

# Draft Environmental Impact Report

SCH# 2022110504

## Volume 2 of 6

Part 2 – Section 4.6 through Chapter 11

### **BULLHEAD SOLAR PROJECT** by EDF Renewables, LLC (*PP22404*)

GPA No. 8, Map No. 214; CUP No. 48, Map No. 214;  
CUP No. 49, Map No. 214; Ag Exclusion Map No. 214;  
SPA No. 42, Map No. 231; SPA No. 43, Map 231;  
ZCC No. 158, Map No. 231; CUP No. 121, Map No. 231;  
CUP No. 122, Map No. 231; Vacation Public Access Easements 03 098 232,  
Map No. 232; SPA No. 35, Map No. 232;  
SPA No. 36, Map No. 232; ZCC No. 36, Map No. 232;  
CUP No. 49, Map No. 232; CUP No. 50, Map No. 232.



Kern County  
Planning and Natural Resources Department  
Bakersfield, California

November 2023



Lorelei H. Oviatt, AICP, Director  
2700 "M" Street, Suite 100  
Bakersfield, CA 93301-2323  
Phone: (661) 862-8600  
Fax: (661) 862-8601 TTY Relay 1-800-735-2929  
Email: [planning@kerncounty.com](mailto:planning@kerncounty.com)  
Web Address: <http://kernplanning.com/>



**PLANNING AND NATURAL  
RESOURCES DEPARTMENT**

Planning  
Community Development  
Administrative Operations

**DATE:** November 30, 2023

**TO:** See Attached Mailing List

**FROM:** Kern County Planning and Natural  
Resources Department  
Attn: Janice Mayes  
2700 "M" Street, Suite 100  
Bakersfield, CA 93301  
(661)862-8793; [majesj@kerncounty.com](mailto:majesj@kerncounty.com)

**SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE BULLHEAD  
SOLAR PROJECT BY EDF RENEWABLES, LLC(PP22404)**

Dear Interested Party:

The Kern County Planning and Natural Resources Department as Lead Agency (pursuant to California Environmental Quality Act [CEQA] Guidelines Section 15052) has determined that preparation of an Environmental Impact Report (EIR) (pursuant to CEQA Guidelines Section 151161) is necessary for the 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 about the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval of projects.

**PROJECT TITLE:** PROJECT TITLE: Bullhead Solar Project, By EDF Renewables, LLC; GPA No. 8, Map No. 214; CUP No. 48, Map No. 214; CUP No. 49, Map No. 214; Ag Exclusion Map No. 214; SPA No. 42, Map No. 231; SPA No. 43, Map 231; ZCC No. 158, Map No. 231; CUP No. 121, Map No. 231; CUP No. 122, Map No. 231; Vacation of Public Access Easements 03 098 232, Map No. 232; SPA No. 35, Map No. 232; SPA No. 36, Map No. 232; ZCC No. 36, Map No. 232; CUP No. 49, Map No. 232; CUP No. 50, Map No. 232.

**PROJECT LOCATION:** The project site is located within the unincorporated area of Kern County, along Dawn Road off Sierra Hwy 14 between 105<sup>th</sup> Street West and 75<sup>th</sup> Street West, north of Favorito Avenue and South of Champagne Avenue. The project site is just south of the City of Rosamond and would connect to the BigBeau Solar site via a private road. Other communities in the vicinity of the project site include the Cities of Lancaster, Palmdale, and Neenach in Los Angeles County, which are roughly 17 miles southeast, 24 miles southeast, and 18 miles southwest of the project, respectively. Edwards Air Force Base is 22 miles east of the project's eastern boundary.

The project site is located on a portion of approximately 1,343-acres comprised of 22 privately owned parcels in Section 1 of Township 9 North, Range 14 West; Sections 5 and 6 of Township 9 North, Range 13 West; and Sections 31, 32, and 33 of Township 10 North, Range 13W in the San Bernardino Base and Meridian (SBB&M).

**PROJECT DESCRIPTION:** The Bullhead Solar Project (proposed project) involves the construction and operation of a solar facility and associated infrastructure, including telecommunications towers and internal roads, to generate up to 270 megawatts (MW) of renewable electrical energy with a Battery Energy Storage System capable of storing approximately 270 MW, or 1,080 megawatt-hours (MWh) of energy, within the approximately 25 acres of the project site. The project is proposed by EDF Renewable, LLC, and would be developed near the existing BigBeau Solar Project.

Implementation of the project as proposed includes the following requests:

1. General Plan Amendment No. 8, Map No. 214, to change the Circulation Element of Kern County General Plan Map to eliminate future road reservations on section and mid-section lines, thus eliminating solar facility installation setbacks in Sections 31, 32, and 33, Township 10 North/Range 13 West, San Bernardino Base and Meridian (SBB&M);
2. Conditional Use Permit No. 48, Map No. 214 for construction and operation of a solar facility and associated infrastructure, including roads and a battery energy storage system;
3. Conditional Use Permit No. 49, Map No. 214 for installation of a telecommunications tower in support of solar facility operation;
4. Exclusion from Agricultural Preserve, Map No. 214 to remove approximately 842 acres from Agricultural Preserve 24, in support of the solar facility construction and operation;
5. Specific Plan Amendment No. 42, Map 231, to change the Circulation Element of the Willow Springs Specific Plan to eliminate future road reservations on section and mid-section lines, thus eliminating solar facility installation setbacks in Section 6, Township 9 North and Range 10 West, San Bernardino Base and Meridian (SBB&M);
6. Specific Plan Amendment No. 43, Map 231, to remove the 4.4 (Comprehensive Planning Area) designation of the Willow Springs Specific Plan to eliminate the need for future residential or industrial infrastructure development at the solar facility;
7. Zone Change No. 158, Map No. 231, to change zoning from E (2 ½) RS MH FPS (Estate (2 ½) Residential Suburban/Mobile Home Combining/Floodplain Secondary Combining), E (5) RS MH FPS (Estate (5) Residential Suburban/Mobile Home Combining/Floodplain Secondary Combining), and E (5) RS FPS (Estate Residential Suburban/Floodplain Secondary Combining) to A FPS (Exclusive Agricultural, Floodplain Secondary) district;
8. Conditional Use Permit No. 121, Map No. 231 for construction and operation of a solar facility and associated infrastructure, including roads and a battery energy storage system;
9. Conditional Use Permit No. 122, Map No. 231 for installation of a telecommunications tower in support of solar facility operations;
10. Vacation of Public Access Easements 03 098 232, Map No. 232 to remove easements and eliminate internal setbacks for the solar facility;
11. Specific Plan Amendment No. 35, Map No. 232, to remove the 4.4 (Comprehensive Plan) designation of the Willow Springs Specific Plan, on approximately 160 acres, to eliminate the need for future development of infrastructure on the solar facility site; Page 3 of 3 Bullhead Solar Project;
12. Specific Plan Amendment No. 36, Map No. 232 to change the Circulation Element of the Willow Springs Specific Plan, to eliminate future road reservations and eliminate solar facility installation setbacks at Section 1, Township 9 North/Range 10 West;
13. Zone Change No. 36, Map No. 232, to change zoning from E (2 ½) to A FPS (Exclusive Agricultural, Floodplain Secondary) district;
14. Conditional Use Permit No. 50, Map No. 232 for construction and operation of a solar facility and associated infrastructure, including roads and a battery energy storage system;
15. Conditional Use Permit No. 49, Map No. 232 for installation of a telecommunications tower in support of solar facility operations;

To allow the construction and operation of the Bullhead Solar Project, pursuant to Section 19.12.030E of the Kern County Zoning Ordinance.

If we have not received a reply from you by **January 15, 2024, at 5:00 P.M.**, we will assume that you have no comments regarding this Draft EIR.

**Should you have any questions regarding this project, please do not hesitate to contact me at [mavesj@kerncounty.com](mailto:mavesj@kerncounty.com) or (661) 862-8793.**

Sincerely,



Janice Mayes, Planner III  
Advanced Planning Division

**BULLHEAD SOLAR PROJECT  
PP22404  
AGENCY LIST**

City of Arvin  
P.O. Box 548  
Arvin, CA 93203

Bakersfield City Planning Dept  
1715 Chester Avenue  
Bakersfield, CA 93301

Bakersfield City Public Works Dept  
1501 Truxtun Avenue  
Bakersfield, CA 93301

California City Planning Dept  
21000 Hacienda Blvd.  
California City, CA 93515

Delano City Planning Dept  
P.O. Box 3010  
Delano, CA 93216

City of Maricopa  
P.O. Box 548  
Maricopa, CA 93252

City of McFarland  
401 West Kern Avenue  
McFarland, CA 93250

City of Ridgecrest  
100 West California Avenue  
Ridgecrest, CA 93555

City of Shafter  
336 Pacific Avenue  
Shafter, CA 93263

City of Taft  
Planning & Building  
209 East Kern Street  
Taft, CA 93268

City of Tehachapi  
Attn: John Schlosser  
115 South Robinson Street  
Tehachapi, CA 93561-1722

City of Wasco  
764 E Street  
Wasco, CA 93280

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  
Ridgecrest Field Office  
300 South Richmond Road  
Ridgecrest, CA 93555

China Lake Naval Weapons Center  
Tim Fox, RLA - Comm Plans & Liaison  
429 E Bowen, Building 981  
Mail Stop 4001  
China Lake, CA 93555

Edwards AFB, Mission Sustainability  
Liaison  
412 TW, Bldg 2750, Ste 117-14  
195 East Popson Avenue  
Edwards AFB, CA 93524

U.S. Fish & Wildlife Service  
777 East Tahquitz Canyon Way, Suite 208  
Palm Springs, CA 92262

Eastern Kern Resource Cons Dist  
300 South Richmond Road  
Ridgecrest, CA 93555-4436

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

U.S. Army Corps of Engineers  
Regulatory Division  
1325 "J" Street, #1350  
Sacramento, CA 95814-2920

U.S. Postal Service  
Address Management Systems  
28201 Franklin Parkway  
Santa Clarita, CA 91383-9321

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

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

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

Caltrans/Dist 9  
Planning Department  
500 South Main Street  
Bishop, CA 93514

State Clearinghouse  
Office of Planning and Research  
1400 - 10th Street, Room 222  
Sacramento, CA 95814

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

State Dept of Conservation  
Office of Land Conservation  
801 "K" Street, MS 18-01  
Sacramento, CA 95814

State Mining and Geology Board  
801 K Street, MS 20-15  
Sacramento, CA 95814

California State University  
Bakersfield - Library  
9001 Stockdale Highway  
Bakersfield, CA 93309

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

State Dept of Food & Agriculture  
1220 "N" Street  
Sacramento, CA 95814

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

State Office of Historical Pres  
Attention Susan Stratton  
P.O. Box 942896  
Sacramento, CA 95296-0001

Integrated Waste Management  
P.O. Box 4025, MS #15  
Sacramento, CA 95812-4025

State Water Resources Control Board  
Division of Drinking Water  
Attn: Jesse Dhaliwal, Sr. Sanitary Eng  
4925 Commerce Drive, Suite 120  
Bakersfield, CA 93309

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

California Regional Water Quality  
Control Board/Lahontan Region  
15095 Amargosa Road - Bld 2, Suite 210  
Victorville, CA 92392

State Lands Commission  
100 Howe Avenue, Ste 100-South  
Sacramento, CA 95825-8202

State Dept of Toxic Substance Control  
Environmental Protection Agency  
1515 Tollhouse Road  
Clovis, CA 93612

Cal Environmental Protection Agency/  
Dept of Toxic Substances Control, Reg 1  
Attn: Dave Kereazis, Permit Div - CEQA  
8800 Cal Center Drive, 2nd Floor  
Sacramento, CA 95826

State Dept of Water Resources  
San Joaquin Dist.  
3374 East Shields Avenue, Room A-7  
Fresno, CA 93726

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 Fire Dept  
Cary Wright, Fire Marshall

Kern County Library/Beale  
Local History Room

Kern County Library/Beale  
Andie Sullivan

Kern County Library  
Mojave Branch  
16916 1/2 Highway 14, Space D2  
Mojave, CA 93501

Kern County Museum  
3801 Chester Avenue  
Bakersfield, CA 93301

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

Kern County Public Works Department/  
Building & Development/Code  
Compliance

Kern County District 2  
Attn: Rosamond Municipal Advisory  
Council  
414 W. Tehachapi Blvd. Suite H  
Tehachapi, CA 93561

Mojave Town Council  
Bill Deaver, President  
P.O. Box 1113  
Mojave, CA 93502-1113

Southern Kern Unified School Dist  
P.O. Box CC  
Rosamond, CA 93560

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

Local Agency Formation Comm/LAFCO  
5300 Lennox Avenue, Suite 303  
Bakersfield, CA 93309

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

East Kern Air Pollution  
Control District

Antelope Valley-East Kern  
Water Agency  
6500 West Avenue N  
Palmdale, CA 93551

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

U.S. Air Force  
Attn: David Bell/AFCEC CZPW  
Western Regional/Leg Branch  
510 Hickam Avenue, Bldg 250-A  
Travis AFD, CA 94535-2729

U.S. Army  
Attn: Philip Crosbie, Chief  
Strategic Plans, S3, NTC  
P.O. Box 10172  
Fort Irwin, CA 92310

U.S. Army  
Attn: Tim Kilgannon, Reg 9 Coord  
Office of Strategic Integration  
721 - 19th Street, Room 427  
Denver, CO 80202

U.S. Navy  
Attn: Steve Chung, Plans & Liaison  
Officer  
1220 Pacific Highway  
San Diego, CA 92132-5190

U.S. Marine Corps  
Command Gen MCIWEST-MCB CamPen  
Attn: A/CS, G7  
Box 555010, Bldg 1160, Rm 280  
Camp Pendleton, CA 92055-5246

AT&T California  
OSP Engineering/Right-of-Way  
4901 Ashe Road  
Bakersfield, CA 93313

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

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

Center on Race, Poverty  
& the Environment  
5901 Christie Avenue, Suit 208  
Emeryville, CA 94608

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

Defenders of Wildlife  
P.O. Box 401  
Folsom, CA 95763

California Farm Bureau  
2300 River Plaza Drive, NRED  
Sacramento, CA 95833

Mojave Chamber of Commerce  
P.O. Box 935  
Mojave, CA 93502

Native American Heritage Council  
of Kern County  
Attn: Gene Albitre  
18169 Highway 155  
Woody, CA 93287

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

Southern California Edison  
P.O. Box 410  
Long Beach, CA 90801

Southern California Edison  
Planning Dept.  
421 West "J" Street  
Tehachapi, CA 93561

Southern California Edison  
Planning Dept.  
510 S. China Lake Blvd.  
Ridgecrest, CA 93555

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  
Octavio Escobedo III, Chairman  
P.O. Box 640  
Arvin, CA 93203F

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

Tubatulabals of Kern County  
Attn: Robert Gomez, Chairperson  
P.O. Box 833  
Weldon, CA 93283

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

Matthew Gorman  
The Gorman Law Firm  
1346 E. Walnut Street, Suite 220  
Pasadena, CA 91106

Eight Bar Ranch  
Jon and Helen Lantz  
11300 Cameron Canyon Road  
Mojave, CA 93501

Fairmont Town Council  
Attn: Barbara Rogers  
P.O. Box 2320  
Rosamond, CA 93560

Joyce LoBasso  
P.O. Box 6003  
Bakersfield, CA 93386

Leadership Counsel for Justice &  
Accountability  
85350 Bagdad Ave.  
Coachella, CA 92236

LIUNA  
Attn: Danny Zaragoza  
2201 "H" Street  
Bakersfield, CA 93301

Mojave Foundation  
Attn: Todd Quelet  
16922 Airport Boulevard  
Mojave, CA 93501

Vestas  
1417 NW Everett Street  
Portland, OR 97209

Lozeau Drury LLP  
1939 Harrison Street, Suite 150  
Oakland, CA 94612

Center for Biological Diversity  
PO Box 549  
Joshua Tree, CA 92252

Michael Strickler  
Iberdrola Renewables, Sr Proj Mgr  
1125 NW Couch St, Ste 700, 7th Fl  
Portland, OR 97209

Sarah K. Friedman  
Beyond Coal Campaign/Sierra Club  
1417 Calumet Avenue  
Los Angeles, CA 90026



Steve Yutske  
TerraGen Power  
11512 El Camino Real, Ste 100  
San Diego, CA 92130

**NOTICE OF AVAILABILITY FOR PUBLIC REVIEW AND HEARING ON  
THE DRAFT ENVIRONMENTAL IMPACT REPORT  
FOR THE PROPOSED CHALAN SOLAR AND STORAGE PROJECT**

This is to advise that the Kern County Planning and Natural Resources Department has prepared an Environmental Impact Report (EIR) for the project identified below. As mandated by State law, the minimum public review period for this document is 45 days.

**PROJECT TITLE:** Bullhead Solar Project, By EDF Renewables, LLC; GPA No. 8, Map No. 214; CUP No. 48, Map No. 214; CUP No. 49, Map No. 214; Ag Exclusion Map No. 214; SPA No. 42, Map No. 231; SPA No. 43, Map 231; ZCC No. 158, Map No. 231; CUP No. 121, Map No. 231; CUP No. 122, Map No. 231; Vacation of Public Access Easements 03 098 232, Map No. 232; SPA No. 35, Map No. 232; SPA No. 36, Map No. 232; ZCC No. 36, Map No. 232; CUP No. 49, Map No. 232; CUP No. 50, Map No. 232.

**PROJECT LOCATION:**

The project site is located within Section 1 of Township 9 North, Range 14 West; Sections 5 and 6 of Township 9 North, Range 13 West; and Sections 31, 32, and 33 of Township 10 North, Range 13W in the San Bernardino Base and Meridian (SBB&M) along Dawn Road off Sierra Hwy 14 between 105th Street West and 75th Street West, north of Favorito Avenue and South of Champagne Avenue. The project site is just south of the City of Rosamond and would connect to the Big Beau Solar site via private road. Other communities in the vicinity of the project site include the cities of Lancaster, Palmdale, and Neenach in Los Angeles County, which are roughly 17 miles southeast, 24 miles southeast, and 18 miles southwest of the project, respectively. Edwards Air Force Base is 22 miles east of the project's eastern boundary.

**DOCUMENT AVAILABILITY:** The document and documents referenced in the Draft EIR are available for review at the Planning Natural Resources Department, 2700 "M" Street, Suite 100, Bakersfield, CA 93301 or on the Departmental website (<https://kernplanning.com/planning/environmental-documents/>).

**PUBLIC HEARING AND COMMENT:** Kern County is soliciting comments on the adequacy and completeness of the analysis and proposed mitigation measures described in the Draft EIR. You may comment by providing testimony at the public hearing on:

**DATE:** February 8, 2024  
**TIME:** 7:00 P.M. or soon thereafter  
**LOCATION:** Chambers of the Board of Supervisors  
Kern County Administrative Center, First Floor  
1115 Truxtun Avenue, Bakersfield, CA 93301

**HOW TO COMMENT:** You may provide testimony at the public hearing on the date and time specified above or provide written comments prior to the close of public comment period on **January 15, 2024, at 5:00 p.m.** to:

**Kern County Planning and Natural Resources Department  
ATTN: Janice Mayes, Planner III  
2700 "M" Street, Suite 100, Bakersfield, CA 93301  
Phone: (661) 862-8793  
E-mail: [majesj@kerncounty.com](mailto:majesj@kerncounty.com)**

**PROJECT DESCRIPTION:**

The Bullhead Solar Project (proposed project) involves the construction and operation of a solar facility on approximately 1343 acres comprised of 22 private parcels, including PV panels, telecommunications towers, inverter stations, transformer systems, transmission lines, substations, and internal roads, necessary to generate up to 270 megawatts (MW) of renewable electrical energy with a Battery Energy Storage System capable of storing approximately 270 MW, or 1,080 megawatt-hours (MWh) of energy, located on approximately 25 acres of the project site. The project is proposed by EDF Renewable, LLC, and would be developed near the existing BigBeau Solar Project.

Implementation of the project as proposed includes the following requests:

1. General Plan Amendment No. 8, Map No. 214, to change the Circulation Element of Kern County General Plan Map to eliminate future road reservations on section and mid-section lines, thus eliminating solar facility installation setbacks in Sections 31, 32, and 33, Township 10 North/Range 13 West, San Bernardino Base and Meridian (SBB&M);
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3. Conditional Use Permit No. 49, Map No. 214 for installation of a telecommunications tower in support of solar facility operation;
4. Exclusion from Agricultural Preserve, Map No. 214 to remove approximately 842 acres from Agricultural Preserve 24, in support of the solar facility construction and operation;
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9. Conditional Use Permit No. 122, Map No. 231 for installation of a telecommunications tower in support of solar facility operations;
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15. Conditional Use Permit No. 49, Map No. 232 for installation of a telecommunications tower in support of solar facility operations;

To allow the construction and operation of the Bullhead Solar Project, pursuant to Section 19.12.030E of the Kern County Zoning Ordinance.

**ENVIRONMENTAL REVIEW FINDINGS: Air Quality (Project and Cumulative); Biological Resources (Cumulative); Wildfire (Cumulative); Aesthetics (Project and Cumulative)**

LORELEI H. OVIATT, AICP, Director  
Planning and Natural Resources Department

To be published once only on next available date and as soon as possible

**MOJAVE DESERT NEWS**

JKM (11/30/23)

cc: County Clerk (2) (with fee)  
Environmental Status Board  
LiUNA  
Supervisory District No. 2

**BULLHEAD SOLAR PROJECT  
PP22404  
APN LIST**

474 120 46 00 4 ANDERSON GARY D 2203 S 77TH AV YAKIMA WA 98903-9690	315 050 14 00 1 AGBAYANI ELMER & CRISTINA REV TRUST 1554 HILLMONT AV SAN JOSE CA 95127-4521	315 030 02 00 0 AIM DEVELOPMENTS LLC 4000 MACARTHUR BL STE 600 NEWPORT BEACH CA 92660
474 120 39 00 4 BAYNOSA RODOLFO B & LUZ C TR 1873 BERRY HILL DR CHINO HILLS CA 91709-4897	346 032 55 00 4 AURORA SOLAR LLC 1125 NW COUCH ST STE 700 PORTLAND OR 97209-4129	474 120 17 00 0 BARCUS B B 5616 45TH AV S W SEATTLE WA 98116
346 363 07 00 8 BLUE CUBE VENTURE LLC 13089 PEYTON DR C473 CHINO HILLS CA 91709	358 051 18 00 3 BEEMAN HARRY LELAND 4448 STUMBERG LN BATON ROUGE LA 70816-6523	315 230 02 00 8 BLACK LIVING TRUST 13590 N NIGHTSTAR CT MARANA AZ 85653
315 050 25 00 3 BURTON GARY EDWARD O 3200 BERRY HOLW MELISSA TX 75454-3032	474 120 11 00 2 BLYDENBURG ALAN C & DEBRA L PO BOX 56867 SHERMAN OAKS CA 91413-1867	315 040 12 00 2 BONALES VERONICA PO BOX 1326 FERNDALE CA 95536-1326
315 060 02 00 9 CANON FERNANDO B 16902 MARINABAY DR HUNTINGTON BCH CA 92649- 2916	315 050 24 00 0 BURTON LESLIE JEAN CAMPBELL TRUST 22710 SHIELDHALL LN TOMBALL TX 77375	315 050 23 00 7 CAMPBELL LESLIE JEAN REVOCABLE TRUST 22710 SHIELDHALL LN TOMBALL TX 77375
346 240 27 00 0 CENTURY DEVELOPMENT CORP P O BOX 7076 EDMOND OK 73083	346 373 03 00 9 CANONES RONITO A & CRISTETA ET AL 26486 JEAN BAPTISTE WY MORENO VALLEY CA 92555-	346 240 37 00 9 CENTURY DEV CORP P O BOX 7076 EDMOND OK 73083
315 050 35 00 2 CITY OF LOS ANGELES D W P PO BOX 51111 # 1031 LOS ANGELES CA 90051-5700	315 050 43 00 5 CHAO DANIEL 104 DORADO TERRACE SAN FRANCISCO CA 94112	315 050 28 00 2 CITY OF LOS ANGELES D W P P O BOX 51111 RM 633 LOS ANGELES CA 90051-0100
346 371 03 00 5 CLARK JERRY ADAM 308 WEST E ST TEHACHAPI CA 93561	315 050 44 00 8 CITY OF LOS ANGELES D W P 111 N HOPE ST RM 340 LOS ANGELES CA 90012-2607	346 032 52 00 5 CITY OF LOS ANGELES D W P 111 N HOPE ST LOS ANGELES CA 90012
474 120 06 01 7 COSTELLO FMLY LIV TR 100 HILLCREST LN KENTFIELD CA 94904	346 372 01 00 6 COLMENAR FMLY TR 2825 ORO BLANCO CI ESCONDIDO CA 92027-5257	315 050 38 00 1 CORONA EZEQUIEL 8715 FAVORITO AV ROSAMOND CA 93560
	346 031 08 00 1 CRYSTAL ORGANIC FARMS LLC P O BOX 81498 BAKERSFIELD CA 93380	346 363 05 00 2 CUDAL MARCELINO M & ZENAIDA V TRUST 757 SANDY HOOK AV LA PUENTE CA 91744-2656

358 051 08 00 4  
CUMMINGS CHARLES D &  
LINDA G  
HCR 3 BOX 226  
ROSAMOND CA 93560

346 361 02 00 9  
DE LOS SANTOS FAMILY  
TRUST  
1316 ARABIC ST  
WILMINGTON CA 90744-4904

474 120 38 00 1  
EDF RENEWABLES DEV INC  
15455 INNOVATION DR  
SAN DIEGO CA 92128

358 051 17 00 0  
EVERETTE SUZANNE E  
PO BOX 50  
LAKE ARROWHEAD CA 92352-  
0050

358 052 03 00 6  
GOMEZ AMADO  
40701 RANCHO VISTA BL SP  
256  
PALMDALE CA 93551-2713

315 230 07 00 3  
HAAG ROBERT W SR &  
SCHMID TAMARA  
5491 TEHACHAPI WILLOW SP  
RD

315 030 10 00 3  
HNF INTERNAT INC  
22 COLLETON RIVER DR  
HENDERSON NV 89052-6646

358 051 43 00 5  
KIMARI HENRY N & KELLY A  
843 MOUNTAIN VIEW RD  
CORDOVA AL 35550-4019

315 230 01 00 5  
L A CITY OF  
PO BOX 51111 RM 1031  
LOS ANGELES CA 90051-5700

346 372 03 00 2  
LAYGO ARMANDO L  
19 LOS FELIS DR  
POMONA CA 91766

346 240 41 00 0  
D A REALTY TRUST  
P O BOX 7076  
EDMOND OK 73083

346 363 06 00 5  
DL INVESTORS 1 LLC  
166 W WASHINGTON ST STE  
730  
CHICAGO IL 60602

315 050 22 00 4  
EDF RENEWABLES  
DEVELOPMENT INC  
15445 INNOVATION DR  
SAN DIEGO CA 92128

346 240 28 00 3  
FOX THOMAS R LIVING TRUST  
2288 OLD TRACY RD  
MOUNTAIN HOME AR 72653

315 011 18 00 8  
GRIFFIN LEONARD W &  
LAURA SURVIVORS TRUST  
PO BOX 2236  
TEHACHAPI CA 93581

346 240 31 00 1  
HAMILTON P A & MURRAY  
HELEN T  
343 W PALM AV APT 5  
EL CAJON CA 92020

346 240 36 00 6  
KARIM RAHIM  
6358 POINT ISABEL WY  
LAS VEGAS NV 89122-7662

315 050 37 00 8  
L A CITY OF  
PO BOX 51111 # 1031  
LOS ANGELES CA 90051-5700

346 372 02 00 9  
LAMBE DONALD S & NORA S  
1671 W NINE ONE HALF MILE  
RD  
CANTONMENT FL 32533-7704

315 040 05 00 2  
LOMBARDI IDA C REV TRUST  
2201 SACRAMENTO ST STE 403  
SAN FRANCISCO CA 94115-2314

358 051 14 00 1  
DAGEFORDE TRUST  
16804 NE 10TH WY  
VANCOUVER WA 98684-6424

315 011 01 00 8  
EDF RENEWABLES DEV INC  
15445 INNOVATION DR  
SAN DIEGO CA 92128

346 240 30 00 8  
ESQUER VICTOR J  
1368 CERRITOS CT  
CHULA VISTA CA 91910-7106

315 040 04 00 9  
GLENN MARILYN R  
5334 CAMELLIA AV  
SACRAMENTO CA 95819-1716

358 052 05 00 2  
GUERRERO RODOLFO GAMINO  
10057 HAMILTON RD  
ROSAMOND CA 93560-6931

346 363 02 00 3  
HIATT FREDERICK H &  
GERALDINE TRUST  
12757 TREE RANCH RD  
OJAI CA 93023

346 371 06 00 4  
KAWASHIMA FRANK T &  
BETTY S  
1215 E NORWOOD PL.  
ALHAMBRA CA 91801

315 050 39 00 4  
L A CITY OF  
PO BOX 51111  
LOS ANGELES CA 90051-0100

358 052 01 00 0  
LAPIS LAND CO LLC  
P O BOX 81498  
BAKERSFIELD CA 93380-1498

315 050 42 00 2  
LOS ANGELES CITY OF  
PO BOX 51111 RM 1031  
LOS ANGELES CA 90051-0100

346 363 04 00 9  
MAGALING BENITO B &  
EVELYN M  
323 WILLITS ST  
DALY CITY CA 94014-1931

358 051 10 00 9  
MC INTOSH TED A  
8608 E 268TH AV  
BUCKLEY WA 98321-9295

346 363 11 00 9  
MULITSTATE LAND INVS LLC  
500 WESTOVER DR STE 12840  
\*

346 240 07 00 2  
OH ALEX S & SEONG H  
19551 RINALDI ST U 24  
PORTER RANCH CA 91326-1687

358 052 08 00 1  
PADILLA LUZVIMINDA V  
3633 KIM CT  
LANCASTER CA 93536

315 050 40 00 6  
PRESSMAN BARRY K  
REVOCABLE TRUST  
2261 MONACO DR  
OXNARD CA 93035-2915

315 040 02 00 3  
RINARD JOAN GIGNAC TRUST  
2738 N KEYSTONE ST  
BURBANK CA 91504

358 051 13 00 8  
ROMERO ULICES JAVIER  
TORRES  
23450 NEWHALL AV SP 26  
NEWHALL CA 91321

358 051 15 00 4  
RYAN FAMILY REVOCABLE  
TRUST  
10568 MOUNTAIN BROW RD  
SONORA CA 95370-8015

358 051 06 00 8  
SEGAL MICHAEL & BRENDA  
TRUST  
1426 STATE HIGHWAY 58  
MOJAVE CA 93501-1961

346 240 06 00 9  
MANNIKUS ERLINDA &  
YENKO EMMA ET AL  
10 PIKEVIEW TERR  
SECAUCUS NJ 07094

315 050 12 00 5  
MONTGOMERY PAUL H  
1629 CYRENE DR  
CARSON CA 90746

346 031 07 00 8  
NAKAGAWA BRANDON  
20553 GALLOWAY DR  
SANTA CLARITA CA 91350

346 250 01 00 7  
OPEN SP HOME OWNERS ASSC  
#4  
P O BOX 20010  
ENCINO CA 91416

474 120 13 00 8  
PETERSON WESLEY A  
P O BOX 2249  
MESA AZ 85214

358 051 09 00 7  
QUEALY JESSICA  
5527 105TH ST W  
WILLOW SPRINGS CA 93560-  
7500

315 050 16 00 7  
ROBINSON ROGER WARREN &  
SYLVA IRENE TRUST  
1450 W IVYTON ST  
LANCASTER CA 93534-2115

315 011 50 00 0  
ROSAMOND ENERGY LLC  
42 E 69TH ST  
NEW YORK NY 10021-5093

358 051 04 00 2  
SEGAL MICHAEL & BRENDA  
1426 STATE HIGHWAY 58  
MOJAVE CA 93501-1961

346 371 07 00 7  
SIMS BENNIE G SR & CHERYL  
L  
9601 LOMITA CT APT 222  
ALTA LOMA CA 91701

346 032 26 00 0  
MARTINEZ JULIO D & AMADA  
MARTINEZ REVOCABLE  
2813 GREEN MOUNTAIN LN  
ESCONDIDO CA 92025-7549

315 050 15 00 4  
MOORISH SCIENCE TEMPLE OF  
AMER  
815 N LA BREA AV 153  
INGLEWOOD CA 90302

474 120 20 00 8  
NEILSON MERLYN R TR  
2204 MANHATTAN BEACH BL  
REDONDO BEACH CA 90278-  
1203

315 040 11 00 9  
ORTEGA ISMAEL & EMELDA  
12521 WINGO ST  
PACOIMA CA 91331

315 011 48 00 5  
PHAN FON & WONG DIANA  
PO BOX 290983  
PHELAN CA 92329-0983

358 051 01 00 3  
RIECK JUDI B TRUST  
660 CASELLA WY  
PETALUMA CA 94954

346 363 03 00 6  
RODIL AUREA T  
136-08 68 DR APT A  
FLUSHING NY 11367

358 052 04 00 9  
RUTKOWSKI BARBARA J  
11705 SCENIC HILLS BL  
HUDSON FL 34667-5619

358 051 05 00 5  
SEGAL MICHAEL & BRENDA  
1426 HIGHWAY 58  
MOJAVE CA 93501

346 371 08 00 0  
SORIANO FRANDEROOSE C &  
OLIVIA C  
19940 ROYAL AV  
HAYWARD CA 94541-3652

474 120 14 00 1  
STONE TRUST  
16651 DALE VISTA LN  
HUNTINGTON BCH CA 93647

346 363 10 00 6  
TERRADO VIRGELIA G  
363 KAHA ST  
KAILUA HI 96734

346 240 10 00 0  
TIEN FMLY TR  
6571 BROWNSTONE PL  
RANCHO CUCAMONG CA  
91739-2011

474 120 49 00 3  
TSUJIHARA LIVING TR  
2229 CALIFORNIA AV  
WAHIAWA HI 96786-2803

346 371 02 00 2  
VELUR HOLDINGS LLC  
P O BOX 56867  
SHERMAN OAKS CA 91413

474 120 50 00 5  
WEISS JAMES T LIV TR  
555 FREEMAN RD # 185  
CENTRAL POINT OR 97502-2562

315 050 02 00 6  
WILLEY FAMILY TRUST  
5792 TEHACHAPI WILLOW SPG  
RD  
ROSAMOND CA 93560

474 120 12 00 5  
YOUNG JASON  
6195 105TH ST WEST  
ROSAMOND CA 93560

346 240 19 00 7  
TAMAYO 2014 TRUST  
1279 N REEDER AV  
COVINA CA 91724-1623

358 051 12 00 5  
TIDWELL DERRIL W &  
PATRICIA A  
4568 HALE AV  
LA VERNE CA 91750-2531

474 120 47 00 7  
TIVENS DONALD J & M  
FAMILY TR  
21250 CALIFA ST STE 113  
WOODLAND HILLS CA 91367-

358 052 09 00 4  
US SOLAR ASSETS LLC  
135 MAIN ST FLR 6  
SAN FRANCISCO CA 94105-8113

346 361 03 00 2  
VICTORIA LUZ B ET AL  
2425 WOODLEY AV  
LAKELAND FL 33803

346 240 32 00 4  
WELCH SHERI  
37715 38TH AVE S  
AUBURN WA 98001-8749

474 120 15 00 4  
WITTIG URSULA  
SCHULWIESENWEG 30  
\*

346 361 01 00 6  
ADVMINVESTMENTS LLC  
1369 ALLENFORD AV  
LOS ANGELES CA 90049

346 240 24 00 1  
TAMAYO TRUST  
1279 N REEDER AV  
COVINA CA 91724-1623

358 051 11 00 2  
TIDWELL PATRICIA A  
4568 HALE AV  
LA VERNE CA 91750-2531

315 040 03 00 6  
TORRES PABLO & ROMERO  
MAGDALENA PEREZ  
23450 NEWHALL AV SP 70  
NEWHALL CA 91321

346 363 12 00 2  
VEAL IRREVOCABLE TRUST  
24091 NUTHATCH LN  
LAGUNA NIGUEL CA 92677

315 060 01 00 6  
WEBB KIRK LIVING TRUST  
1308 ABBOT AV  
SAN GABRIEL CA 91776-3216

346 031 05 00 2  
WESTN NATURAL RESOURCES  
LLC  
11455 EL CAMINO REAL STE  
160

346 240 17 00 1  
WOODCLIFF INC  
19313 STARLIGHT DR  
TARZANA CA 91356

# 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 # 2022110504

Project Title: Bullhead Solar Project

Lead Agency: Kern County Planning and Natural Resources Department

Contact Person: Janice Mayes

Mailing Address: 2700 "M" Street Suite 100

Phone: 661-862-8612

City: Bakersfield

Zip: 93301-2323

County: Kern

Project Location: County: Kern

City/Nearest Community: Rosamond

Cross Streets: The project site is located just south of the City of Rosamond and would connect to the Big Beau Solar site via private road on a portion of 1,343.2-acres comprised of 21 privately owned parcels in Section 1 of Township 9 North, Range 14 West; Sections 5 and 6 of Township 9 North, Range 13 West; and Sections 31, 32, and 33 of Township 10 North, Range 13W in the San Bernardino Base and Meridian (SBB&M).

Lat. / Long.: 34.90° 136" N/118.29° 131" W

Total Acres: 1343.2 acres

Assessor's Parcel No.: Multiple Section: 1, 5, 6, 31, 32, 33

Twp.: 9N/10N; Range:13W/14W

Base: (SBB&M)

Within 2 Miles: State Hwy #: Sierra Hwy 14

Waterways: N/A

Airports: N/A

Railways: N/A

Schools: N/A

## Document Type:

CEQA:  NOP  Draft EIR NEPA:  NOI Other:  Joint Document  
 Early Cons  Supplement/Subsequent EIR  EA  Final Document  
 Neg Dec (Prior SCH No.)  Draft EIS  Other  
 Mit Neg Dec Other

## Local Action Type:

General Plan Update  Specific Plan  Rezone  Annexation  
 General Plan Amendment  Master Plan  Prezone  Redevelopment  
 General Plan Element  Planned Unit Development  Use Permit  Coastal Permit  
 Community Plan  Site Plan  Land Division (Subdivision, etc.)  
 Other Specific Plan Amendment  Other Nonsummary vacation of public access easements; Exclusion from Agricultural Preserve

## Development Type:

Residential: Units \_\_\_\_\_ Acres \_\_\_\_\_  Water Facilities: Type \_\_\_\_\_ MGD \_\_\_\_\_  
 Office: Sq.ft. \_\_\_\_\_ Acres \_\_\_\_\_ Employees \_\_\_\_\_  Transportation: Type \_\_\_\_\_  
 Commercial: Sq.ft. 1343.2 Acres \_\_\_\_\_ Employees 627 peak  Mining: Mineral: \_\_\_\_\_  
 Industrial: Sq.ft. \_\_\_\_\_ Acres \_\_\_\_\_ Employees \_\_\_\_\_  Power: Type Solar PV MW 270  
 Educational \_\_\_\_\_  Waste Treatment: Type \_\_\_\_\_ MGD \_\_\_\_\_  
 Recreational \_\_\_\_\_  Hazardous Waste: Type \_\_\_\_\_  
 Other: Communication/microwave tower and battery storage

## Project Issues Discussed in Document:

Aesthetic/Visual  Fiscal  Recreation/Parks  Vegetation  
 Agricultural Land  Flood Plain/Flooding  Schools/Universities  Water Quality  
 Air Quality  Forest Land/Fire Hazard  Septic Systems  Water Supply/Groundwater  
 Archeological/Historical  Geologic/Seismic  Sewer Capacity  Wetland/Riparian  
 Biological Resources  Minerals  Soil Erosion/Compaction/Grading  Wildlife  
 Coastal Zone  Noise  Solid Waste  Growth Inducing  
 Drainage/Absorption  Population/Housing Balance  Toxic/Hazardous  Land Use  
 Economic/Jobs  Public Services/Facilities  Traffic/Circulation  Cumulative Effects  
 Other Energy, Greenhouse Gas Emissions, Tribal Cultural Resources, Wildfire

Present Land Use/Zoning/General Plan Designation: Land Use: Agriculture/ Zoning: A (Exclusive Agriculture, Floodplain); E 2.5 RS MH FPS (Estate 2.5 Acre, Residential Suburban, Mobilehome Combining, Flood Plain Secondary); E 5 MH FPS (Estate 5 Acre, Mobilehome Combining, Flood Plain Secondary)/ Kern County General Plan: 8.1(Intensive Agriculture); 8.3 (Extensive Agriculture); 8.3/ 2.5 (Extensive Agriculture Flood Hazard Overlay)/ Willow Springs Specific Plan: 5.3/4.4, 5.5, 5.6, (Residential/Comprehensive Plan); 6.2 (General Commercial/Comprehensive Plan)



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

The Bullhead Solar is a proposed project photovoltaic (PV) solar facility with associated infrastructure on approximately 1,343.2 acres of privately-owned land in southeastern Kern County. As stated above, the proposed project would generate up to 270 MW of renewable electrical energy with a battery energy storage system (BESS) capable of storing approximately 270 MW, or 1,080 MWh of storage capacity. The proposed project includes the installation of solar development with associated PV panels, battery storage, inverters, converters, generators, foundations, transformers, and preferred and optional generation-tie (gen-tie) routes to the Rosamond and Whirlwind Substations, only one of which would be constructed. The project also includes laydown yards, a meteorological station, a microwave/communication tower, and a substation.

Implementation of the project as proposed includes the following requests:

- Amendments to the Land Use Element of the Willow Springs Specific Plan as follows:
  - Specific Plan Amendment No. 43, Map No. 231 from Map Code 5.3/4.4 (Maximum 10 Units per Net Acre/Comprehensive Planning Area) to Map Code 5.3 (Maximum 10 Units per Net Acre) on approximately 288 acres, and from Map Code 6.2/4.4 (General Commercial/Comprehensive Planning Area) to Map Code 6.2 (General Commercial) on approximately 15 acres; and
  - Specific Plan Amendment No. 35, Map No. 232 from Map Code 5.3/4.4 (Maximum 10 Units per Net Acre/Comprehensive Planning Area) to Map Code 5.3 (Maximum 10 Units per Net Acre) on approximately 160 acres;
- Changes in Zone Classifications as follows:
  - Zone Classification Change No. 158, Map No. 231 from E(5) RS MH FPS (Estate, 5 Acres, Residential Suburban, Mobile Home Combining, Flood Plain Secondary Combining) to A FPS (Exclusive Agriculture, Flood Plain Secondary Combining), or a more restrictive district, on approximately 94 acres and from E(2 ½) RS MH FPS (Estate, 2 ½ Acres, Residential Suburban, Mobilehome Combining, Flood Plain Secondary Combining) district, to A FPS (Exclusive Agriculture, Flood Plain Secondary Combining), or a more restrictive district, on approximately 215.7 acres; and
  - Zone Classification Change No. 36, Map No. 232 from E (5) RS FPS (Estate, 5 Acres, Residential Suburban, Flood Plain Secondary Combining) district on approximately 8.4 acres, and E 2 ½ RS FPS (Estate, 2 ½ Acres, Residential Suburban, Flood Plain Secondary Combining) district on approximately 151.7 acres to A FPS (Exclusive Agriculture, Flood Plain Secondary Combining), or a more restrictive district.
- Conditional Use Permits to allow for the construction and operations of a combined approximate 270 MW solar facility, as well as ancillary structures including an approximate 270 MW battery storage system with up to 1,080 MWh of storage capacity, within the A (Exclusive Agriculture) Zone District pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance (in Zone Maps 214, 231, and 232):
  - Conditional Use Permit No. 48, Map No. 214 for approximately 842 acres;
  - Conditional Use Permit No. 121, Map No. 231 for approximately 311 acres; and
  - Conditional Use Permit No. 50, Map No. 232 for approximately 160 acres
- Conditional Use Permits to allow the construction and operation of a microwave telecommunications tower, within the A (Exclusive Agriculture) Zone District pursuant to Section 19.12.030.f F of the Kern County Zoning Ordinance (in Zone Maps 214, 231, and 232):
  - Conditional Use Permit No. 49, Map No. 214;
  - Conditional Use Permit NO. 122, Map No. 231; and
  - Conditional Use Permit No. 49, Map No. 232
- Amendment to the Circulation Element of the Kern County General Plan No. 8, Map No. 214 to remove future road reservations on section and mid-section lines within the project boundaries of Sections 31, 32, and 33 of Township 10 North, Range 13 West, (SBB&M);
- Amendments to the Circulation Element of the Willow Springs Specific Plan as follows:
  - Specific Plan Amendment No. 42, Map No. 231 to remove future road reservations on section and mid-section lines within the project boundaries of Section 6, Township 9 North, Range 13 West, SBB&M; and
  - Specific Plan Amendment No. 36, Map No. 232 to remove future road reservations on section lines with the project boundaries of Section 1 of Township 9 North, Range 14 West, SBB&M;
- Petition for Exclusion from the Boundaries from Agricultural Preserve 24, in Zone Map No. 214, for approximately 842 acres of the project site; and
- Nonsummary Vacations of various public access easements in Zone Map No. 232, in and around the project site.

**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".

- |  |  |
|--|--|
| <u>S</u> Air Resources Board                 | _____ Office of Emergency Services                         |
| _____ Boating & Waterways, Department of     | _____ Office of Historic Preservation                      |
| <u>S</u> California Highway Patrol           | _____ Office of Public School Construction                 |
| _____ CalFire                                | _____ Parks & Recreation                                   |
| <u>S</u> Caltrans District # 6 & 9           | _____ Pesticide Regulation, Department of                  |
| _____ Caltrans Division of Aeronautics       | <u>S</u> Public Utilities Commission                       |
| _____ Caltrans Planning (Headquarters)       | <u>S</u> Regional WQCB # <u>Lahontan</u>                   |
| _____ Central Valley Flood Protection Board  | _____ Resources Agency                                     |
| _____ Coachella Valley Mountains Conservancy | _____ S.F. Bay Conservation & Development Commission       |
| _____ Coastal Commission                     | _____ San Gabriel & Lower L.A. Rivers and Mtns Conservancy |
| _____ Colorado River Board                   | _____ San Joaquin River Conservancy                        |
| <u>S</u> Conservation, Department of         | _____ Santa Monica Mountains Conservancy                   |
| _____ Corrections, Department of             | <u>S</u> State Lands Commission                            |
| _____ Delta Protection Commission            | _____ SWRCB: Clean Water Grants                            |
| _____ Education, Department of               | _____ SWRCB: Water Quality                                 |
| <u>S</u> Energy Commission                   | _____ SWRCB: Water Rights                                  |
| <u>S</u> Fish & Game Region # <u>Fresno</u>  | _____ Tahoe Regional Planning Agency                       |
| _____ Food & Agriculture, Department of      | <u>S</u> Toxic Substances Control, Department of           |
| _____ General Services, Department of        | <u>S</u> Water Resources, Department of                    |
| _____ Health Services, Department of         | _____ Other _____  |
| _____ Housing & Community Development        | _____ Other _____  |
| <u>S</u> Integrated Waste Management Board   | _____ Other _____  |
| <u>S</u> Native American Heritage Commission |  |

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

Starting Date November 30, 2023 Ending Date January 15, 2024

**Lead Agency (Complete if applicable):**

Consulting Firm: <u>Placeworks</u>	Applicant: <u>EDF Renewables, LLC. / Scott Kuhlke, Director</u>
Address: <u>700 South Flower Street, Suite 600</u>	Address: <u>1999 Harrison Street, Suite 675</u>
City/State/Zip: <u>Los Angeles, CA 90017</u>	City/State/Zip: <u>Oakland, CA 94612</u>
Contact: <u>Addie Farrell, Principal</u>	Phone: <u>510-457-2168</u>
Phone: <u>213-623-1443, Ext 2119</u>	

Signature of Lead Agency Representative: \_\_\_\_\_ /s/ Jessica Hayes Date: November 30, 2023

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

# Draft Environmental Impact Report

SCH# 2022110504

## Volume 2 of 6

Part 2 – Section 4.6 through Chapter 11

### **BULLHEAD SOLAR PROJECT** by EDF Renewables, LLC (*PP22404*)

GPA No. 8, Map No. 214; CUP No. 48, Map No. 214;  
CUP No. 49, Map No. 214; Ag Exclusion Map No. 214;  
SPA No. 42, Map No. 231; SPA No. 43, Map 231;  
ZCC No. 158, Map No. 231; CUP No. 121, Map No. 231;  
CUP No. 122, Map No. 231; Vacation Public Access Easements 03 098 232,  
Map No. 232; SPA No. 35, Map No. 232;  
SPA No. 36, Map No. 232; ZCC No. 36, Map No. 232;  
CUP No. 49, Map No. 232; CUP No. 50, Map No. 232.



Kern County  
Planning and Natural Resources Department  
Bakersfield, California

Technical Assistance by:  
PlaceWorks

November 2023



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### 4.6.1 Introduction

This energy section of the Environmental Impact Report (EIR) analyzes the energy implications of the proposed project, focusing on the following energy resources: electricity and transportation-related energy (petroleum-based fuels). This Energy section also includes general information relating to natural gas; however, no natural gas is proposed to be used in conjunction with the proposed project. This section includes a summary of the proposed project's anticipated energy needs and conservation measures. Information in this section is primarily based on the *Bullhead Solar Project – Energy Memo* prepared by (ICF 2023). This report is incorporated by reference and provided in **Appendix G** of this EIR. In addition, the information found herein, as well as other aspects of the proposed project's environmental-related energy impacts, are discussed in greater detail elsewhere in this EIR, including in **Chapter 3, Project Description**, **Section 4.3, Air Quality**, and **Section 4.8, Greenhouse Gas Emissions**, of this EIR.

### 4.6.2 Environmental Setting

#### Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines, commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

California has a diverse portfolio of energy resources that produced 2,190 trillion British thermal units (BTUs) in 2020. One BTU is the amount of energy required to heat 1 pound of water by 1 degree Fahrenheit at sea level. BTU is a standard unit of energy that is used in the United States and is on the English system of units (foot-pound-second system). Excluding offshore areas, the State ranked seventh in the nation in crude oil production in 2020, producing the equivalent of 814.5 trillion BTUs. The State ranked second in total renewable energy generation, with 1,013.9 trillion BTUs. Other energy sources in the state include natural gas (192.1 trillion BTUs), nuclear (169.8 trillion BTUs), and biofuels (20.3 trillion BTUs) (U.S. Energy Information Administration 2020a).

According to the U.S. Energy Information Administration, California consumed approximately 6,992.8 trillion BTUs of energy in 2020. Per capita energy consumption (i.e., total energy consumption divided by

the population) in California is among the lowest in the country—approximately 175.3 million BTUs in 2020. Natural gas accounted for the majority of energy consumption (31 percent), followed by motor gasoline (19 percent), renewable energy, including nuclear electric power, hydroelectric power, biomass, and other renewables (20 percent), distillate and jet fuel (12 percent), and interstate electricity (11 percent), with the remaining 7 percent from a variety of other sources. The transportation sector consumed the highest quantity of energy (34.0 percent), followed by the industrial (24.6 percent), commercial (19.6 percent), and residential (21.8 percent) sectors.

Per capita energy consumption, in general, is declining because of improvements in energy efficiency and design. However, despite this reduction in per capita energy use, the State’s total overall energy consumption (i.e., non-per capita energy consumption) is expected to increase over the next several decades as a result of growth in population, jobs, and vehicle travel.

Electrical services in the project site and project area are provided by Southern California Edison (SCE). Approximately 17 percent of power delivered to SCE’s customers in 2020 came from utility-owned generation. In 2020, the sources of utility-owned generation were approximately 8 percent nuclear, 5 percent natural gas, 3 percent large hydroelectric, 1 percent small hydroelectric, and less than 0.5 percent solar generation. Approximately 40 percent of power that SCE delivered to customers in 2020 came from renewable sources. SCE’s current power mix, including utility-owned generation and purchased power, is detailed in **Table 4.6-1, Southern California Edison and the State of California Electric Power Mix in 2020**. The energy usage by sector is shown in **Table 4.6-2, Electricity Consumption in Southern California Edison Service Area in 2020**.

**TABLE 4.6-1: SOUTHERN CALIFORNIA EDISON AND THE STATE OF CALIFORNIA ELECTRIC POWER MIX IN 2020**

Energy Resource	SCE Power Mix <sup>a</sup>	SCE Green Rate 50% Option	SCE Green Rate 100% Option	California-wide Power Mix (for comparison) <sup>a</sup>
<b>Eligible Renewable</b>	<b>30.9%</b>	<b>65.4%</b>	<b>100.0%</b>	<b>33.1%</b>
Biomass & bio-waste <sup>b</sup>	0.1%	0.1%	0.0%	2.5%
Geothermal	5.5%	2.8%	0.0%	4.9%
Eligible hydroelectric	0.8%	0.4%	0.0%	1.4%
Solar	15.1%	57.6%	100.0%	13.2%
Wind	9.4%	4.7%	0.0%	11.1%
<b>Coal</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>2.7%</b>
<b>Large Hydroelectric</b>	<b>3.3%</b>	<b>1.6%</b>	<b>0.0%</b>	<b>12.2%</b>
<b>Natural Gas</b>	<b>15.2%</b>	<b>7.6%</b>	<b>0.0%</b>	<b>37.1%</b>
<b>Nuclear</b>	<b>8.4%</b>	<b>4.2%</b>	<b>0.0%</b>	<b>9.3%</b>
<b>Other</b>	<b>0.3%</b>	<b>0.2%</b>	<b>0.0%</b>	<b>0.2%</b>
<b>Unspecified sources of power<sup>b</sup></b>	<b>42.0%</b>	<b>21.0%</b>	<b>0.0%</b>	<b>5.4%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**TABLE 4.6-1: SOUTHERN CALIFORNIA EDISON AND THE STATE OF CALIFORNIA ELECTRIC POWER MIX IN 2020**

Energy Resource	SCE Power Mix <sup>a</sup>	SCE Green Rate 50% Option	SCE Green Rate 100% Option	California-wide Power Mix (for comparison) <sup>a</sup>
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SOURCE: Appendix G

<sup>a</sup> Percentages are estimated annually by the California Energy Commission (CEC).

<sup>b</sup> “Unspecified sources of power” means electricity from transactions that are not traceable to specific generation sources.

**TABLE 4.6-2: ELECTRICITY CONSUMPTION IN SOUTHERN CALIFORNIA EDISON SERVICE AREA IN 2020**

Agricultural and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
5,078	34,374	5,226	17,134	2,824	38,499	464	103,597

SOURCE: Appendix G

NOTES: All usage expressed in millions of kWh (GWh).

## Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs and delivered through high-pressure transmission pipelines. Natural gas provides almost one-third of the State’s total energy requirements. Natural gas is measured in terms of cubic feet (cf).

The Southern California Gas Company (The Gas Company) is the principal distributor of natural gas in southern California, providing retail and wholesale customers with transportation, exchange, and storage services and procurement services to retail core customers. It is a gas-only utility and, in addition to serving the residential, commercial, and industrial markets, provides gas for enhanced oil recovery and electric generation customers. **Table 4.6-3, *The Gas Company 2021 Natural Gas Demand***, details the natural gas usage by market sector for 2021.

**TABLE 4.6-3: THE GAS COMPANY 2021 NATURAL GAS DEMAND**

<b>Sector</b>	<b>Quantity (billion cubic feet)</b>
Residential	224.0
Commercial	77.0
Industrial (Non-Refinery)	20.4
Industrial (Refinery)	91.7
Industrial Cogeneration	25.4
Refinery-Related Cogeneration	23.0
Enhanced Oil Recovery – Cogeneration	4.1
Electrical Generation	191.0
Wholesale	38.6
Hydro	94.0
Natural Gas Vehicles	15.4
<b>Total</b>	<b>804.6</b>

SOURCE: Appendix G

## Transportation

According to the California Energy Commission (CEC), transportation accounted for approximately 40 percent of California’s total energy consumption in 2019 (CEC, 2019a). In 2022, California consumed 13.6 billion gallons of gasoline and 3.1 billion gallons of diesel fuel (California Department of Tax and Fee Administration 2022a and 2022b). Petroleum-based fuels currently account for more than 90 percent of California’s transportation fuel use (CEC, 2023a). However, the State is now working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and greenhouse gas (GHG) from the transportation sector, and reduce vehicle miles traveled (CEC, 2023ba). The CEC predicts that the demand for gasoline will continue to decline over the next 10 years, and there will be an increase in the use of alternative fuels (CEC, 2016b). According to CARB’s EMFAC2021 Web Database, Kern County on-road transportation sources consumed approximately 405 million gallons of gasoline and 271 million gallons of diesel fuel in 2023 (CARB, 2023).

### 4.6.3 Regulatory Setting

#### Federal

#### Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of US crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy

(CAFE) standards for passenger cars starting in model year 1978. The CAFE standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025 that required a fleet average of 54.5 miles per gallon (mpg) for model year 2025. However, on March 30, 2020, the U.S. Environmental Protection Agency (EPA) finalized an updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021–2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 mpg for model year 2026 vehicles (85 Federal Register 24174 (April 30, 2020)).

On December 21, 2021, under direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration repealed Safer Affordable Fuel Efficient Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, on March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards in response to EO 13990. Fuel efficiency under the standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which would be a 10 MPG increase relative to model year 2021 (NHTSA 2022).

## **Corporate Average Fuel Standards**

The Energy Policy and Conservation Act of 1975 established the first fuel economy standards for on-road motor vehicles sold in the United States. The National Highway Traffic and Safety Administration is responsible for establishing vehicle standards and revising existing standards. Their Corporate Average Fuel Economy program was created to determine vehicle manufacturers' compliance with the fuel economy standards. The USEPA administers the testing program that generates fuel economy data.

## **Energy Policy Act of 2005**

The Energy Policy Act of 2005 was intended to establish a comprehensive, long-term energy policy and is implemented by the U.S. Department of Energy. The act addresses energy production in the United States, including oil, gas, coal, and alternative forms of energy, and energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy-efficient homes, production or purchase of energy-efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of greenhouse gases (GHGs).

## **Energy Independence and Security Act of 2007**

Signed into law in December 2007, the Energy Independence and Security Act was passed to increase the production of clean renewable fuels, increase the efficiency of products, buildings, and vehicles, improve the energy performance of the federal government, increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The act included the first increase in fuel economy standards for passenger cars since 1975 and also included a new energy grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs.

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## **Executive Order 13514 (2009)**

Executive Order (EO) 13514 sets sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. A national policy, the EO instituted a mandate that federal agencies must measure, report, and reduce their GHG emissions from direct and indirect activities.

## **State**

### **California Energy Commission**

The CEC was created in 1974 under the Warren-Alquist Act as the State's principal energy planning organization to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.
- Promote research, development and demonstration.
- Plan for and direct the state's response to energy emergencies.

### **Senate Bill 1389**

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323; SB 1389) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code Section 25301[a]). The 2016 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California including energy efficiency, strategies related to data for improved decisions in the Existing Buildings Energy Efficiency Action Plan, building energy efficiency standards, the impact of drought on California's energy system, achieving 50 percent renewables by 2030, the California Energy Demand Forecast, the Natural Gas Outlook, the Transportation Energy Demand Forecast, Alternative and Renewable Fuel and Vehicle Technology Program benefits updates, update on electricity infrastructure in Southern California, an update on trends in California's sources of crude oil, an update on California's nuclear plants, and other energy issues.

### **California's Renewables Portfolio Standard**

Senate Bills (SBs) 1078 and 107, California's Renewable Portfolio Standards (RPS), obligated investor-owned utilities, energy service providers, and Community Choice Aggregations to procure an additional 1 percent of retail sales per year from eligible renewable sources until 20 percent was reached by 2010. The California Public Utilities Commission and CEC are jointly responsible for implementing the program. SB



X 1-2, called the California Renewable Energy Resources Act, obligates all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. As noted below, SB 350 increased the RPS to 50 percent for 2030, and SB 100 increased the RPS to 100 percent by 2045.

## **California Assembly Bill 1493 (AB 1493, Pavley)**

Known as Pavley I, Assembly Bill (AB) 1493 provided the nation's first GHG standards for automobiles. AB 1493 required the California Air Resources Board (CARB) to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. In 2012, additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the Advanced Clean Cars measure) was adopted for vehicle model years 2017–2025. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025.

In August 2022, the CARB Board members voted to approve the Advanced Clean Cars II proposal, which will dramatically reduce emissions from passenger cars for model years 2026 through 2035. This requires an increasing proportion of new vehicles to be zero-emission vehicles, with the goal of 100 percent zero emission vehicles for new vehicles sold by 2035.

CARB also adopted the Advanced Clean Truck Regulation to accelerate a large-scale transition of zero-emission medium-and-heavy-duty vehicles. The regulation requires the sale of zero-emission medium-and-heavy-duty vehicles as an increasing percentage of total annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. By 2045, every new medium-and-heavy-duty truck sold in California will be zero-emission. Large employers including retailers, manufacturers, brokers, and others are required to report information about shipments and shuttle services to better ensure that fleets purchase available zero-emission trucks.

## **Executive Order S-03-05 (2005)**

EO S-03-05 is designed to reduce California's GHG emissions to (1) 2000 levels by 2010; (2) 1990 levels by 2020; and (3) 80 percent below 1990 levels by 2050.

## **California Health and Safety Code (HSC), Division 25.5/California Global Warming Solutions Act of 2006**

In 2006, the California State Legislature adopted AB 32 (codified in the California HSC, Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. Under HSC Division 25.5, CARB has the primary responsibility for reducing the State's GHG emissions; however, AB 32 also tasked the CEC and the California Public Utilities Commission (CPUC) with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

Since AB 32's adoption, CARB, CEC, the California Public Utilities Commission, and the California Building Standards Commission have been developing regulations that will help the state meet the goals of AB 32 and EO S-03-05. The scoping plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires CARB and other state agencies to develop and enforce regulations and other initiatives to reduce GHG emissions. The AB 32 Scoping Plan, first adopted in 2008, comprises the

state's roadmap for meeting AB 32's reduction target. Specifically, the scoping plan articulates a key role for local governments by recommending that they establish GHG emissions-reduction goals for both their municipal operations and the community that are consistent with those of the state (i.e., approximately 15 percent below current levels) .

CARB re-evaluated its emissions forecast in light of the economic downturn and updated the projected 2020 emissions to 545 million metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>). Two reduction measures (Pavley I and RPS [12 percent–20 percent]) that were not previously included in the 2008 scoping plan baseline were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 million MTCO<sub>2e</sub>. The updated forecast of 507 million MTCO<sub>2e</sub> is referred to as the AB 32 2020 baseline. An estimated reduction of 80 million MTCO<sub>2e</sub> is necessary to lower statewide emissions to the AB 32 target of 427 million MTCO<sub>2e</sub> by 2020.

CARB approved the *First Update to the Scoping Plan* on May 22, 2014. The first update includes both a 2020 element and a post-2020 element. The 2020 element focuses on the state, regional, and local initiatives that are being implemented now to help the state meet the 2020 goal.

## Low Carbon Fuel Standard

EO S-01-07, the Low Carbon Fuel Standard (LCFS), mandates (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, with a reduction in the carbon content of fuel by a quarter of a percent starting in 2011; and (2) that an LCFS for transportation fuels be established in California. The EO initiated a research and regulatory process at CARB. Note that the majority of the emissions benefits due to the LCFS come from the production cycle (i.e., upstream emissions) of the fuel, rather than the combustion cycle (i.e., tailpipe). As a result, LCFS-related reductions are not included in this analysis of combustion-related emissions of carbon dioxide (CO<sub>2</sub>).

## Tractor-Trailer Greenhouse Gas Regulation (2013)

CARB approved the Tractor-Trailer Greenhouse Gas Regulation to reduce GHG emissions by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires. The regulation applies to certain Class 8 tractors manufactured for use in California and complements the parallel EPA and National Highway Traffic Safety Administration heavy-duty truck standards. This regulation could reduce fuel consumption and GHG emissions from new heavy-duty trucks by 4–5 percent per year between 2014 and 2018.

## Senate Bill 350 (2015)

Signed into law in October 2015, SB 350 (also known as the *Clean Energy and Pollution Reduction Act of 2015*) requires CARB (in coordination with the CPUC and CEC) to coordinate and implement the following overarching goals:

- Increase the RPS to 50 percent of retail sales by 2030 and ensure grid reliability.
- Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.

- Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in their integrated resource plans (IRPs) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs. The IRPs will detail how each large utility will meet their customers resource needs, minimize price increases, reduce emissions, and ramp up the deployment of clean energy resources.

## Senate Bill 100 (2018)

SB 100 (*De León*, also known as the *California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases*) was approved by the California legislature and signed by Governor Brown in September 2018. The bill increases RPS in 2030 from 50 percent to 60 percent and establishes a goal of 100 percent RPS by 2045.

## Executive Order B-55-18 (2018)

Approved by the California legislature and signed by Governor Brown in September 2018, EO B-55-18 acknowledges the environmental, community, and public health risks posed by future climate change. It further recognizes the climate stabilization goal adopted by 194 states and the European Union under the Paris Agreement. Although the United States was not party to the agreement, California is committed to meeting Paris Agreement goals and exceeding them wherever possible. Based on the worldwide scientific agreement that carbon neutrality must be achieved by the mid-twenty-first century, EO B-55-18 establishes a new state goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter.

EO B-55-18 charges CARB with developing a framework for implementing and tracking progress toward these goals. This EO extends EO S-3-05 but is only binding on state agencies. The 2022 Scoping Plan identifies a technologically feasible, cost-effective path for achieving carbon neutrality by 2045 or earlier, consistent with the goals of EO B-55-18 (see **Chapter 5.8**, *Greenhouse Gas Emissions*).

## Assembly Bill 1279 (2022)

Assembly Bill (AB) 1279 (Health and Safety Code Section 38562.2) requires California to achieve net zero GHG emissions (i.e., reach a balance between the GHGs emitted and removed from the atmosphere) no later than 2045 and to achieve and maintain net negative GHG emissions from then on. It also mandates an 85 percent reduction in statewide anthropogenic GHG emissions (from 1990 levels) by 2045. AB 1279 recognizes that meeting these targets requires direct GHG emission reductions and removal of carbon dioxide from the atmosphere, as well as a nearly complete transition from fossil fuels. As such, the bill directs CARB to work with relevant state agencies to ensure Scoping Plan updates include measures that put California on a trajectory to achieve these targets. It also tasks CARB with implementing strategies that facilitate carbon dioxide removal (CDR) solutions and carbon capture, utilization, and storage technologies (CCUS). To evaluate the State's progress, AB 1279 requires that CARB report progress toward these targets to the Legislature annually. By 2035, the bill directs CARB to assess the feasibility and tradeoffs of reducing statewide anthropogenic GHG emissions to 85 percent below 1990 levels by 2045 and report its findings to the Legislature.

## **Senate Bill 1020 (2022)**

SB 1020 (*Laird*, also known as the *Clean Energy, Jobs, and Affordability Act of 2022*) was approved by the California legislature and signed by Governor Newsom in September 2022. The bill revises state policy to instead provide that renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by 2035, 95 percent of retail sales of electricity to California customers by 2040, and 100 percent of all retail sales of electricity to California customers by 2045.

## **California Air Resources Board**

### ***CARB's Advanced Clean Car Program***

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations. The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the Zero-Emissions Vehicle regulations (ZEV) to require manufactures to produce an increasing number of pure ZEV's (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025.

### ***Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling***

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

### ***Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles.***

In addition to limiting exhaust from idling trucks, in 2008, CARB approved the Truck and Bus regulation to reduce NO<sub>x</sub>, PM10, and PM2.5 emissions from existing diesel vehicles operating in California (13 CCR, Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. The phasing of this regulation has full implementation by 2023.

CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007 aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR Section

2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

While the goals of these measures are primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

## California Environmental Quality Act

In late 2018, the California Natural Resources Agency finalized updates to the 2018 *CEQA Guidelines* (California Natural Resources Agency, 2018). Appendix G was amended to now include the analysis of energy. Previously included in Appendix F, the Appendix G Checklist now provides energy criteria for the analysis of wasteful energy consumption and conflicts with state or local energy efficiency plans (California Natural Resources Agency, 2018). Appendix F did not describe or require significance thresholds for determining the significance of impacts related to energy. According to the updated Appendix G Checklist, Issue VI. Energy, a project would have a significant impact on energy and energy resources if it would:

- a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In order to assure that energy implications are considered in project decisions, State CEQA Guidelines Appendix F, *Energy Conservation*, provides direction regarding Public Resources Code Section 21100(b)(3)). CEQA requires that environmental impact reports (EIRs) include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Per the State CEQA Guidelines, information identified in Appendix F should only be included where applicable or relevant to the proposed project, and it is noted that, in some cases, additional items may need to be included in the discussion.

State CEQA Guidelines Section 15126.2(b), which was recently added as part of the 2018 comprehensive update, provides the following guidance for energy impacts:

If analysis of the project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources, the EIR shall mitigate that energy use. This analysis should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project. (Guidance on information that may be included in such an analysis is presented in Appendix F.) This analysis is subject to the rule of reason and shall focus on energy use that is caused by the project. This analysis may be included in related analyses of air quality, greenhouse gas emissions, transportation or utilities in the discretion of the lead agency.

State CEQA Guidelines Appendix F, *Energy Conservation*, provides that the goal of conserving energy implies the wise and efficient use of energy. Appendix F provides three means of achieving this goal:

1. Decreasing overall per capita energy consumption;
2. Decreasing reliance on fossil fuels such as coal, natural gas and oil, and;
3. Increasing reliance on renewable energy sources.

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## Local

### Kern County General Plan

The Kern County General Plan was originally adopted on June 15, 2004, and last amended on September 22, 2009. The General Plan's Energy Element includes a discussion of solar development and the aim to accommodate future growth and development in an intentional approach. Because of favorable climatic conditions in the desert and valley regions of Kern County, large-scale use of solar energy represents a major potential energy resource. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the proposed project. Therefore, they are not listed below.

#### ***Chapter 5. Energy Element***

##### **5.4.5. Solar Energy Development**

###### ***Goal***

Goal 1: Encourage safe and orderly commercial solar development.

###### ***Policies***

Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.

Policy 2: The County should attempt to identify and remove disincentives to domestic and commercial solar energy development.

Policy 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.

Policy 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***

Measure 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.

### Willow Springs Specific Plan

The proposed project area also encompasses 518 acres of Kern County's Willow Springs Specific Plan (WSSP) area. The WSSP was adopted in April 2008 and contains goals, policies, and standards that are compatible with those in the Kern County General Plan, but unique to the specific needs of the Willow Springs area. There are no specific energy-related policies and measures contained in the WSSP that are applicable to the proposed project (ICF, 2023).

## 4.6.4 Impacts and Mitigation Measures

### Methodology

The potential impacts analysis is based on an evaluation of whether construction and operational energy-use estimates for the proposed project would be considered excessive, wasteful, or inefficient, taking into consideration that the proposed project would provide a new source of renewable energy. The energy use associated with fuel consumption during both project construction and operations was calculated by converting GHG emissions (i.e., CO<sub>2</sub> emissions) estimated for the proposed project in the Air Quality Technical Report analysis (**Appendix D.1**) of this EIR, using the rate of CO<sub>2</sub> emissions emitted per gallon of combusted gasoline (8.78 kilograms/gallon) and diesel (10.21 kilograms/gallon).

### Construction

Electricity is not expected to be consumed in large quantities during project construction. However, electricity is expected to be consumed from well-water pumping and conveyance for dust suppression during construction. Natural gas is not proposed to be consumed during project construction (i.e., no natural gas-powered equipment or vehicles). Therefore, natural gas associated with construction activities was not calculated.

Regarding transportation-related fuel consumption during construction, the project construction equipment and haul trucks would likely be diesel-fueled, while the construction worker commute vehicles would primarily be gasoline-fueled. The estimated fuel consumption was converted to BTUs, assuming an energy intensity of 109,772 BTUs per gallon of gasoline and 127,460 per gallon of diesel. The water-related energy use during both project construction and operations was calculated using water-usage assumptions, in combination with California Emissions Estimator Model (CalEEMod) defaults for electricity intensity factors associated with water conveyance, treatment, and distribution.

### Operation

Electricity would be used during the operation of the proposed project for pumping and conveying water for panel washing, up to once per year. As with construction, water-related energy use during project operations was calculated using water usage assumptions provided by the applicant and includes water pump horsepower, wattage, water throughput, and total operational time. The energy use associated with operation of the Operation and Maintenance Building(s) (i.e., electricity consumption from staff use of lighting) was based on the total square footage of the two facilities (1,000 square feet per facility) in combination with CalEEMod defaults for energy intensity values (electricity usage per square foot per year) for non-residential buildings.

Natural gas is not proposed to be consumed during project operation. Therefore, natural gas associated with operations was not calculated.

Energy for transportation from employees to the project site was estimated based on the predicted number of trips to and from the project site and the estimated VMT. The analysis assumed operation and maintenance of the proposed project would require up to approximately 15 part-time or full-time staff that would operate the facility at the adjacent BigBeau O&M building. Pick-up trucks as well as the vehicles used by workers commuting to and from the project site are assumed to likely use gasoline. On-site

operational equipment including the backup generator required at the proposed project substation is likely to use diesel.

Proposed project staff would use the O&M facility immediately adjacent to the project site at the BigBeau Solar Facility. Energy use associated with operation of the BigBeau O&M building was previously analyzed, and any change in electricity use associated with the proposed project is anticipated to be minimal. The estimated electricity consumption during project construction and operations, provided in kilowatt-hours (kWh), was converted to BTUs using an energy intensity of 3,412 BTU per kWh.

## Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify, per Appendix G of the *CEQA Guidelines*, a project would have a significant impact on energy and energy resources if it would:

- a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

## Project Impacts

**Impact 4.6-1: The project would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

### ***Construction***

Construction of the proposed project would result in fuel consumption from the use of construction tools and equipment, haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. As shown in **Table 4.6-4, *Project Construction Energy Usage***, project construction is expected to consume a total of approximately 1,335,389 gallons of diesel fuel (170,208 million BTUs) from construction equipment and vendor, hauling, and water truck trips and approximately 143,963 gallons of gasoline (15,803 million BTUs) from construction worker vehicle trips. In addition, 724,041 kWh of electricity (2,470 million BTUs) are expected to be consumed from water use during construction (ICF, 2023). Note that while construction may include construction trailers that will connect to electricity, consumption has not been estimated in this analysis because the size of these trailers is unknown at this time, and any electricity consumption to power basic office needs would be negligible.



**TABLE 4.6-4: PROJECT CONSTRUCTION ENERGY USAGE**

Source	Energy Unit		Unit Conversion	
	Gallons	kWh	BTU	MBTU
Trucks (diesel)	781,645 <sup>a</sup>	–	99,628,475,910	99,628
Workers (gasoline)	143,963 <sup>b</sup>	–	15,803,145,798	15,803
Equipment (diesel)	553,744 <sup>a</sup>	–	70,580,190,220	70,580
Water (kWh)	–	724,041	2,470,427,626	2,470
<b>Total</b>	–	–	–	<b>188,482</b>

SOURCE: Appendix G

NOTES:

Construction is over the life of project construction.

<sup>a</sup> Gallons of diesel fuel<sup>b</sup> Gallons of gasoline

Construction activities and corresponding fuel energy consumption would be temporary and localized because the use of diesel fuel and heavy-duty equipment would not be a typical condition of the proposed project. In addition, there are no unusual project characteristics that would cause the use of construction equipment that would be less energy efficient compared with other similar construction sites in other parts of the state. Construction of the proposed project requires the modeled number of equipment, vehicles, and workers to complete the proposed project in a time- and cost-efficient manner. Furthermore, as shown in **Table 4.6-5, Project Operational Energy Usage**, the proposed project's renewable energy production would greatly offset the project's construction and operational energy usage. Therefore, construction-related fuel consumption as a result of implementation of the proposed project is not anticipated to result in inefficient, wasteful, or unnecessary energy use compared with other similar types of construction sites in the region and impacts would be less than significant.

Energy consumption associated with decommissioning activities are anticipated to be similar to construction activities. As with energy consumption associated with construction, decommissioning energy use is expected to be offset by the renewable energy produced during the operational phase of the proposed project. Moreover, the estimated lifetime of the proposed solar panels is 35 years. Should decommissioning of the proposed project occur 35 or more years in the future, energy consumption is expected to be less than what would be experienced by construction of the proposed project due to the relative improvements in energy efficiency and use of renewable energy resources for vehicles and equipment from incrementally stringent emissions and fuel efficiency standards. Furthermore, implementation of Mitigation Measure MM 4.3-1, as provided in **Section 4.3, Air Quality**, of this EIR, would require the use of energy-efficient and alternatively-fueled equipment during project construction and would also ensure compliance with Title 13, California Code of Regulations, Section 2449 et seq., which imposes construction equipment idling restrictions. Compliance with Title 13 would also help to reduce unnecessary fuel consumption during project construction. Therefore, the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of transportation fuels.

## Operation

Upon completion of construction and testing phases, the proposed project would be operated primarily during daylight hours, but also when the battery energy storage system (BESS) is being dispatched. The proposed project would receive service power from SCE, whereas the substation control house would include a generator for emergency backup. Electricity would be consumed during operations; however, the demand would be offset by the power generated by the proposed project. Electricity consumption during operation is anticipated to be mainly from monitoring equipment and safety lighting and associated with backup power to the BESS.

Energy consumption during operation is presented in **Table 4.6-5, Project Operational Energy Usage**. During operation of the solar facility, there would be periodic visits to the project site by personnel for inspection, security checks, maintenance, and system monitoring, as well as annual panel washing. Operation and maintenance of the proposed project would require up to approximately 15 part-time or full-time staff that would operate the facility at the adjacent BigBeau O&M building. Pick-up trucks, likely using gasoline, would access the project site periodically for operations and maintenance. Gasoline would also be required by workers commuting to and from the project site. The proposed project overall would require the use of approximately 13,272 gallons of diesel fuel (1,692 million BTUs) per year and approximately 10,370 gallons of gasoline (1,138 million BTUs) per year during operation of the facility. In addition, 39,822 kWh (136 million BTUs) per year of electricity is expected to be consumed through water use.

**TABLE 4.6-5: PROJECT OPERATIONAL ENERGY USAGE**

Source	Gallons/kWh	BTU	MBTU
Trucks (diesel)	2,059 gallons <sup>a</sup>	262,485,928	262
Workers (gasoline)	10,370 gallons <sup>b</sup>	1,138,340,932	1,138
Power Washers (diesel)	10,686 gallons <sup>a</sup>	1,362,056,172	1,362
Emergency Generator (diesel)	526 gallons <sup>a</sup>	67,071,793	67
Water (kWh)	39,822 kWh	135,873,519	136
Displaced Electricity (annual)	-870,000,000 kWh	-2,968,440,000,000	-2,968,440
<b>Total</b>			<b>-2,965,474</b>

SOURCE: Appendix G

NOTES: Operational consumption is on an annual basis.

<sup>a</sup> Gallons of diesel fuel

<sup>b</sup> Gallons of gasoline

Total annual electricity generation is estimated to be 870,000 MWh (-2,968,440 million BTU), which more than offsets the energy consumed annually to operate the proposed project and the project's total energy consumption during construction (-2,965,474 million BTU). The proposed project's electricity demand would not constitute a wasteful, inefficient, or unnecessary use of energy. Operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources and would result in beneficial effects as a result of the net generation of renewable clean energy.

In addition, implementation of the proposed project would support the means of achieving energy conservation as outlined in the State CEQA Guidelines, Appendix F. In accordance with Appendix F, the proposed project would decrease reliance on fossil fuels such as coal, natural gas and oil, and would increase reliance on renewable energy sources. Further, the proposed project would not be expected to increase overall per capita energy consumption. Thus, the proposed project would support the goal of achieving energy conservation as outlined in the State CEQA Guidelines, Appendix F, and would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant.

### ***Mitigation Measures***

Implementation of Mitigation Measure MM 4.3-1 is required as provided in **Section 4.3**, *Air Quality*, of this EIR.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM-4.3-1, as provided in **Section 4.3**, *Air Quality*, of this EIR, impacts would be less than significant.

### **Impact 4.6-2: The project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.**

#### ***Construction***

Construction equipment would comply with federal, State, and regional requirements where applicable. Construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of five minutes at a location and the phase-in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these regulations 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.

#### ***Operation***

The proposed project involves the construction, operation and maintenance of a solar and BESS facility that would produce a new renewable source of energy in Kern County. Therefore, the proposed project would directly support California's goal to have renewable or zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers by 2045, pursuant to SB 1020.

The proposed project would require the use of fuel and minimal amounts of electricity throughout its lifespan. However, these energy inputs would be offset by the proposed project's anticipated generation of approximately 870,000 MWh annually.

Because the proposed project would provide a new source of renewable energy supporting the state's energy goals, offset its fuel usage, and comply with fuel and energy efficiency regulations, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Overall, because the main objectives of the proposed project are to assist California Investor-Owned utilities in meeting their obligations under California's RPS Program and assist California in meeting the GHG

emissions reduction goal of 1990 level GHG emissions by 2020, as required by AB 32, and the future reduction goal of 40 percent below 1990 levels by 2030, the proposed project would be compliant with the applicable recommended actions of the CARB Climate Change Scoping Plan, as well as, applicable federal, state and local policies. Specifically, the proposed project would assist the State and regulated utility providers to generate a greater portion of energy from renewable sources consistent with the 2020 and 2030 RPS. Therefore, this impact would be less than significant.

### ***Mitigation Measures***

No mitigation measures would be required.

### ***Level of Significance***

Impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

Kern County has several projects within 6 miles of Bullhead Solar that are in various phases of development, with most currently under construction. In addition to those in close proximity to the project site, Kern County currently has numerous solar and wind renewable energy projects underway in the Antelope Valley, ranging from 0.5 MW at the smallest plant to 1,008 MW at the largest.

Similar to the proposed project, cumulative projects identified in the region generally would require the use of fossil fuels, primarily during construction, with some small energy use associated with ongoing operations. A cumulative energy consumption impact would occur if development associated with projects identified on the Kern County Planning and Natural Resources Department's Energy Project list, or projects within the geographic scope of the cumulative impact analysis for energy use, would increase energy consumption throughout the region when combined with the proposed project. The cumulative projects in the region would result in the development of renewable energy projects in an area currently served by The Gas Company and SCE, and the development of the cumulative projects would not result in an expansion of The Gas Company or SCE's service area. The cumulative projects would be required to comply with the same regulations and policies as the proposed project, including Title 24 energy efficiency standards, which promote energy efficiency and reduce inefficient, wasteful, and unnecessary consumption of energy, as well as other County-specific requirements. Further, the proposed project would implement Mitigation Measure MM 4.3-1, as provided in **Section 4.3, *Air Quality***, of this EIR, which would require the use of energy-efficient and alternatively-fueled equipment during project construction. The proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. The result of the proposed project would be a net gain in renewable energy, offsetting emissions from construction and furthering state-wide renewable energy goals. Further, the proposed project would decrease reliance on fossil fuels such as coal, natural gas and oil, and would increase reliance on renewable energy sources. Therefore, impacts from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The proposed project would instead support renewable energy goals and provide an additional source of renewable energy to the County and state. Similar to the proposed project, cumulative projects in proximity to the proposed project and within the Antelope Valley are utility-scale solar power generation

facilities. These cumulative projects would also support renewable energy goals and be required to be designed in compliance with the building energy efficiency standards and comply with any applicable state plans for renewable energy and energy efficiency to the extent required by law. Cumulative impacts would be less than significant, and the proposed project's contribution to cumulative energy impacts would not be cumulatively significant.

### ***Mitigation Measures***

Implement Mitigation Measure MM 4.3-1, as provided in **Section 4.3**, *Air Quality*, of this EIR.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.3-1, as provided in **Section 4.3**, *Air Quality*, of this EIR, impacts would be less than significant.

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## **4.7.1 Introduction**

This section of the Environmental Impact Report (EIR) describes the geologic and soil characteristics of the project site and potential geology and soils impacts associated with construction and operation of the proposed project and mitigation measures that would reduce these impacts, if applicable. The analysis in this section is based in part on the *Geology and Soils Technical Report* (**Appendix H**; ICF, 2023) and the *Paleontological Inventory Report* (**Appendix I**; Paleo Solutions, Inc., 2022) prepared for the project.

## **4.7.2 Environmental Setting**

### **Regional Geologic Setting**

The project site is located in the western portion of the Mojave Desert. The western Mojave area is bordered by rugged mountain ranges that reach elevations of 10,080 and 7,900 feet above sea level, respectively. The desert has comparatively low relief and consists of an alluviated plain containing irregularly trending bedrock hills and low mountains. The western Mojave Desert region is a tectonic block known as the Mojave block, bounded on the southwest by the San Andreas fault zone and on the northwest by the Garlock fault zone. The San Andreas Fault is the master fault of an intricate fault network cutting through the California coastal region; the fault extends from northern California to the San Bernardino area of southern California. The Garlock Fault is an active east-northeast-striking left-lateral strike-slip fault in southern California that clearly marks the northern boundary of the Mojave Block and the southern ends of the Sierra Nevada and the valleys of the westernmost Basin and Range province. The project site is intersected by the potentially active Willow Springs fault.

The project site where the solar arrays are proposed is located within the Willow Springs, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle map (quad). Gen-tie line options extend into the Tylerhorse Canyon, Little Buttes, and Fairmont Butte quads, whereas proposed access roads are within the Willow Springs and Little Buttes quads. Rock units within the Willow Springs quad area consist of crystalline rocks of pre-Tertiary age, pyroclastic, volcanic, and sedimentary rocks of Tertiary age; and alluvial sedimentary deposits of Quaternary age. Most of the Willow Springs quad lies within a part of the western Mojave Desert that is generally flat and includes some low hills and a few volcanic buttes (ICF, 2023).

### **Local Geologic Setting**

#### **Soils and Topography**

The proposed project site is on relatively flat land that gently slopes from the northwest toward the southeast. Topography within the project site (i.e., solar array) decreases gradually from 2,760 feet down

to 2,640 feet above mean sea level. The area generally has low relief without significant topographic features.

The primary soil units located on the project site at the proposed solar array area include Cajon loamy sand, Hesperia fine sandy loam, DeStazo sandy loam, and Cajon sand. The primary soil units identified within gen-tie locations include:

- **Gen-tie Option 1 to Rosamond Substation:** DeStazo sandy loam, Hesperia fine sandy loam, Arizo gravelly loamy sand, Mohave coarse sandy loam, Adelanto coarse sandy loam, Rosamond fine sandy loam, Rosamond loam
- **Gen-tie Option 2 to Rosamond Substation:** Cajon loamy sand, DeStazo sandy loam, Hesperia fine sandy loam, Rosamond loam, Rosamond fine sandy loam, and sunrise sandy loam
- **Gen-tie Option 3 to Rosamond Substation:** DeStazo sandy loam, Arizo gravelly loamy sand, Hesperia fine sandy loam, Mohave coarse sandy loam, Cajon loamy sand, Rosamond loam, Adelanto loamy sand, and Rosamond silty loam. Adelanto loamy sand, Hesperia fine sandy loam, Rosamond loam, and Rosamond silty clay loam
- **Gen-tie Option 4 to Whirlwind Substation (including portion co-located with the existing AVTL):** Cajon loamy sand, Hesperia fine sandy loam, Arizo gravelly loamy sand, Hanford coarse sandy loam, Greenfield sandy loam, Hanford gravelly sandy loam, Ramona coarse sandy loam, Ramona fine sandy loam, and Hesperia fine sandy loam and Cajon loamy sand

These soils are well drained or somewhat excessively drained loams with moderately slow to rapid permeability and negligible to rapid runoff; see **Appendix H** (ICF, 2023).

## Groundwater

The project site is located within the Antelope Valley Groundwater Basin of the South Lahontan Hydrologic Region and encompasses 1,580 square miles in the western Mojave Desert (CDWR 2004, 2016). The basin is bounded by the Garlock fault zone on the northwest and the San Andreas fault to the southwest, where the Tehachapi Mountains meet the San Gabriel Mountains. The runoff from the northern mountains flows through ridges, buttes, and low hills into Rosamond Lake. Big Rock and Little Rock Creeks alone are estimated to contribute more than 50 percent of the runoff. Total runoff from the San Gabriel Mountains (including runoff from Big Rock and Little Rock Creeks) has been estimated to contribute up to 80 percent of the total natural recharge in the basin. Based on the USGS National Water Information System and California State Elevation Monitoring databases, groundwater monitoring in March 2021 indicated groundwater depth of approximately 199 feet below ground surface (bgs). Groundwater monitoring data was recorded from a privately-owned well onsite (well DW245); see **Appendix H** (ICF, 2023). DW245 is an approximately 960-foot-deep irrigation well located in the southwestern portion of the project site.

Groundwater provides approximately 79 percent of the Antelope Valley basin's water supply. The Sustainable Groundwater Management Act 2019 – Basin Prioritization Process and Results considers Antelope Valley as not critically over-drafted and “very low” priority. Almost 90 percent of the groundwater is adjudicated; see **Appendix H** (ICF 2023).

## Faults and Seismic Hazards

The Garlock fault zone is one of the most prominent geologic features in Southern California, clearly marking the northern boundary of the area known as the Mojave Block, as well as the southern ends of the



Sierra Nevada and the valleys of the westernmost Basin and Range province. The Garlock fault is capable of producing earthquakes of at least magnitude 8. The occurrence of the last large-magnitude earthquake on the Garlock fault and the recurrence interval are not known. The Garlock fault zone is approximately 10 miles northwest of the project site.

The San Andreas Fault is the master fault of an intricate fault network cutting through the California coastal region; the fault extends from Northern California southward to Cajon Pass, near San Bernardino, ending at its southern terminus beneath the Salton Sea. In the 1857 Fort Tejon earthquake, the San Andreas fault ruptured for a distance of 200 miles or more. This earthquake is ranked as one of California's greatest earthquakes, and its magnitude has been estimated as  $8.0 \pm 0.5$ . Based on this estimate, an earthquake of magnitude 8.5 is considered the maximum credible earthquake on this portion of the San Andreas fault. Geologic studies show that over the past 1,400 to 1,500 years, large earthquakes have occurred at about 150-year intervals on the southern San Andreas fault. Because the last large earthquake on the southern San Andreas fault occurred in 1857, that section of the fault is considered a likely location for an earthquake within the next few decades. The San Andreas Fault is approximately 17 miles southwest of the project site.

The 2019 Ridgecrest Earthquake Sequence was the first major earthquake to occur in Southern California since the 1999 magnitude 7.1 Hector Mine earthquake. The 2019 Ridgecrest Earthquake Sequence consisted of a magnitude 6.4 earthquake centered 11.3 miles west-southwest of the town of Ridgecrest and a magnitude 7.1 earthquake (34 hours later), located 6.8 miles northwest of the magnitude 6.4 event (USGS 2021). More than 47,000 people in Southern California and as far away as Northern California and Phoenix, Arizona, felt seismic shaking as a result of the Ridgecrest Earthquake Sequence. Due to the far-reaching effects of the sequence, seismic activity was also felt in the proposed project area. The potential for damage to structures or facilities would depend on the earthquake-specific magnitude, location of the earthquake and project design. Both events were thought to have happened on an unidentified shallow strike slip fault in the Eastern California shear zone. The town of Ridgecrest is approximately 57 miles to the northwest of the proposed project site and 9 miles north of the Garlock fault zone (at its closest point). **Table 4.7-1, Probable Earthquake Magnitudes for Regional Faults**, shows approximate distance and magnitudes of regional faults.

**TABLE 4.7-1: PROBABLE EARTHQUAKE MAGNITUDES FOR REGIONAL FAULTS**

Earthquake (Fault)	Approximate Distance to Proposed Project (miles)	Probable Earthquake Magnitude (Moment Magnitude $M_w$ )
Garlock Fault Zone	10	$8.0 \pm 0.5$
Rosamond Fault	1	Less than 8.0
San Andreas Fault Zone	17	$8.0 \pm 0.5$
Willow Springs Fault	0.08	Less than 8.0

SOURCE: ICF 2023 (Appendix H)

### **Fault Rupture**

A fault is a fracture in the earth's crust where rocks or sediment on one side of the fault has moved relative to those on the other side. Faults are the result of excessive strain caused by compression or extension within the earth's crust over time. A fault trace is the line on the earth's surface representing the fault location. The USGS Earthquake Glossary defines an active fault as, "A fault that is likely to have another earthquake sometime in the future. Faults are commonly considered active if they have moved one or more

times in the last 11,700 years.” Earthquake surface fault rupture is the natural phenomenon in which subsurface fault rupture manifests in some form at the ground surface. Surface fault rupture is defined as slip on an “active” fault plane that has propagated upwards to and has offset or disturbed the earth’s surface. Surface faulting may also arise as a secondary effect from other geologic processes such as by aquifer compaction and subsidence or strong ground shaking triggering slip on neighboring faults.

The proposed project is not located in an Alquist-Priolo Zone (DOC 2023d). The proposed project is not located in a fault-rupture hazard zone. The nearest fault-rupture hazard zone is associated with the Garlock fault, which is approximately 10 miles northwest of the project site. Current conditions indicate that future rupture along the Garlock fault zone is likely. The proposed project is not within a State of California earthquake fault zone. The Willow Springs Fault, which traverses the proposed Gen-tie Options 1, 2, and 3, to the Rosamond Substation, is considered a potentially active fault according to the most recent California Geological Survey (CGS) and USGS fault databases (CGS 2023, USGS 2023).

### **Ground Shaking**

Faults located within the project site vicinity have the potential to cause ground shaking to occur on the project site; the magnitude of ground shaking experienced onsite is dependent on the distance to causative faults and the earthquake magnitude (or measure of the amount of energy released during an earthquake event). The closest major active faults that could produce strong seismic shaking in the proposed project area include the Garlock fault (approximately 10 miles to the northwest of the project site) and San Andreas fault (approximately 17 miles to the southwest); see **Appendix H** (ICF 2023).

Several sizable earthquakes have been recorded along the Garlock fault zone, with the most recent being a magnitude 5.7 near the town of Mojave (approximately 13 miles to the northeast of the project study area) on July 11, 1992, known as the Mojave Earthquake. At least one section of the fault has shown movement by creep (steady fault movement) in recent years. The Garlock fault is capable of producing earthquakes of at least magnitude 8. The occurrence of the last large-magnitude earthquake on the Garlock fault and the recurrence interval are not known.

As mentioned above, in the 1857 Fort Tejon earthquake, the San Andreas fault ruptured for a distance of 200 miles or more. This earthquake is ranked as one of California’s greatest earthquakes, and its magnitude has been estimated as  $8.0 \pm 0.5$ . Based on this estimate, an earthquake of magnitude 8.5 is considered the maximum credible earthquake on this portion of the San Andreas fault. Geologic studies show that over the past 1,400 to 1,500 years, large earthquakes have occurred at about 150-year intervals on the southern San Andreas fault. Because the last large earthquake on the southern San Andreas fault occurred in 1857, that section of the fault is considered a likely location for an earthquake within the next few decades.

In addition, there are a few inactive and potentially active faults in the project site that include the Rosamond and Willow Springs faults. The Rosamond fault is classified as a Pre-Quaternary fault, or fault without recognized Quaternary displacement, and therefore inactive. The Willow Springs fault traverses the proposed Gen-tie Options 1, 2, and 3 to the Rosamond Substation. The fault is classified as a Quaternary fault and therefore considered potentially active. Although a ground-shaking event from the Willow Springs fault cannot be completely ruled out, similar to the Rosamond fault, the potential for ground shaking is considered significantly lower than the Garlock and San Andreas faults; see **Appendix H** (ICF, 2023).

### ***Liquefaction***

Liquefaction is a type of ground failure resulting from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Loose granular soils and silts that are saturated by relatively shallow groundwater are susceptible to liquefaction. Factors known to influence liquefaction potential include soil type and depth (typically granular, loose sediments), grain size, relative density, groundwater level (typically less than 50 feet), degree of saturation, and intensity and duration of ground shaking. As noted above, groundwater depths were recorded at approximately 199 feet bgs. In addition, the proposed project site is not within a California Geological Survey Earthquake Zone of Required Investigation for liquefaction (California Geological Survey 2023). Therefore, the potential for liquefaction at the project site is considered low; see **Appendix H** (ICF, 2023).

### ***Landslides***

Landslides generally occur where slopes are steep and/or soils lack cohesiveness. Earthquakes can induce landslides and mass wasting in zones that are susceptible. As described above, the project site is relatively flat with no substantive slopes. The project site generally has low relief without significant topographic features and is not within a California Geological Survey Earthquake Zone of Required Investigation (California Geological Survey 2023 for landslides). The potential for landslides within the project site is considered low; see **Appendix H** (ICF, 2023).

### ***Soil Erosion***

Soil erosion is the wearing away of soil and rock by processes such as mechanical or chemical weathering, mass wasting, and the action of waves, wind and subsurface water flow. Excessive soil erosion can eventually lead to damage of building foundations and roadways. In general, areas that are most susceptible to erosion are those that would be exposed during the construction phase when earthwork activities disturb soils and require temporary stockpiling. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures, asphalt, or slope protection, however changes in drainage patterns can also cause areas to be susceptible to the effects of erosion. There are many factors contributing to soil erosion. Soils containing high silt content have the highest soil erodibility since they are easily detached, tend to crust and produce high rates of runoff (MSU, 2020a). Coarse textured soils, or sandy soils, are easily detached but typically do not produce a lot of runoff, so they have low soil erodibility.

Onsite soils characteristics typically do not produce rapid runoff. Therefore, the soils onsite likely have a moderate to high erosion potential. Long slope length and high slope steepness contribute to higher erosion rates (MSU, 2020b); since the site is relatively flat, erosion potential related to slope length and slope steepness is low.

### ***Land Subsidence***

Land subsidence is a gradual settling or sudden sinking of the Earth's surface due to removal or displacement of subsurface earth materials. Subsidence can also occur naturally when moisture-deficient soils are exposed to water or by human activities including the extraction of oil and gas and the withdrawal of groundwater. According to the Seismic Hazard Atlas map, Figure 15 of the *Kern County General Plan Safety Element*, the proposed project site is not in an area of land subsidence. Additionally, research conducted via the Geologic Energy Management Division (CalGEM) Well Finder website did not identify the project study area as lying within or near an oil or gas field or active oil or gas well. The nearest active

oil or gas field (Tejon Hills) is located approximately 21 miles northwest of the project site. Therefore, based on information reviewed, the potential for subsidence in the proposed project footprint associated with the conditions described above is considered low; see **Appendix H** (ICF, 2023).

### ***Soil Collapse***

Collapsible soils consist of loose, dry, low-density materials that collapse, compact and change in settlement under the addition of water (also known as hydrocompaction) or excessive loading, often resulting in severe damage to structures. These soils are distributed throughout the southwestern United States, specifically in areas of young alluvial fans, debris flow sediments, and loess (wind-blown sediment) deposits (AEEG, 2017). According to the Seismic Hazard Atlas map, Figure 15 of the *Kern County General Plan Safety Element*, the proposed project site is not in an area of hydrocompaction; see **Appendix H** (ICF, 2023).

### ***Expansive Soils***

Expansive soils contain clay types capable of absorbing water in a manner that results in volumetric changes. Over long term periods of cyclical changes in water content, these volumetric changes can end up causing damage to foundations, retaining walls, sidewalks, and roadways. According to the Natural Resources Conservation Service's Web Soil Survey, soils found within the project site (including gen-tie locations and access roads) are predominantly classified as nonplastic to having low plasticity with low expansion potential. Therefore, based on information reviewed, the potential for impacts in the proposed project footprint associated with expansive soils is considered low; see **Appendix H** (ICF, 2023).

## **Paleontological Setting**

Paleontological resources are the mineralized (fossilized) remains of prehistoric plants and animals and the mineralized impressions (trace fossils) left as indirect evidence of the form and activity of such organisms. These resources are located within sedimentary rocks or alluvium and are nonrenewable.

Formations that contain vertebrate fossils are considered more sensitive because vertebrate fossils tend to be rare and fragmentary. Formations containing microfossils, plant casts, and invertebrate fossils are more common. A significant fossil deposit is a rock unit or formation that contains significant nonrenewable paleontological resources. This is defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals such as trackways or nests and middens), which provide datable material and climatic information. This definition excludes invertebrate or botanical fossils except when present within a given vertebrate assemblage. However, invertebrate and botanical fossils may be significant as environmental indicators associated with vertebrate fossils.

Geologic mapping indicates that the project site surface consists mostly of Holocene-age young alluvium (Qa) with lesser amounts of Holocene- to Pleistocene-age older alluvium (Qoa). Also mapped within the vicinity, within a half-mile of the project site, are Holocene-age young sand deposits (Qs); and several members of the Miocene-age Gem Hill Formation, including porphyritic felsite (Tgf); porphyry (Tgp); and tuff, tuff-breccia, and tuffaceous sandstone (Tgt). Further, Holocene- to Pleistocene-age older alluvium (Qoa) occurs at relatively shallow depths below surficial sediments throughout the Mojave Desert Geomorphic Province and, therefore, may be encountered at shallow depths beneath Holocene-age young alluvium (Qa) within the project site.

Younger sedimentary deposits are Holocene in age (approximately less than 11,700 years old) and include young alluvium (Qa) and young sand deposits (Qs). These younger surficial deposits consist of fluvial sediments deposited on broad canyon and valley floors by modern river and stream systems. Sediments consist of variable compositions of clay, silt, sand, gravel, and larger clasts. These younger sediments are generally unconsolidated, undissected, and less topographically developed than older deposits. Holocene-age young alluvium (Qa) is mapped at the surface of the majority of the project site including all gen-tie lines, and Holocene-age young sand deposits (Qs) are mapped east of and within a half-mile of the northeast portion of the project site. Holocene-age deposits that are less than approximately 5,000 years old are typically too young to contain significant fossil resources.

Older sedimentary deposits are Holocene to Pleistocene in age (approximately 2.59 million to less than 11,700 years old) and include older alluvium (Qoa). These older deposits consist of fluvial sediments deposited on broad canyon and valley floors by ancient and modern river and stream systems. Sediments consist of medium- to coarse-grained silt, sand, and gravel from alluvial fans derived from the uplift of adjacent mountains. Compared with younger deposits, Holocene- to Pleistocene-age older sedimentary deposits typically have moderately- to well-developed soil horizons, are more topographically developed, and have moderately to well dissected surfaces, except where obscured by erosion. Holocene- to Pleistocene-age older alluvium (Qoa) is mapped at the surface of the Gen-Tie line Option 4 to the Whirlwind Substation along the western and southwestern margins of the project site and is also mapped north and west of the Gen-Tie line Option 4 to the Whirlwind Substation along the project site's northwestern margins. Numerous fossil taxa have been recovered from Pleistocene-age deposits of Kern County, including specimens of extinct horse (*Equus occidentalis*), rabbit (Leporinae), camel (*Procamelus*), dog (Canidae), rodent (*Thomomys*, *Microtus*, *Dipodomys*, *Neotoma*), frog (*Hyla*), and lizard (Lacertilia). Approximately 30,000 fossil specimens have been collected from Pleistocene sediments at McKittrick Tar Pits in western Kern County, approximately 80 miles northwest of the project site. These specimens include a diversity of species of rodents, rabbits, birds, camels, horses, bison, pronghorn antelope, and mammoths, as well as plants and preserved insects. While the depositional environment of the McKittrick Tar Pit locality differs from that of the project site, there is the potential for a similar fauna to be recovered during project excavations. Pleistocene-aged older alluvium is considered to have moderate paleontological potential.

The Miocene-aged Gem Hill Formation (approximately 23 million to 5.33 million years old) is part of the broader Tropico Group, which has a maximum thickness of 2,800 feet and comprises Pliocene- to Miocene-age non-marine sedimentary and volcanic rocks that are scattered throughout the western Mojave Desert including the proposed project vicinity. The Miocene-age Gem Hill Formation is an older unit of the Tropico Group, and it consists primarily of rhyolite and pyroclastic material as well as mixtures of pyroclastic sedimentary rocks. Three separate units or members of the Miocene-age Gem Hill Formation, including porphyritic felsite (Tgf); porphyry (Tgp); and tuff, tuff-breccia, and tuffaceous sandstone (Tgt), are mapped southeast of the project site and east of and within a half-mile of Gen-tie Options 1 and 3 to the Rosamond Substation. The entire formation is considered to be non-fossiliferous and has no documented localities. The Miocene-age Gem Hill Formation, including all mapped members (Tgf, Tgp, Tgt), is considered to have a very low potential for producing significant paleontological resources; see **Appendix I** (ICF, 2023).

## Existing Paleontological Resources

To evaluate the proposed project's potential effects on significant paleontological resources, Paleo Solutions, Inc. (PSI) conducted a paleontological resources assessment of the project site, which included geologic map review, a literature search, a record search conducted by the Natural History Museum of Los Angeles County (LACM), and a field survey (2022). As described above, the geologic map and literature review indicates the project site is mapped mostly as Holocene-age young alluvium with lesser amounts of Holocene- to Pleistocene-age older alluvium. The methodology and results of these studies are summarized below.

### **Museum Records Search**

A paleontological records search request was sent on May 17, 2021 to the LACM and results were received for paleontological localities within the vicinity of the project site on May 17, 2021. Based on the results of the museum records search, the LACM does not contain records of paleontological resources from within the project site; however, one fossil locality was recorded within close proximity. The location of fossil localities in relation to the project site are shown in **Table 4.7-2, Fossil Localities Recorded Near the Project Site**. Locality LACM VP 7891, located approximately 1.7 miles north of the project site between the Tehachapi Mountains and Rosamond Hills northeast of the intersection of 110<sup>th</sup> Street and Champaign Road, was recorded from unknown Pleistocene-age sediments at 21 feet below the ground surface and produced fossil camel (*Hemiauchenia*). Additionally, there are several localities recorded from the vicinity from sediments similar to those that underlie the project area surface. Locality LACM VP 7853, which is located at the Waste Management of North America Lancaster Landfill, was recorded from unknown Pleistocene-age sediments and produced fossil iguana (*Dipsosaurus*), spiny lizard (*Sceloporus*, Phrynosomatidae), side blotched lizard (*Uta*), night lizard (*Xantusia*), western alligator lizard (*Elgaria*), whiptail lizard (*Aspidocelis*), toothy skink (*Plestiodon*), colubrid snake (*Trimorphodon*, *Masticophis*, *Phyllorhynchus*), smelt (Osmeridae), pocket gopher (*Thomomys*), vole (Microtinae), deer mouse (*Peromyscus*), pack rat (*Neotoma*), pocket mouse (*Perognathus*), kangaroo rat (*Dipodymus*), antelope squirrel (*Ammospermophilus*), rabbit (*Sylvagus*), and camel (Camelidae). Locality LACM VP 7884, which is located east of the southeastern corner of the East 3rd Street and East Avenue H-13 intersection, was recorded from unknown Pleistocene-age sediments and produced fossil camel (*Camelops hesternus*). Locality LACM VP 3722, which is located in Tehachapi, was recorded from unknown Pleistocene-age sediments and produced fossil horse (*Equus*). Localities LACM VP 5941 through 5950, which are located between 90th Street East and 200th Street East in Palmdale, are recorded from unknown Holocene-age sediments and produced fossil leopard lizard (*Gambelia wislizenii*), kingsnake (*Lampropeltis*), bird (Aves), rodent (Rodentia), pocket gopher (*Thomomys*), and rabbit (*Sylvilagus*).

**TABLE 4.7-2: FOSSIL LOCALITIES RECORDED NEAR THE PROJECT SITE**

Locality Number (LACM VP)	Approximate Distance from the Project Site (Miles)	Formation	Taxa	Depth in Feet Below Ground Surface (bgs)
7891	1.7	Unknown	Lamine camelid ( <i>Hemiauchenia</i> )	21 ft bgs
7853	14	Unknown	iguana ( <i>Dipsosaurus</i> ), spiny lizard ( <i>Sceloporus</i> , Phrynosomatidae), side blotched lizard ( <i>Uta</i> ), night lizard ( <i>Xantusia</i> ), western alligator lizard ( <i>Elgaria</i> ), whiptail lizard ( <i>Aspidocelis</i> ), toothy skink ( <i>Plestiodon</i> ), colubrid snake ( <i>Trimorphodon</i> , <i>Masticophis</i> , <i>Phyllorhynchus</i> ), smelt (Osmeridae), pocket gopher ( <i>Thomomys</i> ), vole (Microtinae), deer mouse ( <i>Peromyscus</i> ), pack rat ( <i>Neotoma</i> ), pocket mouse ( <i>Perognathus</i> ), kangaroo rat ( <i>Dipodymus</i> ), antelope squirrel ( <i>Ammospermophilus</i> ), rabbit ( <i>Sylvagus</i> ), camel (Camelidae)	3-11 ft bgs
7884	16	Unknown	camel ( <i>Camelops hesternus</i> )	4 ft bgs
5942-5950	31	Unknown	leopard lizard ( <i>Gambelia wislizenii</i> ), kingsnake ( <i>Lampropeltis</i> ), bird (Aves), rodent (Rodentia), pocket gopher ( <i>Thomomys</i> ), rabbit ( <i>Sylvilagus</i> )	0-3 m bgs
3722	15	Unknown	horse ( <i>Equus</i> )	Unknown

SOURCE: Paleo Solutions, Inc. 2022 (Appendix I)

### **Paleontological Reconnaissance Survey**

The analysis of existing data was supplemented with a pedestrian field survey conducted by PSI on May 20 and 21, 2021 of the project site including Gen-Tie options. The paleontological survey confirmed the presence of Holocene-age young alluvium (Qa) and Holocene-age young sand deposits (Qs) on the project site at a thickness of one foot. Holocene- to Pleistocene-age older alluvium (Qoa) was also observed along the western and southwestern margins of the project site within the vicinity of the Gen-Tie line Option 4 to the Whirlwind Substation at a thickness of six feet. Although mapped within close proximity to the project site, no exposures of Miocene-age Gem Hill Formation (Tgf, Tgp, Tgt) were observed during the survey.

No paleontological resources were observed or collected during the survey. However, sediments conducive to fossil preservation were observed in Holocene- to Pleistocene-age older alluvium (Qoa). Additionally, PSI technicians visited previously recorded fossil locality LACM VP 7891, which is located north of the project site and northeast of the intersection of 110th Street and Champagne Road. The purpose of this supplementary exploration was to search for additional fossils that may be exposed at the surface as well as to compare the surficial sediments with those that are exposed at the project site surface. No further paleontological resources were discovered at locality LACM VP 7891. The surficial sediments, which are also mapped as Holocene-age young alluvium (Qa), are indistinguishable from those that are exposed within the project boundaries and along Gen-Tie Option 4 to the Whirlwind Substation; see **Appendix I** (ICF, 2023).

### 4.7.3 Regulatory Setting

Geologic resources and geotechnical hazards are governed primarily by local jurisdictions. The conservation elements and seismic safety elements of city and county general plans contain policies for the protection of geologic features and avoidance of hazards.

The California Environmental Quality Act (CEQA) is the major environmental statute that guides the design and construction of projects on nonfederal lands in California. This statute establishes a specific process for environmental impact analysis and public review. In addition, the Project Proponent must comply with other applicable federal, State, and local statutes, regulations, and policies. Relevant and potentially relevant statutes, regulations, and policies are discussed below.

## Federal

### Clean Water Act (Erosion Control)

The Federal Clean Water Act (CWA) (33 USC 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point-source and certain nonpoint-source discharges to jurisdictional waters of the United States. Such discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). Projects that disturb one acre or more are required to obtain NPDES coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit), Order No. 2022-0057-DWQ. The General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which includes best management practices (BMPs) to regulate stormwater runoff, including measures to prevent soil erosion. Requirements of the CWA and associated SWPPP are described in further detail in Section 4.10, *Hydrology and Water Quality*.

### Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1997 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the proposed project would be required to adhere.



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## Paleontological Resources

### *Paleontological Resources Preservation Act*

The federal Paleontological Resources Preservation Act of 2002 limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency. These researchers must agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and other researchers. The act incorporates key findings of a report, “Fossils on Federal Land and Indian Lands,” issued by the Secretary of the Interior in 2000, which establishes that most vertebrate fossils and some invertebrate and plant fossils are considered rare resources.

## State

### The Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (formerly the Special Studies Zoning Act) regulates the development and construction of buildings intended for human occupancy to avoid hazards associated with surface fault rupture. In accordance with this law, the California Geological Survey maps active faults and designates Earthquake Fault Zones along mapped faults. This act groups faults into categories (i.e., active, potentially active, or inactive). Historic and Holocene faults are considered active, Late Quaternary and Quaternary faults are considered potentially active, and pre-Quaternary faults are considered inactive. These classifications are qualified by conditions. For example, a fault must be shown to be “sufficiently active” and “well defined” through detailed site-specific geologic explorations to determine whether building setbacks should be established. Any project that involves the construction of buildings or structures for human occupancy, such as an operations and maintenance building, is subject to review under the Alquist-Priolo Earthquake Fault Zoning Act, and any structures for human occupancy must be located at least 50 feet from any active fault.

### The Seismic Hazards Mapping Act of 1990

In accordance with PRC Chapter 7.8, Division 2, the California Geologic Survey is directed to delineate seismic hazard zones. The purpose of the act is to reduce the threat to public health and safety and minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by the California Geological Survey in their land use planning and permitting processes. In accordance with the Seismic Hazards Mapping Act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

## California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress facilities, and general stability of

buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2022 edition of the CBC is based on the 2021 IBC published by the International Code Council. The code is updated triennially, and the 2022 edition of the CBC was published by the California Building Standards Commission in 2022, and took effect starting January 1, 2023. The 2022 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-10, *Minimum Design Loads for Buildings and Other Structures*, provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads) for inclusion into building codes. A load is the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with Chapter 16 of the CBC. Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. Expansive soils are defined in the CBC as follows:

**1803.5.3 Expansive Soil.** In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Soils meeting all four of the following provisions shall be considered expansive, except that tests to show compliance with Items 1,2 and 3 shall not be required if the test prescribed in Item 4 is conducted:

1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D 4318.
2. More than 10 percent of the soil particles pass a No. 200 sieve (75 micrometers), determined in accordance with ASTM D 422.
3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422.
4. Expansion index greater than 20, determined in accordance with ASTM D 4829.

## **Public Resources Code Section 5097.5 and Section 30244**

Other State requirements for paleontological resource management are included in Public Resources Code (PRC) Section 5097.5 and Section 30244; of these two PRC sections, only the latter (Section 30244) applies to the proposed project as the former (Section 5097.5) is only applicable to projects on public land. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to archaeological or paleontological resources.

## **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act, in cooperation with the CWA, established the SWRCB. The SWRCB and the nine RWQCBs are responsible for protecting California's surface water and groundwater supplies. Section 13000 of the act directs each RWQCB to develop Water Quality Control Plans for all areas in its region, to designate the beneficial uses of California's rivers and groundwater basins; these plans are the basis for each board's regulatory program.

The Basin Plan gives direction on the beneficial uses of State waters in Region 6, describes the water quality that must be maintained to support such uses, and includes programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The Lahontan RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements to individuals, communities, or businesses whose waste discharges may affect water quality. These requirements are State Waste Discharge Requirements for discharge to land or federally delegated NPDES permits for discharges to surface water. Responsibility for implementing CWA Sections 401–402 and Section 303(d) is also outlined in the Porter-Cologne Water Quality Control Act.

## **State Regional Water Quality Control Board, Stormwater General Construction Permit**

The five-member SWRCB allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine RWQCBs in the major watersheds

of the State. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters.

In 1999, the State adopted the NPDES General Permit for Stormwater Discharges Associated with Construction Activities (Construction Activities General Permit) (SWRCB Order No. 2022-0057-DWQ, NPDES No. CAS000002). The General Construction Permit generally requires that construction sites with 1 acre or greater of soil disturbance, or less than 1 acre but part of a greater common plan of development, apply for coverage for discharges under the General Construction Permit by submitting a Notice of Intent for coverage, developing a stormwater pollution prevention plan (SWPPP), and implementing best management practices to address construction site pollutants if the proposed project is deemed to discharge into a water of the United States. However, as the project site is in a terminal drainage area of Kern County (e.g., does not drain to a waters of the United States), NPDES coverage is not expected to be required as described in further detail in Section 4.10, *Hydrology and Water Quality*.

The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the proposed project. The SWPPP must list the best management practices (BMP) the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Enrollment under the General Construction Permit is through the Stormwater Multiple Application and Report Tracking System. Additionally, the SWRCB is responsible for implementing the CWA and issues NPDES permits to cities and counties through the individual regional boards.

## Local

Construction and operation of the solar facility would be subject to all applicable policies and regulations contained within the general and specific plans, including the Kern County General Plan, Willow Springs Specific Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to geology and soils. The policies, goals, and implementation measures in the Kern County General Plan related to geology and soils that are applicable to the proposed project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the proposed project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference. Additionally, the policies, goals, and implementation measures in the Willow Springs Specific Plan related to geology and soils that are applicable to the proposed project are provided below.

## Society for Vertebrate Paleontology Professional Standards

The Society for Vertebrate Paleontology (SVP) has established standard guidelines for acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional paleontologists in the nation adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard

guidelines. Most California State regulatory agencies accept the SVP standard guidelines as a measure of professional practice.

As defined by the SVP (2010: 11), significant nonrenewable paleontological resources are:

*fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).*

Numerous paleontological studies have developed criteria for the assessment of significance for fossil discoveries. In general, these studies assess fossils as significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life; or
5. The fossils are in short supply and/or are in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

A geologic unit known to contain significant fossils is considered “sensitive” to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either directly or indirectly disturb, or destroy, fossil remains. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case (SVP, 1995:23).

Fossils are contained within surficial sediments, or bedrock, and are, therefore, not observable, or detectable, unless exposed by erosion or human activity. In summary, paleontologists cannot know either the quality or quantity of fossils prior to natural erosion, or human-caused exposure. As a result, even in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce significant fossils elsewhere within the same geologic unit (both within and outside of the study area), a similar geologic unit, or based on whether the unit in question was deposited in a type of environment that is known to be favorable for fossil preservation. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if these remains are significant, successful mitigation and salvage efforts may be undertaken in order to prevent adverse impacts to these resources.

### **Paleontological Sensitivity**

Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils,

and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its “Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Paleontologic Resources,” the SVP (2010: 1-2) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential:

- **High Potential.** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcanoclastic formations (e. g., ashes or tephtras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.). Rock units which contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or middens, and rock units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.
- **Low Potential.** Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e.g. basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.
- **Undetermined Potential.** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.
- **No Potential.** Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources.

For geologic units with high potential, full-time monitoring is generally recommended during any project-related ground disturbance (SVP, 2010). For geologic units with low potential, full-time monitoring will not generally be required. For geologic units with undetermined potential, field surveys by a qualified vertebrate paleontologist should be conducted to specifically determine the paleontologic potential of the rock units present within the project area.

## Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan for geologic resources applicable to the proposed project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to

development such as the proposed project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

## ***Chapter 1. Land Use, Conservation, and Open Space Element***

### **1.3 Physical and Environmental Constraints**

#### ***Goal***

Goal 1: To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

#### ***Policy***

Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes from 2.6 – 2.9, Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.

#### ***Implementation Measures***

Measure D: Review and revise the County's current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.

Measure N: Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

### **1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation**

#### ***Policy***

Policy 25: The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

#### ***Implementation Measure***

Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

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## **Chapter 4. Safety Element**

### **4.1 Introduction**

#### ***Goal***

Goal 1: Minimize injuries and loss of life and reduce property damage.

### **4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure**

#### ***Policy***

Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

#### ***Implementation Measures***

Measure B: Require geological and soils engineering investigations in identifying significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.

Measure C: The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible in accordance with State and County regulations.

### **4.5 Landslides, Subsidence, Seiche, and Liquefaction**

#### ***Policies***

Policy 1: Determine the liquefaction potential at sites in areas of shallow groundwater (Map Code 2.3) prior to discretionary development and determine specific mitigation to be incorporated into the foundation design, as necessary, to prevent or reduce damage from liquefaction in an earthquake.

Policy 3: Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

## **Willow Springs Specific Plan**

The project site is within the Willow Springs Specific Plan. The Willow Springs Specific Plan was adopted in 1992 and amended in 2008 as part of the Land Use, Open Space, and Conservation Element of the Kern County General Plan. Its goals, policies, and standards are compatible with those of the Kern County General Plan, but are tailored to the particular needs of the expanded Willow Springs area. The geology and soils-related policies and measures contained in the Willow Springs Specific Plan that are applicable to the project are outlined below. Note that only applicable goals, policies, and standards are included here; those goals, policies, and standards that are not applicable are not included.



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## ***Seismic/Safety Element***

### ***Goals***

Goal 1 To preserve cultural resources contained on sensitive sites located within the Willow Springs Specific Plan area.

### ***Policy***

Policy 1 Compliance with site-specific issues, goals, policies, and implementation measures contained in the Seismic/Safety Element of the Kern County General Plan.

### ***Mitigation/Implementation Measures***

Measure 4e The slope and foundation designs for all structures shall be based on detailed soils and engineering studies.

## **Kern County Code of Building Regulations (Title 17 of the Ordinance code of Kern County)**

All construction in Kern County is required to conform to the Kern County Building Code (Chapter 17.08, Building Code, of the Kern County Code of Regulations). Kern County has adopted the CBC, 2022 Edition, with some modifications and amendments. The entire County is in Seismic Zone 4, a designation previously used in the Uniform Building Code (UBC) to denote the areas of highest risk for earthquake ground motion. California has an unreinforced masonry program that details seismic safety requirements for Zone 4. Seismic provisions associated with Seismic Zone 4 have been adopted .

### ***Chapter 17.28. Kern County Grading Code***

The purpose of the Kern County Grading Code (Chapter 17.28, Building Code, of the Kern County Code of Regulations) sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading construction. Sections of the Grading Code that are particularly relevant to geology and soils are provided below.

#### **Section 17.28.140. Erosion Control**

- A. Slopes. The faces of cut-and-fill slopes shall be prepared and maintained to control erosion. This control may consist of effective planting. Protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.
- B. Other Devices. Where necessary, check dams, cribbing, riprap, or other devices or methods shall be employed to control erosion and provide safety.
- C. Temporary Devices. Temporary drainage and erosion control shall be provided as needed at the end of each work day during grading operations, such that existing drainage channels would not be blocked. Dust control shall be applied to all graded areas and materials and shall consist of applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

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**Section 17.28.170. Grading Inspection**

- A. General. All grading operations for which a permit is required shall be subject to inspection by the building official. Professional inspection of grading operations and testing shall be provided by the civil engineer, soils engineer, and the engineering geologist retained to provide such services in accordance with Subsection 17.28.170(E) for engineered grading and as required by the building official for regular grading.
- B. Civil Engineer. The civil engineer shall provide professional inspection within such engineer's area of technical specialty, which shall consist of observation and review as to the establishment of line, grade, and surface drainage of the development area. If revised plans are required during the course of the work they shall be prepared by the civil engineer.
- C. Soils Engineer. The soils engineer shall provide professional inspection within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The soils engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this chapter. Revised recommendations relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, the building official and the civil engineer.
- D. Engineering Geologist. The engineering geologist shall provide professional inspection within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations relating to conditions differing from the approved engineering geology report shall be submitted to the soils engineer.
- E. Permittee. The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this Code, and the permittee shall engage consultants, if required, to provide professional inspections on a timely basis. The permittee shall act as a coordinator between the consultants, the contractor and the building official. In the event of changed conditions, the permittee shall be responsible for informing the building official of such change and shall provide revised plans for approval.
- F. Building Official. The building official may inspect the project at the various stages of the work requiring approval to determine that adequate control is being exercised by the professional consultants.
- G. Notification of Noncompliance. If, in the course of fulfilling their responsibility under this chapter, the civil engineer, the soils engineer, or the engineering geologist finds that the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the building official. Recommendations for corrective measures, if necessary, shall also be submitted.
- H. Transfer of Responsibility. If the civil engineer, the soils engineer, or the engineering geologist of record is changed during the course of the work, the work shall be stopped until:
  - 1. The civil engineer, soils engineer, or engineering geologist, has notified the building official in writing that they will no longer be responsible for the work and that a qualified replacement has been found who will assume responsibility.
  - 2. The replacement civil engineer, soils engineer, or engineering geologist notifies the building official in writing that they have agreed to accept responsibility for the work.

## Kern County Water Quality Control Plan

Each of the nine RWQCBs adopts a Water Quality Control Plan which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's groundwater and surface waters, and local water quality conditions and problems. Water quality problems in the regions are listed in these plans, along with the causes, if they are known. Each RWQCB is to set water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of nuisance, with the understanding that water quality can be changed somewhat without unreasonably affecting beneficial uses.

The Kern County Public Works Department requires the completion of an NPDES Storm Water Program Permit for all construction projects disturbing one or more acre within Kern County. Prior to issuance of the permit, Kern County Engineering, Surveying and Permit Services must verify the applicant's stormwater plans. This form requires the applicant to provide background information on construction activities. Applicants must apply for the permit under one of the following four conditions:

1. All storm water is retained onsite and no storm water runoff, sediment, or pollutants from onsite construction activity can discharge directly or indirectly offsite or to a river, lake, stream, municipal storm drain, or offsite drainage facilities.
2. All storm water runoff is not retained on site, but does not discharge to a Water of the United States (i.e., drains to a terminal drainage facility). Therefore, a SWPPP has been developed and BMPs must be implemented.
3. All storm water runoff is not retained on site, and the discharge is to a Water of the United States. Therefore, a Notice of Intent (NOI) must be filed with the State Regional Water Resources Control Board prior to issuance of the building permit. Also, a SWPPP has been developed and BMPs must be implemented.
4. Construction activity is between one to five acres and an Erosivity Waiver was granted by the SWRCB. BMPs must be implemented.

### 4.7.4 Impacts and Mitigation Measures

#### Methodology

Potential significant impacts associated with the project site were identified based on a review of available online sources, the *Geology and Soils Technical Report* (**Appendix H**; ICF, 2023) and the *Paleontological Inventory Report* (**Appendix I**; Paleo Solutions, Inc., 2022). The CEQA-level technical reports present findings, conclusions, and recommendations concerning development of the proposed project based on an engineering analysis of geotechnical properties of the subsurface conditions and evaluation of the underlying soils.

The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Direct impacts to paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information (significant impact). At the project-specific

level, direct impacts can be mitigated to a less than significant level through the implementation of paleontological mitigation.

The Potential Fossil Yield Classification (PFYC) system was developed by the Bureau of Land Management (BLM, 2016). Because of its demonstrated usefulness as a resource management tool, the PFYC has been utilized for many years for projects across the country, regardless of land ownership. It is a predictive resource management tool that classifies geologic units on their likelihood to contain paleontological resources on a scale of 1 (very low potential) to 5 (very high potential). This system is intended to aid in predicting, assessing, and mitigating paleontological resources. The PFYC system is summarized in **Table 4.7-3, Summary of Paleontological Fossil Yield Classification.**

**TABLE 4.7-3: SUMMARY OF PALEONTOLOGICAL FOSSIL YIELD CLASSIFICATION**

BLM PFYC Designation	Assignment Criteria Guidelines and Management Summary
1 = Very Low Potential	<p>Geologic units are not likely to contain recognizable paleontological resources.</p> <p>Units are igneous or metamorphic, excluding air-fall and reworked volcanic ash units.</p> <p>Units are Precambrian in age.</p> <p>Management concern is usually negligible, and impact mitigation is unnecessary except in rare or isolated circumstances.</p>
2 = Low Potential	<p>Geologic units are not likely to contain paleontological resources.</p> <p>Field surveys have verified that significant paleontological resources are not present or are very rare.</p> <p>Units are generally younger than 10,000 years before present.</p> <p>Recent aeolian deposits.</p> <p>Sediments exhibit significant physical and chemical changes (i.e., diagenetic alteration) that make fossil preservation unlikely.</p> <p>Management concern is generally low, and impact mitigation is usually unnecessary except in occasional or isolated circumstances.</p>
3 = Moderate Potential	<p>Sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence.</p> <p>Marine in origin with sporadic known occurrences of paleontological resources.</p> <p>Paleontological resources may occur intermittently, but these occurrences are widely scattered.</p> <p>The potential for authorized land use to impact a significant paleontological resource is known to be low-to-moderate.</p> <p>Management concerns are moderate. Management options could include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Opportunities may exist for hobby collecting. Surface-disturbing activities may require sufficient assessment to determine whether significant paleontological resources occur in the area of a proposed action and whether the action could affect the paleontological resources.</p>

**TABLE 4.7-3: SUMMARY OF PALEONTOLOGICAL FOSSIL YIELD CLASSIFICATION**

<b>BLM PFYC Designation</b>	<b>Assignment Criteria Guidelines and Management Summary</b>
<p>4 = High Potential</p>	<p>Geologic units that are known to contain a high occurrence of paleontological resources.</p> <p>Significant paleontological resources have been documented but may vary in occurrence and predictability.</p> <p>Surface-disturbing activities may adversely affect paleontological resources.</p> <p>Rare or uncommon fossils, including nonvertebrate (such as soft body preservation) or unusual plant fossils, may be present.</p> <p>Illegal collecting activities may impact some areas.</p> <p>Management concern is moderate to high depending on the proposed action. A field survey by a qualified paleontologist is often needed to assess local conditions. On-site monitoring or spot-checking may be necessary during land disturbing activities. Avoidance of known paleontological resources may be necessary.</p>
<p>5 = Very High Potential</p>	<p>Highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources.</p> <p>Significant paleontological resources have been documented and occur consistently.</p> <p>Paleontological resources are highly susceptible to adverse impacts from surface disturbing activities.</p> <p>Unit is frequently the focus of illegal collecting activities.</p> <p>Management concern is high to very high. A field survey by a qualified paleontologist is almost always needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.</p>
<p>U = Unknown Potential</p>	<p>Geologic units that cannot receive an informed PFYC assignment</p> <p>Geological units may exhibit features or preservational conditions that suggest significant paleontological resources could be present, but little information about the actual paleontological resources of the unit or area is unknown.</p> <p>Geologic units represented on a map are based on lithologic character or basis of origin but have not been studied in detail.</p> <p>Scientific literature does not exist or does not reveal the nature of paleontological resources.</p> <p>Reports of paleontological resources are anecdotal or have not been verified.</p> <p>Area or geologic unit is poorly or under-studied.</p> <p>BLM staff has not yet been able to assess the nature of the geologic unit.</p> <p>Until a provisional assignment is made, geologic units with unknown potential have medium to high management concerns. Field surveys are normally necessary, especially prior to authorizing a ground-disturbing activity.</p>

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a proposed project is determined to “directly or indirectly destroy a significant paleontological resource or unique geologic feature.” In general, for projects that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources. For projects that are directly underlain by geologic units with no paleontological sensitivity, there is no potential for impacts on paleontological resources unless sensitive geologic units which underlie the non-sensitive unit are also affected.

## 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 on geology and soils.

A project would have a significant adverse effect on geology and soils if it would:

- a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - 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;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction;
  - Landslides.
- b. Result in substantial soil erosion or the loss of topsoil;
- c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
- e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;
- f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

## Project Impacts

**Impact 4.7-1: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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.**

Primary ground rupture is ground deformation that occurs along the surface trace of the causative fault during an earthquake. The proposed project would introduce structures and people to the project site (construction workers and periodic maintenance workers) and could thus expose people and structures to seismic risks. While the project site is located in the highly seismic Southern California region within the influence of multiple faults, it is not located within or within close proximity to a State of California Alquist-Priolo Earthquake Fault Zone. The nearest Earthquake Fault Zone as delineated by the Alquist-Priolo Earthquake Fault Zoning Act, is associated with the Garlock fault and is approximately 10 miles northwest of the project site. The other faults located in the project site vicinity are the Rosamond and the Willow Springs faults, with the Rosamond fault being inactive and the Willow Springs fault being potentially active, located 1 mile south and 0.8-mile south, respectively. Due to the distance from the nearest major active fault to the project site, the potential for surface fault rupture at the project site is considered low. The proposed project would not directly or indirectly cause substantial adverse risk including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map. Impacts would be less than significant.

### ***Mitigation Measures***

No mitigation measures would be required.

### ***Level of Significance***

Impacts would be less than significant.

**Impact 4.7-2: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.**

As stated above in Section 4.7.2, *Environmental Setting*, the project site is in a highly seismic region that could experience one or more substantive seismic events in the future. The most recent major earthquakes near the project site were the 2019 Ridgecrest Earthquake Sequence, which consisted of two earthquakes of magnitudes 6.4 and 7.1 and were reported to have been felt by people in as far away as Northern California and Phoenix, Arizona. Depending on the magnitude, distance to the source, and duration of shaking, damage to the PV modules, O&M Building(s), or other ancillary facilities and injury to workers or visitors could result. However, because the proposed project would not establish a permanent onsite population beyond the approximate 15 part-time and/or full-time employees during operations and maintenance, the risk of substantial adverse effects due to strong seismic ground shaking is considered low.

The proposed project features are not expected to contribute to or exacerbate major geologic phenomena (i.e., strong seismic shaking) that can potentially occur in the area.

In addition, prior to the issuance of grading permits, the Project Proponent would be required to design project infrastructure to withstand substantial ground shaking in accordance with all applicable ordinances of the Kern County Building Code (Chapter 17.08) and the current CBC. Additionally, as required by the Kern County Code of Building Regulations, the project would require preparation of a soils engineering report, engineering geology report, engineering calculations, and drainage computations, which would provide final design and construction recommendations. Adherence to the requirements of the Kern County Building Code and the CBC would ensure that seismic hazards would be minimized; impacts related to ground shaking would be less than significant.

### ***Mitigation Measures***

No mitigation measures would be required.

### ***Level of Significance after Mitigation***

Impacts would be less than significant.

### **Impact 4.7-3: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving seismic-related ground failure, including liquefaction.**

Seismically induced liquefaction occurs when loose, water-saturated sediments of relatively low density are subjected to cyclic shaking that causes soils to lose strength or stiffness because of increased pore water pressure. Liquefaction generally occurs when the depth to groundwater is less than 50 feet. Based on review of available groundwater data in the site vicinity, groundwater at and near the project site is reported at greater than 50 feet bgs. Groundwater was reported at a depth of approximately 199 feet bgs; see **Appendix H** (ICF 2023). The project is not located within a California Geological Survey Earthquake Zone of Required Investigation. Furthermore, the proposed project site is not in an area of land subsidence or hydrocompaction, nor was it identified within or near an oil/gas field or active oil/gas well, making the potential for impacts associated with unstable geologic units or soil unlikely. Structures constructed as part of the project would be required by State law to be constructed in accordance with all applicable IBC and CBC earthquake construction standards, including those relating to soil characteristics. Building code requirements may include, but are not limited to, ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. In addition, the preparation of a soils engineering report, engineering geology report, engineering calculations, and drainage computations as required by the Kern County Code of Building Regulations would confirm site suitability and provide final design and construction recommendations. Adherence to all applicable regulations would avoid any potential impacts to structures related to seismic-related ground failure. Therefore, impacts would be less than significant.

### ***Mitigation Measures***

No mitigation measures would be required.



### ***Level of Significance***

Impacts would be less than significant.

#### **Impact 4.7-4: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving landslides.**

The project site has low relief without significant topographic features and is not within a California Geological Survey Earthquake Zone of Required Investigation (California Geological Survey 2019) for landslides. Therefore, adverse effects related to landslides are not anticipated to occur or pose a hazard to the project or surrounding area; impacts would be considered less than significant.

### ***Mitigation Measures***

No mitigation measures would be required.

### ***Level of Significance***

Impacts would be considered less than significant.

#### **Impact 4.7-5: The project would result in substantial soil erosion or the loss of topsoil.**

Construction of the project site would involve earth-disturbing activities that could expose soils to the effects of wind or water erosion. Although the project site consists of relatively flat topography and would not involve substantive cut and fill operations, earthmoving and construction activities could loosen soil, and the removal of existing minimal vegetation could contribute to soil loss and erosion. Since the project would not contain all stormwater runoff onsite, a SWPPP would be prepared and implemented per the requirements of the Kern County NPDES Program. The SWPPP would detail that existing vegetation and topography are to be preserved to the maximum extent possible. The SWPPP would also specify various types of BMPs including erosion control BMPs to prevent soil from moving offsite; all temporary erosion control measures required by the Kern County Grading Code (Chapter 17.28.140) would be incorporated into the SWPPP (Mitigation Measure 4.10-1). Also, per Kern County Code of Building Regulations, the proposed project would be required to prepare a soils engineering report, engineering geology report, engineering calculations, and drainage computations. As a result, project construction would have less-than-significant impacts related to erosion.

Project operations would include the periodic cleaning of the panels with water. However, this is not expected to result in soil erosion because infrequency of these activities and the limited volumes of water involved; water is expected to infiltrate into the ground and not generate substantial erosion or soil loss. Project operations would not entail ground disturbance of area which has not previously been subjected to disturbance. As a result, project operation would have a less than significant impact with relation to soil erosion.

### ***Mitigation Measures***

**MM 4.7-1:** Prior to the issuance of building or grading permits for the project, the project proponent shall conduct a final engineering design specific geotechnical study to evaluate soil

conditions and geologic hazards on the project site and submit it to the Kern County Public Works Department for review and approval. The project proponent shall retain a California registered and licensed geotechnical engineer to design the project facilities to withstand probable seismically induced ground shaking at the site. All grading and construction on site shall adhere to the specifications, procedures, and site conditions contained in the final design plans, which shall be fully compliant with the seismic recommendations of the California-registered professional engineer.

- a. The final geotechnical study must be signed by a California-registered and licensed professional geotechnical engineer or engineering geologist and must include, but not be limited to, the following:
  1. Location of fault traces and potential for surface rupture and groundshaking potential;
  2. Maximum considered earthquake and associated ground acceleration for design;
  3. Potential for seismically induced liquefaction, landslides, differential settlement, and unstable soils;
  4. Stability of any existing or proposed cut-and-fill slopes;
  5. Collapsible or expansive soils;
  6. Foundation material type;
  7. Potential for wind erosion, water erosion, sedimentation, and flooding;
  8. Location and description of unprotected drainage that could be impacted by the proposed development; and,
  9. Recommendations for placement and design of facilities, foundations, and remediation of unstable ground.
- b. The project proponent shall determine the final siting of project facilities based on the results of the geotechnical study and implement recommended measures to minimize geologic hazards. The project proponent shall not locate project facilities on or immediately adjacent to an active fault trace. All structures shall be offset at least 100 feet from any mapped fault trace. Alternatively, a detailed fault trenching investigation may be performed to accurately locate the fault trace(s) to avoid sighting improvements on or close to these fault structures and to evaluate the risk of fault rupture. After locating the fault, accurate setback distances can be proposed.
- c. The final geotechnical report shall be submitted for review and approval by the Kern County Public Works Department. The Kern County Public Works Department shall evaluate any final facility siting design developed prior to the issuance of any building or grading permits to verify that geological constraints have been avoided. Final design requirements shall also be provided to the onsite construction supervisor and the Kern County Building Inspector to ensure compliance. A copy of the approved design shall be submitted to the Kern County Planning and Natural Resources Department.

Implement Mitigation Measure MM 4.10-2 (see Section 4.10, *Hydrology and Water Quality*, of this EIR, for full mitigation measure text).

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***Level of Significance after Mitigation***

Impacts would be less than significant.

**Impact 4.7-6: The project would 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.**

As stated above, the proposed project would result in no impact related to landslides. The Geology and Soils Technical Report concluded that the liquefaction potential on the project site is low, largely based on the groundwater depth in the area which is reportedly greater than 100 feet below ground surface. As a result, combined with the relatively flat topography the low liquefaction potential indicates a low potential for lateral spreading. Furthermore, the proposed project site is not in an area of land subsidence or hydrocompaction, nor was it identified within or near an oil/gas field or active oil/gas well, making the potential for impacts associated with unstable geologic units or soil unlikely. Therefore, the proposed project is unlikely to be affected by or exacerbate geological conditions associated with unstable soils. In addition, the preparation of a site-specific soils engineering report, engineering geology report, engineering calculations, and drainage computations (as required by the Kern County Code of Building Regulations) would confirm site suitability and provide final design and construction recommendations consistent with the Kern County Building Code (Chapter 17.08) and the most recent version of the CBC. Therefore, impacts would be less than significant.

***Mitigation Measures***

No mitigation would be required.

***Level of Significance after Mitigation***

Impacts would be less than significant.

**Impact 4.7-7: The project would 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.**

The Geology and Soils Technical Report for the project site concluded that soils found within the project site (including gen-tie locations and access roads) are predominantly classified as nonplastic to having low plasticity with low expansion potential. Therefore, the proposed project is unlikely to be affected by or to exacerbate the (already low) expansion potential of onsite soils. In addition, the proposed project, as required by the Kern County Code of Building Regulations, would be required to prepare a soils engineering report, engineering geology report, engineering calculations, and drainage computations which would confirm site suitability and provide final design and construction recommendations consistent with the Kern County Building Code (Chapter 17.08) and the most recent version of the CBC. Adherence to all applicable regulations would avoid any potential impacts to structures resulting from expansive soil at the project. Therefore, impacts would be less than significant.

***Mitigation Measures***

No mitigation measures would be required.

***Level of Significance after Mitigation***

Impacts would be less than significant.

**Impact 4.7-8: The project would 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.**

The proposed project does not feature septic tanks or alternative wastewater disposal systems. The project would use portable bathroom facilities to accommodate onsite workers and no wastewater disposal facilities including septic systems would be necessary. Once the proposed project is operational, the project site would be operated on an unstaffed basis and monitored remotely. Intermittent site visits by personnel for inspections or maintenance would be performed by staff using the Operations and Maintenance facility west and immediately adjacent to the project site under the BigBeau project. These facilities are not proposed to be located on the proposed project site. Therefore, impacts related to the onsite soils ability to support a septic system would be considered less than significant.

***Mitigation Measures***

No mitigation measures would be required.

***Level of Significance***

Impacts would be considered less than significant.

**Impact 4.7-9: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, as defined in CEQA Guidelines Section 15064.**

Surficial deposits of the project site are mostly underlain by Holocene-age young alluvium (Qa) with lesser amounts of Holocene- to Pleistocene-age older alluvium (Qoa) at the Whirlwind gen-tie line along the western and southwestern margins of the project site. Although Holocene-age young alluvium (Qa) and young sand deposits (Qs) may contain sediments greater than 5,000 years old, they are considered to have a low potential for producing significant paleontological resources. However, these deposits may overlie sensitive, older (i.e., Pleistocene-age) deposits at variable depths, which has moderate potential for paleontological resources. If significant vertebrate fossils are encountered during project implementation, disturbance of such resources would result in a potentially significant impact to paleontological resources. Therefore, although surface grading and very shallow excavation within the younger Holocene-age alluvium is unlikely to impact sensitive paleontological resources, excavations deeper than 5 feet could extend into the older Holocene- to Pleistocene-age alluvium and impact significant vertebrate fossil resources. Project implementation could also result in a potentially significant impact to paleontological resources within surficial older Holocene- to Pleistocene-age older alluvium deposits at the Whirlwind gen-tie line. However, with implementation of Mitigation Measures MM 4.7-2 through MM 4.7-4, which would require

Paleontological Resources Awareness Training for construction workers, use of a qualified paleontological monitor during construction activities, and appropriate treatment of accidentally uncovered paleontological resources, impacts to paleontological resources would be reduced to less than significant.

### ***Mitigation Measures***

**MM 4.7-2:** The project proponent shall retain a qualified paleontologist, defined as a paleontologist meeting the Society for Vertebrate Paleontology's Professional Standards (SVP, 2010), to carry out all mitigation measures related to paleontological resources.

- a. Prior to the start of any ground disturbing activities, the qualified paleontologist shall conduct a Paleontological Resources Awareness Training program for all construction personnel working on the project. A Paleontological Resources Awareness Training Guide approved by the qualified paleontologist shall be provided to all personnel. A copy of the Paleontological Resources Awareness Training Guide shall be submitted to the Kern County Planning and Natural Resources Department. The training guide may be presented in video form.
- b. Paleontological Resources Awareness Training may be conducted in conjunction with other awareness training requirements.
- c. The training shall include an overview of potential paleontological resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the qualified paleontologist for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of paleontological resources.
- d. The project operator shall ensure all new employees who have not participated in earlier Paleontological Resources Sensitivity Trainings shall meet the provisions specified above.
- e. The Paleontological Resources Awareness Training Guides shall be kept onsite and available for all personnel to review and be familiar with as necessary.

**MM 4.7-3:** A qualified paleontologist or designated monitor shall spot monitor all ground-disturbing activity (with the exception of vibratory or hydraulic installation of tracking or mounting structures and foundations or supports) that occurs at a depth of 5 feet or deeper below ground surface in areas mapped as Holocene-age young alluvium (Qa) (PFYC 2) and for all ground disturbance within the mapped Holocene- to Pleistocene-age older alluvium (Qoa).

- a. The duration and timing of monitoring shall be determined by the qualified paleontologist in consultation with the Kern County Planning and Natural Resources Department, and shall be based on a review of geologic maps and grading plans.
  1. During the course of monitoring, if the paleontologist can demonstrate based on observations of subsurface conditions that the level of monitoring should be reduced, the paleontologist, in consultation with the Kern County Planning and Natural Resources Department, may adjust the level of monitoring to circumstances, as warranted.

- b. Paleontological monitoring shall include inspection of exposed rock units during active excavations within sensitive geologic sediments. The qualified paleontologist shall have authority to temporarily divert excavation operations away from exposed fossils to collect associated data and recover the fossil specimens if deemed necessary.
- c. Following the completion of construction, the paleontologist shall prepare a report documenting the absence or discovery of fossil resources onsite. If fossils are found, the report shall summarize the results of the inspection program, identify those fossils encountered, recovery and curation efforts, and the methods used in these efforts, as well as describe the fossils collected and their significance. A copy of the report shall be provided to the Kern County Planning and Natural Resources Department and to an appropriate repository such as the Natural History Museum of Los Angeles County.

**MM 4.7-4:** If a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find. The qualified paleontologist shall evaluate the significance of the resources and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.7-2 through MM 4.7-4, impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

Impacts of the project would be considered cumulatively considerable if they would have the potential to combine with other past, present, or reasonably foreseeable projects to become significant. Cumulative projects listed in **Table 4-7**, *Cumulative Projects List*, would be subject to relatively similar seismic hazards as that of the proposed project. However, the effects of these projects are not of a nature to cause cumulatively significant effects from geologic impacts or on soils because such impacts are site specific and would only have the potential to combine with impacts of the project if they occurred in the same location as the project.

Development of the proposed project, with implementation of the regulatory requirements discussed above, would result in less-than-significant impacts related to exposing persons or structures to geology, soils, or seismic hazards. Although the entire region is a seismically active area, geologic and soil conditions vary widely within a short distance, making the cumulative context for potential impacts resulting from exposing people and structures to related risks one that is more localized or even site-specific. Similar to the proposed project, other projects in the area would be required to adhere to the same California and Kern County Building Codes which would reduce the risk to people and property to less-than-significant levels. While future seismic events cannot be predicted, adherence to all federal, State, and local programs, requirements and policies pertaining to building safety and construction would limit the potential for injury or damage to a less-than-significant level. Therefore, the proposed project, combined with past, present, and other

foreseeable development in the area, would not result in a cumulatively significant impact by exposing people or structures to risk related to geologic hazards, soils, and/or seismic conditions. Therefore, the proposed project would result in less-than-significant cumulative impacts related to geology and soils.

Surficial deposits, namely erosion and sediment deposition, can be cumulative in nature, depending on the type and amount of development proposed in a given geographical area. The cumulative setting for soil erosion consists of existing, planned, proposed, and reasonably foreseeable land use conditions in the region. However, construction constraints are primarily based on specific sites within a proposed development and on the soil characteristics and topography of each site. Individual projects are required to comply with applicable codes, standards, and permitting requirements (e.g., preparation of a SWPPP) to mitigate erosion impacts. Other cumulative scenario projects would be required to adhere to similar requirements, thereby minimizing cumulative scenario erosion impacts. Specifically, all planned projects in the vicinity of the proposed project are subject to environmental review and would be required to conform to the Kern County General Plan and Building Code, and would implement additional mitigation of seismic hazards to ensure soil stability, especially related to seismically induced erosion. The project would not contribute to any cumulative impacts for geologic, seismic hazards or related events. Cumulative impacts related to geology and soils are less than significant.

The potential for liquefaction and other geologic hazards related to liquefaction, including lateral spreading, are considered low as historic groundwater levels in the area of the project site have been recorded at a depth greater than 100 feet bgs. With regard to subsidence, as the proposed project would not obtain water from an underground aquifer, development of the project would not lead to subsidence on the project site or in the area. In addition, cumulative projects would be expected to use water supply canals and water pumping facilities in the project vicinity rather than pumping from underground aquifers. Areas where natural slope is over-steepened by the construction of access roads, structure formations or other excavated areas would have the potential for landslide susceptibility, lateral spreading, and collapse as a result of the proposed project or other cumulative projects. However, as with the proposed project, cumulative projects would be required to prepare a site-specific soils engineering report, engineering geology report, engineering calculations, and drainage computations which would confirm site suitability and provide final design and construction recommendations as required by the Kern County Code of Building Regulations. The proposed project would not contribute to any cumulative impacts related to onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Cumulative impacts would be less than significant.

With regard to expansive soils, as required by the Kern County Code of Building Regulations, the proposed project would prepare a soils engineering report, engineering geology report, engineering calculations, and drainage computations, which would confirm site suitability and provide final design and construction recommendations consistent with CBC requirements to reduce potential adverse effects from expansive soils. Cumulative projects would implement similar measures to address any potential for expansive soils. With compliance with the California and Kern County Building Codes, the proposed project would not contribute to any cumulative impacts related to expansive soils. Cumulative impacts would be less than significant.

As discussed above, the proposed project would use portable bathroom facilities to accommodate onsite workers and no wastewater disposal facilities including septic systems would be necessary. Therefore, impacts related to the onsite soils ability to support a septic system would have no impact. The proposed project would not have any cumulative impacts related to soils stability to support a septic system.

The geographic scope for cumulative effects to paleontological resources includes the western portion of the Antelope Valley, which includes the Mojave Desert that surrounds the area of the proposed project. Given similarities in geologic formations, this area is expected to contain similar types of paleontological resources. There is no temporal scope because direct impacts to paleontological resources are permanent. Cumulative impacts to paleontological resources in the study area could occur if other related projects, in conjunction with the proposed project, had or would have impacts on paleontological resources that, when considered together, would be significant. Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant paleontological resources impact due to the potential loss of paleontological resources unique to the region. However, mitigation measures are included in this EIR to reduce potentially significant project impacts to paleontological resources during construction of the proposed project. For Mitigation Measure MM 4.7-1, the project proponent would be required to conduct a final engineering design specific geotechnical study to evaluate soil conditions and geologic hazards on the project site and submit it to the Kern County Public Works Department for review and approval prior to the issuance of grading permits. Implementation of Mitigation Measure MM 4.7-2 requires paleontology sensitivity training for construction workers and Mitigation Measure MM 4.7-3 requires appropriate monitoring of construction activities for potential paleontological resources that may be encountered. Although project construction has the potential to disturb paleontological resources, the implementation of Mitigation Measure MM 4.7-4 would ensure the appropriate protocol is followed with regard to identifying and handling remains. Implementation of these mitigation measures would reduce potential impacts to paleontological resources to a less-than-significant level.

With implementation of Mitigation Measures MM 4.7-1 through MM 4.7-4, the proposed project would not result in significant impacts to paleontological resources. Given this minimal impact and the requirement for similar mitigation for other projects in the Antelope Valley, cumulative impacts to paleontological resources would be less than significant.

### ***Mitigation Measures***

Implement Mitigation Measures MM 4.7-1 through MM 4.7-4 and MM 4.10-2 would be required (see Section 4.10, *Hydrology and Water Quality*, of this EIR, for full mitigation measure text).

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.7-1 through MM 4.7-4, and MM 4.10-2, cumulative impacts would be less than significant.



### **4.8.1 Introduction**

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting relating to greenhouse gases (GHGs) for the proposed project. It also describes the impacts associated with GHGs that would result from implementation of the proposed project, and, as necessary, mitigation measures that would reduce these impacts.

Information in this section is based primarily on the project’s *Air Quality and Greenhouse Gas Technical Report* and the *Air Quality and Greenhouse Gas Emissions Assessment for the Decommissioning of the Bullhead Solar Project*, prepared by ICF. This report is incorporated by reference and provided in **Appendix D.1** and **Appendix D.2** of this EIR. The impact assessment for the proposed project is also based on a review of relevant literature and technical reports that include, but are not limited to, information and guidelines by the California Air Resources Board (CARB), the United States Environmental Protection Agency (USEPA), and the applicable provisions of CEQA.

### **4.8.2 Environmental Setting**

GHGs and climate change are a cumulative global issue. CARB and the USEPA regulate GHG emissions in the State of California and the United States, respectively. CARB has the primary regulatory responsibility in California for GHG emissions, but local agencies can also adopt policies for GHG emission reduction. CARB has divided California into regional air basins. The project site is in the western Antelope Valley, approximately eight miles northwest of the community of Rosamond, in the southeast portion of unincorporated Kern County, which is in the Mojave Desert Air Basin (MDAB) under the jurisdiction of the Eastern Kern Air Pollution Control District (EKAPCD).

## **Greenhouse Gases**

GHGs refer to gases that absorb and re-emit infrared radiation in the atmosphere. Many chemical compounds in Earth’s atmosphere act as GHGs, which allow sunlight to enter the atmosphere freely. When sunlight strikes Earth’s surface, some of it is reflected back toward space as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy sent from the sun to Earth’s surface should be about the same as the amount of energy radiated back into space, leaving the temperature of Earth’s surface roughly constant. Many gases exhibit these “greenhouse” properties. Scientists have concluded that human activities are contributing to global climate change by adding large amounts of these heat-trapping gases to the atmosphere. The primary source of GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and ozone (O<sub>3</sub>)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC

that contribute to global warming to a lesser extent are nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.

The GHGs listed by the IPCC (i.e., CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) are discussed in this section in order of abundance in the atmosphere, and their principal characteristics are discussed below. California law and the State CEQA Guidelines contain similar definitions of GHGs (Health and Safety Code Section 38505(g); 14 California Code of Regulations 15364.5). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh anthropogenic (human-made) contributions. Consequently, the primary GHGs of concern associated with the proposed project are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. Note that HFCs, PFCs, and SF<sub>6</sub> are not discussed because those gases are primarily generated by manufacturing processes, which are not anticipated as part of the proposed project.

- **Carbon dioxide:** CO<sub>2</sub> enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and chemical reactions (e.g., the manufacture of cement). CO<sub>2</sub> is also removed from the atmosphere (or “sequestered”) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane:** CH<sub>4</sub> is emitted during the production and transport of coal, natural gas, and oil. CH<sub>4</sub> emissions also result from livestock and agricultural practices and the decay of organic waste in municipal solid waste landfills.
- **Nitrous oxide:** N<sub>2</sub>O is emitted during agricultural and industrial activities and during combustion of fossil fuels and solid waste.

To simplify reporting and analysis, methods have been developed to describe emissions of GHGs in terms of a single gas. The most commonly accepted method for comparing GHG emissions is the global warming potential (GWP) method, defined in the IPCC Fourth Assessment Report (AR4). IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalence (CO<sub>2</sub>e), which compares the gas in question to that of the same mass of CO<sub>2</sub> (which has a GWP of 1 by definition). The GWP values used in this report are based on the AR4 and United Nations Framework Convention on Climate Change reporting guidelines and are defined in **Table 4.8-1, Lifetimes, GWPs, and Abundance of Significant GHGs**. The AR4 GWP values are consistent with those used in CARB’s 2019 California GHG inventory and 2017 Scoping Plan.

**TABLE 4.8-1: LIFETIMES, GWPs, AND ABUNDANCE OF SIGNIFICANT GHGS**

Gas	GWP (100 years)	Lifetime (years) <sup>a</sup>	Atmospheric Abundance
CO <sub>2</sub>	1	50–200	400 ppm
CH <sub>4</sub>	25	9–15	1,834 ppb
N <sub>2</sub> O	298	121	328 ppb

SOURCE: Appendix D.1.

NOTES: ppm = parts per million; ppb = parts per billion; ppt = parts per trillion

<sup>a</sup> Defined as the half-life of the gas.

## Greenhouse Gas Emissions Inventories

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on

a small scale (e.g., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

To help contextualize the magnitude of potential project-related emissions, **Table 4.8-2**, *Global, National, State, and Local GHG Emissions Inventories*, outlines the most recent global, national, statewide, and local GHG inventories.

**TABLE 4.8-2: GLOBAL, NATIONAL, STATE, AND LOCAL GHG EMISSIONS INVENTORIES**

<b>Emissions Inventory</b>	<b>CO<sub>2</sub>e (metric tons)</b>
2010 IPCC Global GHG Emissions Inventory	49,000,000,000
2020 EPA National GHG Emissions Inventory	5,981,400,000
2019 CARB State GHG Emissions Inventory	418,200,000
2005 County of Kern GHG Emissions Inventory	27,045,617

SOURCE: Appendix D.1.

## Sources of GHG Emissions

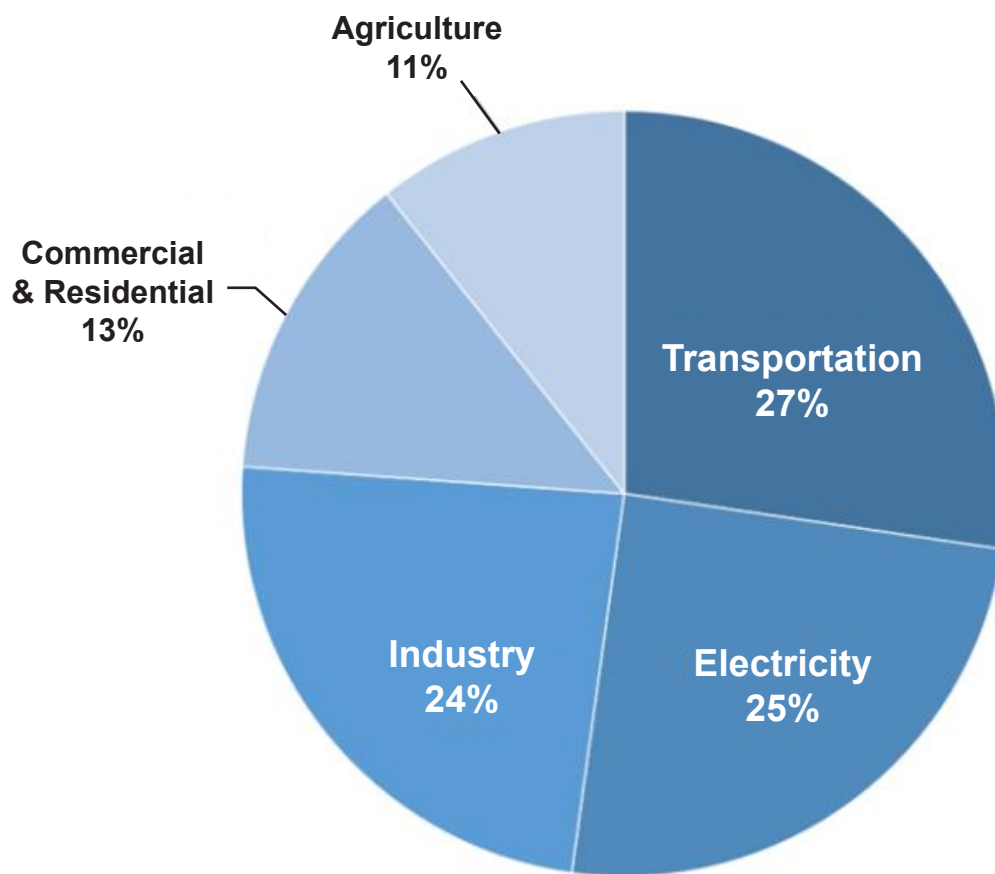
At a national level, the largest source of GHG emissions from human activity is burning fossil fuels for electricity, heat, and transportation. The primary sources of GHG emissions in the United States in 2020 are summarized in **Figure 4.8-1**, *Total U.S. Greenhouse Gas Emissions by Economic Sector in 2020*. Transportation and electricity production accounted for 27 and 25 percent of U.S. GHG emissions in 2020, respectively. Over 90 percent of fuel used in transportation in the U.S. is petroleum based, and approximately 60 percent of electricity is generated from burning fossil fuels. Transportation and electricity are followed by industry, commercial and residential uses, agriculture, and land use and forestry.

In 2019, GHG emissions in California totaled 418.2 million metric tons of CO<sub>2</sub>e. The transportation sector is the largest contributor, accounting for approximately 40 percent of statewide GHG emissions. The industrial sector is the second-largest contributor, with 21 percent. GHG emissions from electric power declined from 2018 to 2019, due primarily to California's Renewables Portfolio Standard (RPS) and Cap-and-Trade Program, which have caused large increases in the use of renewable energy resources in the state.

In-state electricity production accounts for 9 percent of the state's overall GHG emissions inventory. The renewable technologies related to electricity production in California are wind, solar PV, solar thermal, hydroelectric, geothermal, and biomass. As of 2019, California was ranked first in the nation for producing electricity from solar, geothermal, and biomass resources. PV technology is a major constituent in meeting the State's goals for renewable energy as well as GHG emissions.



### Total U.S. Greenhouse Gas Emissions by Economic Sector in 2020



Source: EPA, 2022b.

Figure 4.8-1: TOTAL US GREENHOUSE GAS EMISSIONS BY ECONOMIC SECTOR IN 2020

## Climate Change

Climate change is a complex phenomenon that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result in sea level rise and changes in climate and rainfall, among other effects, it is not possible to characterize precise local climate characteristics or predict precisely how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty, it is widely understood that substantial climate change is expected in the future, although the precise extent will take further research to define.

Research efforts coordinated through CARB, the California Energy Commission (CEC), the California EPA, the University of California system, and others are examining the specific changes to California's climate as the Earth's surface warms. Potential impacts include:

- Sea level rise along the California coastline.
- Extreme heat conditions.
- An increase in heat-related human deaths, infectious diseases, and respiratory problems caused by deteriorating air quality.
- Reduced snowpack and streamflow in the Sierra Nevada, affecting winter recreation and water supplies.
- Potential increase in the severity of winter storms, affecting peak stream flows and flooding.
- Changes in growing season conditions that could affect California agriculture, causing variations in crop quality and yield.
- Changes in the distribution of plant and wildlife species due to changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

### 4.8.3 Regulatory Setting

#### Federal

There is currently no federal overarching law specifically related to the reduction of GHG emissions. Under the Obama Administration, the USEPA was developing regulations under the Clean Air Act. Settlement agreements between the USEPA, several states, and nongovernmental organizations address GHG emissions from electricity-generating units and refineries, and the USEPA issued an Endangerment Finding and a Cause or Contribute Finding. The USEPA has also adopted a Mandatory Reporting Rule and Clean Power Plan. Under the Clean Power Plan, the USEPA issued regulations to control CO<sub>2</sub> emissions from new and existing coal-fired power plants. However, on February 9, 2016, the Supreme Court issued a stay of these regulations pending litigation. Former USEPA Administrator Scott Pruitt signed a measure to repeal the Clean Power Plan in October 2017. Therefore, no federal regulations specifically related to GHG emissions have been factored into the proposed project's impact analysis.

## Energy Standards

The USEPA is responsible for implementing federal policy to address GHGs. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO<sub>2</sub> gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions (e.g., the ENERGY STAR labeling system for energy-efficient products). These programs play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

## Endangerment Finding

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>). The Endangerment Finding was required before the USEPA could regulate GHG emissions under Section 202(a)(1) of the Clean Air Act. The USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle engines contribute to air pollution, which is endangering public health and welfare. These findings do not themselves impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

## Passenger Cars and Trucks Corporate Average Fuel Economy Standards

Standards have been adopted at the federal level to increase the fuel economy of cars and light trucks. In 2012, the National Highway Traffic Safety Administration (NHTSA) established its final passenger car and light-truck Corporate Average Fuel Economy standards for model years 2017 to 2021, which, in model year 2021, would have required, on average, a combined fleetwide fuel economy standard of 40.3 to 41.0 miles per gallon.

On August 2, 2018, NHTSA and the USEPA proposed to amend the fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 (Safer Affordable Fuel-Efficient [SAFE] Vehicles Rule). On September 19, 2019, the USEPA and NHTSA issued a final action on the One National Program Rule, which is considered Part One of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards. The One National Program Rule enables the USEPA/NHTSA to provide nationwide uniform fuel economy and GHG vehicle standards, specifically by (1) clarifying that federal law preempts State and local tailpipe GHG standards, (2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and (3) withdrawing California's CAA preemption waiver to set State-specific standards.

The USEPA and NHTSA published their decisions to withdraw California's waiver and finalize regulatory text related to the preemption on September 27, 2019 (84 Federal Register 51310). California, 22 other states, the District of Columbia, and two cities filed suit against Part One of the SAFE Vehicles Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia). On October 28, 2019, the Union of Concerned Scientists, Environmental

Defense Fund, and other groups filed a protective petition for review after the federal government sought to transfer the suit to the U.S. Court of Appeals for the District of Columbia Circuit (*Union of Concerned Scientists v. National Highway Traffic Safety Administration*). The lawsuit filed by California and others is stayed pending resolution of the petition.

The USEPA and NHTSA published final rules to amend and establish national CO<sub>2</sub> and fuel economy standards on April 30, 2020 (Part Two of the SAFE Vehicles Rule) (85 Federal Register 24174). The revised rule changes the national fuel economy standards for light-duty vehicles from 50.4 to 40.5 miles per gallon in future years. This new rule rolls back California fuel efficiency standards for on-road passenger vehicles. California, 22 other states, and the District of Columbia filed a petition for review of the final rule on May 27, 2020, to challenge this new rule in the court system; it is reasonably foreseeable that the State will be successful in its legal challenges, for the reasons outlined in the State's lawsuit. Furthermore, on January 20, 2021, President Biden signed an executive order directing the government to revise fuel economy standards with the goal of further reducing emissions. Most recently, on April 22, 2021, the Biden Administration proposed to formally roll back portions of the SAFE Rule, thereby restoring California's right to enforce more stringent fuel efficiency standards.

## **40 CFR Part 98, Mandatory Reporting of Greenhouse Gases Rule**

This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 MTCO<sub>2e</sub> emissions per year. Additionally, reporting of emissions is required for owners of SF<sub>6</sub>- and PFC-insulated equipment, when the total nameplate capacity of these insulating gases is above 17,280 pounds. The proposed project would not be expected to trigger GHG reporting according to the rule.

## **40 CFR Part 52, Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule**

The USEPA mandated to apply Prevention of Significant Deterioration (PSD) requirements to facilities whose stationary source CO<sub>2e</sub> emissions exceed 75,000 tons per year. The proposed project would not be expected to trigger PSD permitting as required by this regulation; however, GHG emissions of the proposed project are quantified in this EIR.

## **Fuel Efficiency Standards for Construction Equipment**

The federal government sets fuel efficiency standards for off-road diesel engines that are used in construction equipment. The regulations, contained in 40 CFR Parts 1039, 1065, and 1068, include multiple tiers of emission standards. Most recently, the USEPA adopted a comprehensive national program to reduce emissions from off-road diesel engines by integrating engine and fuel controls as a system to gain the greatest reductions.

## **State**

### **Executive Order S-1-07**

EO S-01-07, the low-carbon fuel standard (LCFS), mandates: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, with a

reduction in the carbon content of fuel by a quarter of a percent starting in 2011; and (2) that an LCFS for transportation fuels be established in California. In September 2018, the LCFS regulation was amended to increase the statewide goal to a 20 percent reduction in carbon intensity of California's transportation fuels by 2030. The EO initiates a research and regulatory process at CARB. Note that the majority of the emissions benefits due to the LCFS arise from the production cycle (i.e., upstream emissions) of the fuel, rather than the combustion cycle (i.e., tailpipe). As a result, LCFS-related reductions are not included in this analysis of combustion-related emissions of CO<sub>2</sub>.

## **Executive Orders S-3-05 and B-30-15**

EO S-3-05 set target dates to reduce statewide GHG emissions to historical levels, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

EO B-30-15 set a target date of 2030 to reduce GHG emissions to 40 percent below 1990 levels. EOs S-3-05 and B-30-15 are only applicable to "State agencies with jurisdiction over sources of greenhouse gas emissions" (Order 4-29-2015 Section 2), and Kern County is not a State agency. Furthermore, there is currently no implementation strategy for these executive orders (i.e., a plan that apportions GHG reductions by economic sector/activity/region, similar to the Assembly Bill (AB) 32 Climate Change Scoping Plan).

## **Assembly Bill 32 and Senate Bill 32**

AB 32 codified the State's GHG emissions target by requiring California's global warming emissions to be reduced to 1990 levels by 2020. Since its adoption, CARB, CEC, the California Public Utilities Commission (CPUC), and the California Building Standards Commission have been developing regulations that will help the State meet the goals of AB 32 and EO S-03-05. The scoping plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires CARB and other state agencies to develop and enforce regulations and other initiatives to reduce GHG emissions. The AB 32 Scoping Plan, first adopted in 2008, is the State's roadmap for meeting AB 32's reduction target. Specifically, the scoping plan articulates a key role for local governments by recommending that they establish GHG emissions-reduction goals for both their municipal operations and the community that are consistent with those of the State (i.e., approximately 15 percent below current levels).

CARB re-evaluated its emissions forecast in light of the economic downturn and updated the projected 2020 emissions to 545 million MTCO<sub>2e</sub>. Two reduction measures (Pavley I and RPS [12 to 20 percent]) that were not previously included in the 2008 Scoping Plan baseline were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 million MTCO<sub>2e</sub>. The updated forecast of 507 million MTCO<sub>2e</sub> is referred to as the AB 32 2020 Baseline. An estimated reduction of 80 million MTCO<sub>2e</sub> is necessary to lower statewide emissions to the AB 32 target of 427 million MTCO<sub>2e</sub> by 2020.

Senate Bill (SB) 32 requires CARB to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 level by 2030, consistent with the target in EO B-30-15. The bill specifies that SB 32 will become operative only if AB 197 is enacted and becomes effective on or before January 1, 2017. AB 197 (1) creates requirements to form the Joint Legislative Committee on Climate Change Policies; (2)



requires CARB to prioritize direct emission reductions from stationary sources, mobile sources, and other sources and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit; (3) requires CARB to prepare reports on sources of GHGs, criteria air pollutants, and toxic air contaminants; (4) establishes 6-year terms for voting members of CARB; and (5) adds two legislators as nonvoting members of CARB. Both bills were signed by Governor Brown in September 2016.

## **Assembly Bill 1279 (2022)**

AB 1279 (Health and Safety Code Section 38562.2) requires California to achieve net zero GHG emissions (i.e., reach a balance between the GHGs emitted and removed from the atmosphere) no later than 2045 and to achieve and maintain net negative GHG emissions from then on. It also mandates an 85 percent reduction in statewide anthropogenic GHG emissions (from 1990 levels) by 2045. AB 1279 recognizes that meeting these targets requires direct GHG emission reductions and removal of carbon dioxide from the atmosphere, as well as a nearly complete transition from fossil fuels. As such, the bill directs CARB to work with relevant State agencies to ensure scoping plan updates include measures that put California on a trajectory to achieve these targets. It also tasks CARB with implementing strategies that facilitate carbon dioxide removal solutions and carbon capture, utilization, and storage technologies. To evaluate the State's progress, AB 1279 requires that CARB report progress toward these targets to the legislature annually. By 2035, the bill directs CARB to assess the feasibility and tradeoffs of reducing statewide anthropogenic GHG emissions to 85 percent below 1990 levels by 2045 and report its findings to the legislature.

## **CARB Climate Change Scoping Plan**

CARB adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* in November 2022 to identify a technologically feasible, cost-effective, and equity-focused path to achieve carbon neutrality by 2045, pursuant to AB 1279. The 2022 Scoping Plan extends and expands upon GHG reduction measures of the previous scoping plans and includes additional measures to capture and store atmospheric carbon through the state's natural and working lands and using a variety of mechanical approaches. The plan also assesses the state's progress toward meeting the GHG emissions reduction goal called for in SB 32.

## **Senate Bill 375**

SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. CARB adopted the vehicular GHG emissions reduction targets, in consultation with the metropolitan planning organizations (MPO), which require a 7 to 8 percent reduction by 2020 and a 13 to 16 percent reduction by 2035, for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs, such as the Kern Council of Governments (KCOG), work with local jurisdictions in the development of sustainable community strategies (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives.

## **California Green Building Standard Code**

Title 24 of the California Code of Regulations, referred to as the California Building Code, consists of a compilation of several discrete standards and codes related to building construction, including but not

limited to plumbing, electrical, interior acoustics, energy efficiency, and handicap accessibility. Of relevance to GHG emissions reductions are the California Building Code's energy efficiency and green building standards.

### ***Part 6: Energy Code***

California Code of Regulations, Title 24, Part 6, is the California Energy Efficiency Standards for Residential and Nonresidential Buildings (California Energy Code). The CEC updates the California Energy Code every three years with more stringent design requirements to reduce energy consumption, resulting in lower GHG emissions. The 2022 California Energy Code took effect on January 1, 2023.

New construction and major renovations must demonstrate compliance with the current California Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC. The compliance reports must demonstrate a building's energy performance through use of CEC-approved energy performance software that shows iterative increases in energy efficiency given the selection of heating, ventilation, and air conditioning; sealing; glazing; insulation; and other components related to the building envelope.

### ***Part 11: California Green Building Standards Code***

The California Green Building Standards Code (CALGreen) was first added to Title 24 in 2009 as a voluntary code that became mandatory effective January 1, 2011. The most recent 2022 CALGreen, which became effective January 1, 2023, institutes mandatory minimum environmental performance standards for all ground-up new construction of nonresidential and residential structures. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The 2022 CALGreen mandatory standards require the following:

- Outdoor water use requirements as outlined in local water efficient landscaping ordinances or current Model Water Efficient Landscape Ordinance standards, whichever is more stringent.
- Requirements for water conserving plumbing fixtures and fittings.
- 65 percent construction/demolition waste diverted from landfills.
- Infrastructure requirements for electric-vehicle charging stations.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Requirements for low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards.

In addition to the mandatory CALGreen standards, the CALGreen code provides voluntary tiers for increased environmental performance standards that can be adopted as mandatory measures by local jurisdictions. Similar to the reporting procedure for demonstrating California Energy Code compliance in new buildings and major renovations, compliance with CALGreen requirements must be demonstrated through completion of compliance forms and worksheets.

## California Renewables Portfolio Standard

SB 1078 and SB 107, California's RPS, obligated investor-owned utilities, energy service providers, and Community Choice Aggregations to procure an additional 1 percent of retail sales per year from eligible renewable sources until 20 percent was reached by 2010. The CPUC and CEC are jointly responsible for implementing the program. SB X 1-2, called the California Renewable Energy Resources Act, obligated all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. As noted below, SB 350 increased the RPS to 50 percent for 2030, and SB 100 increased the RPS to 100 percent by 2045.

### Senate Bill 350

Signed into law in October 2015, SB 350 (Clean Energy and Pollution Reduction Act) requires CARB (in coordination with the CPUC and CEC) to coordinate and implement the following overarching goals:

- Increase the RPS to 50 percent of retail sales by 2030 and ensure grid reliability.
- Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.
- Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in their integrated resource plans (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly owned utilities meet GHG emissions reductions planning targets through a combination of measures, as described in IRPs. The IRPs will detail how each large utility will meet their customers resource needs, minimize price increases, reduce emissions, and ramp up the deployment of clean energy resources.

### Senate Bill 100

SB 100 (De León, also known as the California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases) was approved by the California legislature and signed by Governor Brown in September 2018. The bill implements the following goals:

- Increase the RPS to 50 percent of retail sales by 2026 (moved up by four years from SB 350).
- Increase the RPS to 60 percent of retail sales by 2030 (new 2030 target).
- Increase the RPS to 100 percent of retail sales by 2045 (carbon-free goal for 2045).

SB 100 is a legislative action that was signed into law after the 2017 Scoping Plan was adopted. The Scoping Plan modeling is based on the SB 350 target of 50 percent renewables by 2030. However, the new SB 100 targets of 60 percent renewables by 2030 and 100 percent renewables by 2045 supersede the goals of SB 350 and are included in the 2022 Scoping Plan.

### Senate Bill 1368

SB 1368 requires the CPUC to establish a baseload generation standard for publicly owned or leased facilities that generate electricity at a GHG Emissions Performance Standard of 1,100 pounds of CO<sub>2e</sub> per megawatt-hour. SB 1368 also requires the posting of notices of public deliberations by publicly owned

companies on the CPUC website and establishes a process to determine compliance with the Emissions Performance Standard.

## **Advanced Clean Cars Program**

Known as Pavley I, AB 1493 provided the nation's first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that would lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the Advanced Clean Cars measure) was adopted for vehicle model years 2017 to 2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025.

In August 2022, the CARB board members voted to approve the Advanced Clean Cars II proposal, which will dramatically reduce emissions from passenger cars for model years 2026 through 2035. This requires an increasing proportion of new vehicles to be zero-emission vehicles, with the goal of 100 percent zero emission vehicles for new vehicles sold by 2035.

CARB also adopted the Advanced Clean Truck Regulation to accelerate a large-scale transition of zero-emission medium- and heavy-duty vehicles. The regulation requires the sale of zero-emission medium- and heavy-duty vehicles as an increasing percentage of total annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b to 3 truck sales, 75 percent of Class 4 to 8 straight truck sales, and 40 percent of truck tractor sales. By 2045, every new medium- and heavy-duty truck sold in California will be zero emission. Large employers, including retailers, manufacturers, brokers, and others, are required to report information about shipments and shuttle services to better ensure that fleets purchase available zero-emission trucks.

## **Executive Order B-55-18 (2018)**

Approved by the California legislature and signed by Governor Brown in September 2018, EO B-55-18 acknowledges the environmental, community, and public health risks posed by future climate change. It further recognizes the climate stabilization goal adopted by 194 states and the European Union under the Paris Agreement. Although the United States was not party to the agreement, California is committed to meeting the Paris Agreement goals and exceeding them wherever possible. Based on the worldwide scientific agreement that carbon neutrality must be achieved by the mid-twenty-first century, EO B-55-18 establishes a new State goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter.

The EO charges CARB with developing a framework for implementing and tracking progress toward these goals. This EO extends EO S-3-05, but is only binding on State agencies. The 2022 Scoping Plan identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 or earlier, consistent with the goals of EO B-55-19.

## **Senate Bill 1020 (2022)**

SB 1020 (Laird, also known as the Clean Energy, Jobs, and Affordability Act of 2022) was approved by the California legislature and signed by Governor Newsom in September 2022. The bill revises State policy to provide that renewable energy resources and zero-carbon resources supply 90 percent of all retail sales

of electricity to California end-use customers by 2035, 95 percent of retail sales of electricity to California customers by 2040, and 100 percent of all retail sales of electricity to California customers by 2045.

## Regional

### 2022 Regional Transportation Plan/Sustainable Communities Strategy

The Kern County Council of Governments adopted the *2022 Regional Transportation Plan and Sustainable Communities Strategy* (RTP/SCS) on July 21, 2022. The RTP is updated every four years and serves as a blueprint for the region's transportation system, encompassing various modes including freight, intermodal, and aviation. The SCS is included to specifically address emissions reductions from passenger vehicle travel, including 9 percent per capita reductions by 2020 and 15 percent per capita by 2035, compared to baseline year 2005. The plan contains seven core goals.

1. Mobility—Improve the mobility of people and freight.
2. Accessibility—Improve accessibility to, and the economic wellbeing of, major employment and other regional activity centers.
3. Reliability—Improve the reliability and safety of the transportation system.
4. Efficiency—Maximize the efficiency and cost effectiveness of the existing and future transportation system.
5. Livability/Quality of Life—Promote livable communities and satisfaction of consumers with the transportation system.
6. Sustainability—Provide for the enhancement and expansion of the system, while minimizing effects on the environment.
7. Equity—Ensure an equitable distribution of the benefits among various demographics and user groups.

## Local

### Kern County General Plan

The Land Use, Open Space, and Conservation Element of the Kern County General Plan provides goals, policies, and implementation measures applicable to air quality, and as related to the proposed project, would also reduce project GHG emissions. These goals, policies, and implementation measures are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to developments such as the proposed project. Therefore, they are not listed below.

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## ***Chapter 1: Land Use, Open Space, and Conservation Element***

### **Air Quality**

#### ***Policies***

Policy 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:

- (1) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
- (2) 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.

Policy 21: The County shall support air districts efforts to reduce PM<sub>10</sub> and PM<sub>2.5</sub> emissions.

#### ***Implementation Measures***

Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.

Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:

1. Minimizing idling time.
2. Electrical overnight plug-ins.

Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:

1. Pave dirt roads within the development.
2. Pave outside storage areas.
3. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
4. Use of alternative fuel fleet vehicles or hybrid vehicles.
5. Use of emission control devices on diesel equipment.
6. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
7. Provide bicycle lockers and shower facilities on site
8. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
9. The use and development of park and ride facilities in outlying areas.

10. Other strategies that may be recommended by the local Air Pollution Control Districts.

Measure J: The County should include PM<sub>10</sub> control measures as conditions of approval for subdivision maps, site plans, and grading permits.

## ***Chapter 5: Energy Element***

### **Solar Energy Development**

#### ***Policies***

Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.

Policy 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.

In 2009, the Kern County Board of Supervisors approved the proposed list of Energy, Efficiency, and Conservation projects for which the County will request funding under the provisions of the American Recovery and Reinvestment Act of 2009. The Kern County Planning and Natural Resources Department has requested an allocation for the preparation of a climate change action plan for the County General Plan. California's Climate Change Scoping Plan calls for local governments to reduce GHG emissions through the adoption of local programs as an important strategy to reduce community scale GHG emissions. Project conformance with an adopted climate change action plan would ensure the goal of AB 32 can be attained with the proposed project.

### **Willow Springs Specific Plan**

The project site is in the Willow Springs Specific Plan area. The Willow Springs Specific Plan was adopted in 1992 (most recently revised on April 1, 2008) and includes policies and implementation measures to minimize air quality impacts, which would also reduce project GHG emissions. The following summarizes the policies and implementations measures from the Willow Springs Specific Plan that are applicable to the proposed project.

#### ***Air Quality***

##### ***Goal***

Goal: Imposition of appropriate mitigation measures to reduce where practical to do so, the effect short-term and long-term projects have on the areas which involve grading activities, erosion controls, revegetation of disturbed sites, and provisions to introduce into the plan area a competitive job market to reduce travel times.

##### ***Implementation Measures***

Measure 3: Construction equipment shall be fitted with the most modern emission control devices and be kept in proper tune. Motors out of proper tune can result in emissions that vastly exceed recommended standards.

Measure 7: All phases of the Willow Springs Specific Plan Update project shall comply with applicable rules and regulations of the Kern County Air Pollution Control District.

## Eastern Kern Air Pollution Control District

In 2012, EKAPCD adopted an addendum to its CEQA Guidelines to address GHG impacts, including quantitative thresholds for determining significance for GHG emissions for new stationary sources where EKAPCD serves as the lead CEQA review agency. A project is considered to have a significant project or cumulative considerable impact if it generates 25,000 tons or more of CO<sub>2</sub>e per year (22,680 MTCO<sub>2</sub>e). This impact would be considered to be fully reduced to below the significance level if it meets one of the following conditions:

- The project demonstrates to EKAPCD that it is in compliance with a state GHG reduction plan such as AB 32 or future GHG reduction plan if it is more stringent than the state plan; or
- Project GHG emissions can be reduced by at least 20 percent below business as usual (BAU) through implementation of one or more of the following strategies:
  - Compliance with Best Performance Standard (BPS);
  - Compliance with GHG Offset; and/or
  - Compliance with an Alternative GHG Reduction Strategy.

## 4.8.4 Impacts and Mitigation Measures

### Methodology

Project-related activities would result in short-term and long-term generation of GHG emissions during construction and operation. The proposed project would also indirectly contribute to a long-term reduction of GHG emissions by providing low-GHG electricity to California customers. The GHGs that were quantitatively estimated for the proposed project are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.

In general, GHG emissions from the proposed project were quantified using the same methods described in **Chapter 4.3, Air Quality**, in this EIR, for estimating criteria pollutants, and are based on detailed project information provided by the Project Proponent. Emissions of CO<sub>2</sub>e were calculated using the GWP of each of these pollutants as found in the California Greenhouse Gas Emission Inventory, which is consistent with the IPCC AR4.

### Construction Emissions

**Off-Road Equipment:** Off-road equipment would be required for several construction activities, including demolition, grading, and structure construction. Emission factors for off-road construction equipment (e.g., loaders, graders, bulldozers) were obtained from the California Emissions Estimator Model (CalEEMod) (Version 2022.1) User's Guide appendix, which provides values per unit of activity (in grams per horsepower-hour) by calendar year. GHGs were estimated by multiplying the CalEEMod emission factors by the equipment inventory and activity assumptions (e.g., horsepower, hours of use per day).



**On-Road Vehicles and Trucks:** On-road vehicles (e.g., passenger vehicles, pickup trucks, flatbed trucks) would be required for material deliveries to the project site, equipment hauling, onsite crew and material movement, and employee commuting. Exhaust emissions from on-road vehicles were estimated using the CARB's Emission FACTor Model (EMFAC2021) and activity data (miles traveled per day). Emission factors for haul trucks are based on aggregated-speed emission rates for EMFAC's T7 Single Construction vehicle category. Emission factors for water trucks are based on aggregated-speed emission rates for EMFAC's T6 Instate Heavy vehicle category. According to transportation analysis, 155 vendor trips per day would be required for delivery of equipment and materials, including the solar panels for installation, for the duration of project construction. The average trip length for vendor and material delivery trips from local and nonlocal sources would be approximately 55 miles and include approximately 0.25 mile of onsite unpaved road travel.

Water trucks would be required for several construction phases to provide fugitive dust control, with as many as 12 expected on a given day. According to the Water Supply Assessment prepared for the proposed project, potential locations for water supply are less than 5 miles and 6 miles south of the project site. Additionally, there are onsite wells that the proposed project may use to source all of the needed water supply for project construction. However, for the purposes of providing a conservative analysis, a worst-case scenario was modeled with all necessary water coming from offsite. In total, the proposed project would have a combined 167 heavy-duty truck trips between the vendor trips and water trucks, consistent with the Traffic Impact Analysis (**Appendix M**) in this EIR.

Emissions factors for employee commute vehicles are based on a weighted average for all vehicle speeds for EMFAC's light-duty automobile/light-duty truck vehicle categories. Per the Traffic Impact Analysis, the average construction day would consist of 201 one-way employee commute trips based on an 18-month construction schedule. However, the construction emissions analysis uses a conservative 12-month construction schedule, so the employee commute trips were increased to an average of 302 one-way trips per day to accommodate the reduced schedule. According to the transportation analysis, approximately 50 percent of construction personnel would be hired from the local area, which includes the cities of Lancaster, Rosamond, and Mojave. It is anticipated that approximately 30 percent of the remaining construction personnel would temporarily relocate to one of these three cities for the duration of the proposed project. The remaining 20 percent of construction personnel will be considered nonlocal and are anticipated to come from Bakersfield, Tehachapi, and other areas outside of Antelope Valley. Given this information, it was assumed that the average trip length for employee travel would be approximately 26.5 miles.

**Electricity Consumption:** GHG emissions generated by electricity related to water demand during construction were quantified using activity data (e.g., megawatt-hour [MWh]) and emission factors from SCE. Total water use during construction would be approximately 200 acre-feet.

**Joshua Tree Removal and Mulching:** The removal and mulching of up to 2,300 Joshua trees onsite would result in GHG emissions impacts related to reduced annual carbon sequestration and the one-time release of carbon stored in the trees, if mulched. The CO<sub>2</sub> sequestration rate and total stored CO<sub>2</sub> were quantified using the U.S. Forest Service's Center for Urban Forest Research Tree Carbon Calculator.

## Operational Emissions

As mentioned above, during operation of the solar and BESS facility, there would be daily operational activities as well as annual panel washing. GHG emissions would result from off-road equipment exhaust from pressure washers, on-road vehicle trip generation for water trucks for panel cleaning, employee trips,

and electricity from water demand. Combustion exhaust was estimated using the same method above for criteria air pollutants, including CARB's EMFAC2021 model. Emission factors for the use of pressure washers were obtained from the CalEEMod (v. 2022.1) User's Guide appendix. Exhaust emissions from on-road vehicles were estimated using the EMFAC2021 emissions model and activity data (i.e., miles traveled per day).

The GHG emissions generated from project operation would be displaced due to the renewable solar energy produced at the site. Emissions displacement was estimated using the USEPA's Emissions & Generation Resource Integrated Database (eGrid) and information on California's renewable and zero-carbon energy supply goals pursuant to SB 1020.

- **Off-Road Equipment:** Pressure washers would be required for periodic panel washing at the project site during normal operations. It was assumed that panel washing would occur up to once per year and take approximately three months to complete, assuming use of four pressure washers per day. Emission factors for the use of the pressure washers were obtained from the CalEEMod (v. 2022.1) User's Guide appendix, which provides value per unit of activity (in grams per horsepower-hour) by calendar year. The CalEEMod default horsepower and load factors were used to estimate GHG emissions generation.
- **On-Road Vehicles:** On-road vehicles (e.g., pickup trucks, water trucks, passenger vehicles) would be required for delivery of water for panel washing, and employee commuting. Exhaust emissions from on-road vehicles were estimated using the EMFAC2021 emissions model and activity data (miles traveled per day). Vendor trucks delivering potable water are based on aggregated speed emission rates for EMFAC's T7 Single Construction vehicle category.

For conservative analysis, it is assumed that the panels would be washed once per year, using water from offsite sources and transported to the site in water trucks. Emission factors for hauling water for panel washing are based on aggregated-speed emission rates for EMFAC's T6 In-State Heavy category. It is anticipated the washing will use up to eight acre-feet of water over a three-month period. Assuming use of 5,000-gallon capacity trucks, nine water trucks per day would be required for the delivery of water during panel washing. Water during operations is assumed to be provided from the same location as water for construction. According to the Water Supply Assessment (**Appendix L**) prepared for the proposed project, potential locations for water supply are less than 5 miles and 6 miles south of the project site. For the purposes of providing a conservative analysis, a one-way trip distance of 6 miles was assumed for delivery of water during panel cleaning.

Emission factors for employee commute vehicles are based on a weighted average for all vehicle speeds for EMFAC's Light-Duty Automobile/Light-Duty Truck vehicle categories. Typical daily operation of the solar facility would require up to 15 full-time or part-time staff at the operation and maintenance facility at the adjacent BigBeau Solar Project. As with project construction, employee travel distance was assumed to be 26.5 miles per trip.

- **Energy Consumption:** Energy sources include electricity consumption from electricity related to general water demand (e.g., pumping). Onsite GHG emissions generated by electricity related to water demand (i.e., pumping/conveyance) during normal operations were quantified using activity data (e.g., MWh) for the proposed project and emission factors from SCE, which is the known provider during operation. Total water use during operation would be approximately 11 acre-feet.
- **Energy Generation:** The proposed solar facility would generate renewable energy with no associated GHG emissions. Therefore, operation of the proposed project would result in displaced GHG emissions due to the gradual switch from nonrenewable GHG-generating energy to renewable energy.

Energy displacement and the subsequent emissions displacement from the proposed solar facility were calculated using the USEPA eGrid future year emission factors, the USEPA's 2019 energy mix for the California–Mexico Power Area (CAMX), and total electricity generation per year. The regional CAMX eGrid values were used to estimate energy generation in the region. CAMX energy mix and emission factors were extrapolated out to future years based on the renewable and zero-carbon energy supply goals of the State pursuant to SB 1020 (i.e., 90 percent renewable or zero carbon by 2035, 95 percent renewable or zero carbon by 2040, and 100 percent renewable or zero carbon by 2045). Total annual electricity generation was assumed to be 870,000 MWh/year.

## Decommissioning Emissions

At such time as the proposed project is decommissioned, equipment operation and site restoration activities would result in emissions of GHGs. Given the assumption that much of the construction equipment necessary to construct; the Project Proponent would also be required to decommission the site, it is reasonable to assume that decommissioning activities would be similar in nature to activities associated with construction of the proposed project. It should be noted that this does not take into account any future improvement in technology or subsequent reductions in air emissions. Project decommissioning is projected to be shorter in duration than construction and take four to eight months to complete (however, for the purposes of this analysis, it was assumed that decommissioning activities would be completed within 4 months, instead of 12 months for construction). Therefore, decommissioning is assumed to be one-third of the predicted construction emissions.

## 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 on GHGs.

A project would have a significant impact on GHGs if it would:

- a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Kern County has not developed a quantified threshold of significance for GHG emissions, but a project that contributes to a net decrease in GHG emissions and is consistent with the adopted implementation of the 2022 Scoping Plan is presumed to have less-than-significant GHG impacts.

In March 2012, EKAPCD adopted an addendum to their CEQA guidelines to address GHG impacts, including quantitative thresholds for determining significance of GHG emissions when EKAPCD is the CEQA lead agency. In these circumstances, a project is considered to have a significant impact or cumulatively considerable impact if it exceeds the following criteria:

- Generate 25,000 MTs or more of CO<sub>2</sub>e per year

The above impact would be considered to be fully reduced to below the significance level if it meets one of the following conditions:

- The project demonstrates to EKAPCD that it is in compliance with a State GHG reduction plan such as AB 32 or future federal GHG reduction plan if it is more stringent than the State plan; or
- Project GHG emissions can be reduced by at least 20 percent below BAU through implementation of one or more of the following strategies:
  - a. Compliance with a Best Performance Standard (BPS);
  - b. Compliance with GHG Offset; and/or
  - c. Compliance with an Alternative GHG Reduction Strategy.

Pursuant to the CEQA thresholds, impacts were evaluated based on whether the project would be consistent with the State's applicable GHG reduction goals, plans, policies, and regulatory requirements. Specifically, those plans and policies established in accordance with AB 32 and the State's RPS program as well as other federal, state, and local policies.

## Project Impacts

**Impact 4.8-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

### ***Construction***

Construction of the proposed project would result in temporary generation of GHG emissions related to off-road equipment use, on-road vehicle operations, and electricity from water use. **Table 4.8-3, *Estimated Project Construction Greenhouse Gas Emissions***, shows GHG emissions related to construction of the proposed project. Annual GHG emissions from project construction would be approximately 16,162 MTCO<sub>2</sub>e. These emissions were amortized over the 35-year lifespan of the proposed project, which totals approximately 462 MTCO<sub>2</sub>e per year. These emissions were added to operational emissions for comparison to EKAPCD's GHG threshold.

**TABLE 4.8-3: ESTIMATED PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS**

Phase	GHG Emissions CO <sub>2</sub> e (metric tons) <sup>a</sup>
Move Equipment Onsite	219
Site Preparation and Grading	1,003
Access Road Improvements	392
Internal Roads Construction	126
Solar Array Structural, Underground and Panel Installation, Battery Storage	13,153
Electrical Substation and Microwave Tower Construction	261
Generation Tie Line Construction	403
Joshua Tree Removal and Mulching	606
<b>Total Construction Emissions</b>	<b>16,162</b>
Amortized (35-Year Project Life)	462

SOURCE: Appendix D.1.

NOTES: Refer to **Appendix D** for all assumptions and calculations.

<sup>a</sup> Totals may not add up due to rounding.

## Operation

Once operational, the proposed project would result in GHG emissions from resource consumption associated with periodic off-road equipment used for panel washing, on-road vehicle operations, and electricity from water use, while providing renewable energy generation that would offset electricity produced by the statewide grid and support statewide clean energy goals. The total effect of the proposed project is the net change between operations sources generated and emissions displaced by the proposed project.

The 270-MW PV facility is expected to generate approximately 870,000 MWh/year. The renewable energy generated by the proposed project would displace GHG emissions that would otherwise be generated in the electrical grid by nonrenewable resources. Because additional renewable resources would be integrated into the statewide electrical grid as a result of the renewable and zero-carbon energy supply goals of the State, the annual displaced emissions achieved by the proposed project would decline as a function of time (i.e., reductions per MWh would reduce as the grid gets cleaner, meaning the emissions that are displaced would reduce over time). Lifetime GHG reductions were quantified assuming a 35-year design life for the panels and linear integration of additional renewables into the statewide grid, up to 100 percent by 2045, pursuant to SB 1020. The net effect on operational emissions on both an annual (i.e., opening year) basis and over the proposed project's 35-year lifetime is presented in **Table 4.8-4, Estimated Greenhouse Gas Emissions from Project Operation in 2025**, and **Table 4.8-5, Estimated Greenhouse Gas Emissions from Project Lifetime**.

As shown in **Table 4.8-4, Estimated Greenhouse Gas Emissions from Project Operation in 2025**, daily operations, periodic panel washing, and water demand during operation would generate 241 MTCO<sub>2</sub>e per year. Together with amortized construction, the total annual GHG emissions would be 702 MTCO<sub>2</sub>e. The

renewable energy generated by the proposed project would offset 30,788 MTCO<sub>2</sub>e per year of grid-supplied electricity, resulting in an annual net GHG reduction of 30,085 MTCO<sub>2</sub>e. An approximate total of 1,077,571 MTCO<sub>2</sub>e of emissions would be displaced over the proposed project's 35-year lifetime.

**TABLE 4.8-4: ESTIMATED GREENHOUSE GAS EMISSIONS FROM PROJECT OPERATION IN 2025**

Source	GHG Emissions CO <sub>2</sub> e (metric tons) <sup>a</sup>
Daily Operations	100
Periodic Panel Washing	109
Electricity from Water Demand	9
Water Hauling	17
Potable Water Deliveries	5
<hr/>	
Total Annual Operational Emissions <sup>a</sup>	241
Amortized Construction	462
Total Annual Project Emissions <sup>b</sup>	702
<i>Annual displaced emissions</i>	-30,788
<b>Net Emissions</b>	<b>-30,085</b>
EKCAPCD Threshold	25,000
<i>Exceed Threshold?</i>	<i>No</i>

SOURCE: Appendix D.1.

NOTES: Refer to **Appendix D** for all assumptions and calculations.

<sup>a</sup> Totals may not add up due to rounding.

<sup>b</sup> Average MTCO<sub>2</sub>e that would be displaced annually, over the 35-year project life.

### ***Decommissioning***

The proposed project would also generate emissions associated with decommissioning activities, as detailed in Appendix D.2. Decommissioning activities are assumed to generate GHG emissions at a rate equal to one-third of the GHG emissions generated during construction. As such, decommissioning activities would generate approximately 5,387 metric tons of carbon dioxide equivalents (MTCO<sub>2</sub>e) during the decommissioning period. By combining the GHG emissions generated during decommissioning with the GHG emissions generated during construction and operation, the net GHG emissions would be -1,047,599 MTCO<sub>2</sub>e.

**TABLE 4.8-5: ESTIMATED GREENHOUSE GAS EMISSIONS FROM PROJECT LIFETIME**

Source	GHG Emissions CO <sub>2</sub> e (metric tons) <sup>c</sup>
Total Operational Emissions <sup>a</sup>	8,423
Total Construction Emissions	16,162
Total Decommissioning Emissions	5,387
Total Project Emissions <sup>b</sup>	29,972
Total Displaced Emissions	-1,077,571
<b>Net Emissions<sup>b</sup></b>	<b>-1,047,599</b>

SOURCE: Appendices D.1 and D.2.

NOTES: Refer to **Appendix D.1** and **D.2** for all assumptions and calculations.

<sup>a</sup> Total Operational Emissions are based on opening year operational GHG emissions (**Table 4.8-4**, *Estimated Greenhouse Gas Emissions from Project Operation in 2025*) multiplied by 35.

<sup>b</sup> Totals may not add up due to rounding.

<sup>c</sup> Total MTCO<sub>2</sub>e that would be displaced over the 35-year project life.

As shown in **Table 4.8-5**, *Estimated Greenhouse Gas Emissions from Project Lifetime*, over the 35-year lifetime of the proposed project, emissions would total approximately 29,972 MTCO<sub>2</sub>e. The renewable energy generated during the 35 years of project operation would offset an estimated 1,077,571 MTCO<sub>2</sub>e of grid-supplied electricity. These displaced emissions would result in a total net GHG reduction of approximately 1,047,599 MTCO<sub>2</sub>e over the proposed project's life.

Given that the proposed project would result in a net decrease of CO<sub>2</sub>e emissions, impacts related to the generation of GHG emissions, either directly or indirectly, would be less than significant.

### **Mitigation Measures**

No mitigation measures would be required.

### **Level of Significance**

Impacts would be less than significant.

### **Impact 4.8-2: The project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas.**

The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions to achieve the GHG reduction goals of the State, including AB 32, SB 32, and AB 1279. Many of these strategies have been extended as part of the 2022 Scoping Plan to achieve SB 32 and carbon neutrality by 2045 under AB 1279.

The 2022 Scoping Plan states that the development of California's renewable and zero-carbon energy supply goals are a key sector for the State's goal in achieving carbon neutrality by 2045. As discussed above in Section 4.8.3, *State*, SB 1020 revised California's renewable and zero-carbon energy supply goals to 90 percent by 2035, 95 percent by 2040, and 100 percent by 2045. The renewable and zero-carbon energy

supply goals promote multiple objectives, including diversifying the electricity supply. Increasing the renewable energy supply toward 100 percent zero-carbon by 2045 is designed to accelerate the transformation of the electricity sector, including investment in the transmission infrastructure and system changes to allow integration of large quantities of intermittent wind and solar generation. The proposed project would add renewable solar-generated energy to the electricity supply and result in an emissions benefit (see **Table 4.8-4**, *Estimated Greenhouse Gas Emissions from Project Operation in 2025*, and **Table 4.8-5**, *Estimated Greenhouse Gas Emissions from Project Lifetime*). Therefore, the proposed project would be consistent with the renewable and zero-carbon energy supply goals of the 2022 Scoping Plan.

Additionally, the proposed project would not exceed EKAPCD's 25,000 MTCO<sub>2</sub>e project threshold. Given that Kern County has not yet adopted a GHG reduction plan, there are no other measures or policies applicable to the proposed project. Accordingly, impacts related to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be less than significant.

### **Mitigation Measures**

No mitigation measures would be required.

### **Level of Significance**

Impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

Emissions of GHGs and their contribution to global climate change are considered a cumulative impact by definition. Therefore, the geographic extent of the project's cumulative area of impact would be worldwide. As described under Impact 4.8-1 and shown in **Table 4.8-4**, *Estimated Greenhouse Gas Emissions from Project Operation in 2025*, annual emissions of project construction and operations would total 702 MTCO<sub>2</sub>e. The renewable energy generated by the proposed project would offset about 30,788 MTCO<sub>2</sub>e per year of grid-supplied electricity, resulting in an annual net GHG reduction of approximately 30,085 MTCO<sub>2</sub>e. As shown in **Table 4.8-5**, *Estimated Greenhouse Gas Emissions from Project Lifetime*, project decommissioning would generate an additional 5,387 MTCO<sub>2</sub>e. Thus, over the 35-year lifetime of the project, emissions would total approximately 24,585 29,972 MTCO<sub>2</sub>e. The renewable energy generated during the 35 years of project operation would offset an estimated 1,077,571 MTCO<sub>2</sub>e of grid-supplied electricity. These displaced emissions would result in a total net GHG reduction of approximately 1,052,986 1,047,599 MTCO<sub>2</sub>e over the project life. Given that the proposed project would result in a net decrease of CO<sub>2</sub>e emissions, impacts related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment would be considered less than cumulatively considerable; and therefore, less than significant.

### **Mitigation Measures**

No mitigation measures would be required.

### **Level of Significance**

Cumulative impacts would be less than significant.



## Section 4.9

# Hazards and Hazardous Materials

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### 4.9.1 Introduction

This section of the Environmental Impact Report (EIR) evaluates the potential impacts of the proposed project on human health and the environment due to exposure to hazardous materials or conditions associated with the project site, project construction, and project operations and presents mitigation measures where applicable. Information in this section is based on the *Phase I Environmental Site Assessment – Bullhead Solar – 1,359.5 Acres, Tehachapi Willow Springs Road, Rosamond, CA, 93560* (**Appendix J**; by *Practical Environmental Solutions* (2023), of this EIR, completed for the project site. In addition, other publicly available databases including the Department of Toxic Substances Control’s EnviroStor and State Water Resources Control Board’s GeoTracker were also consulted.

### 4.9.2 Environmental Setting

This section discusses the existing conditions related to hazards and hazardous materials in the project site and surrounding area and describes the environmental setting for hazardous materials sites, airports, electromagnetic fields (EMFs), and wildfire hazards.

As described in **Chapter 3, Project Description**, of this EIR, the proposed project includes the development of a photovoltaic (PV) solar facility and associated infrastructure necessary to generate up to a combined total of 270 megawatts (MW) of renewable electrical energy including associated energy storage on approximately 1,343 acres of primarily privately owned land. The facility would include solar panels, inverters, gen-tie lines, electrical collection system, battery storage, substation, and an Operations and Maintenance (O&M) building. The energy would be ultimately transferred to the electrical grid via either the proposed Rosamond or Whirlwind substations.

### Existing Setting

The project site is relatively flat and characterized by undeveloped land; three water wells on parcels 358-052-01, 346-032-10, and 346-032-53; farmland with associated farm buildings and structures on parcel 315-011-60; and residential uses (one residence located on parcel 315-011-58). A former private airport landing area is located on parcel 346-032-53 in the eastern portion of the project site, which is owned by the Project Proponent. The landing strip is not operational and remnant would be removed with project construction. According to **Appendix J, Phase I Environmental Site Assessment**, the former privately operated landing strip has no reported violations or releases of hazardous materials that would affect the project site.

### Current Uses Surrounding the Project Site

The areas surrounding the project site include undeveloped lands, rural residential, active and fallow agricultural lands, access roadways, the California aqueduct, high-voltage transmission line corridors, and

solar and wind development uses to the north, south, east and west of the project site. The closest school to the project site is the Tropico Middle School, located approximately 6 miles southeast of the project site. The nearest public airport to the project site is the Rosamond Skypark, located at 4000 Knox Avenue, Rosamond, approximately 5.5 miles southeast of the project site.

## Historical Property Use

Historical aerial photographs were reviewed to understand the history of land uses at the project site. Historical aerial maps from the historic aerials database depict the project site as mostly undeveloped and agricultural land going back to 1963, the oldest aerial photograph available. The available aerial photographs date back to 1995, 2004, 2012, and 2020 via Google Earth. The residence located onsite was constructed between 1974 and 1985. The residence is not depicted in the 1974 aerial photograph; however, it is shown in the 1985 aerial photograph (Historic Aerials, 2023; Google Earth, 2023).

No additional historical data was available for the project site such as fire insurance maps, city directories or other environmental reports. Additionally, no known recognized environmental concerns were identified in the environmental site assessment, **Appendix J**, connected to historical property uses; and the project site is not listed on any hazardous materials database.

## Hazardous Materials and Waste

Under Title 22 of the California Code of Regulations (CCR), a hazardous material is defined as a material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment, or a material specified in an ordinance adopted. Hazardous waste means a hazardous waste as defined in Section 66.261.3 of CCR Title 22. Hazardous waste is classified according to four properties: (1) toxicity; (2) ignitability; (3) corrosiveness; and (4) reactivity (CCR Title 22, Division 4.5, Chapter 11, Article 3).

Various forms of hazardous materials can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials. The environmental site assessment, **Appendix J**, conducted for the project site was used to determine potential risks of encountering legacy contaminants at the site. The residence located onsite was constructed between 1974 and 1985. The residence is not depicted in the 1974 aerial photograph; however, it is shown in the 1985 aerial photograph (Historic Aerials, 2023). The exact construction date is unknown; however, the residence was demolished as of May 8, 2023. Therefore, there is no potential for the residence to contain hazardous building materials.

## Recognized Environmental Conditions:

A recognized environmental condition (REC) is one of the terms used to identify environmental liability within the context of **Appendix J**, environmental site assessment. The American Society for Testing and Materials (ASTM) International defines an REC as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.” Conditions at the project site are of little importance and are minor

occurrences of contamination that generally do not present a material risk to human health and would not likely be subject to enforcement action if brought to the attention of governmental agencies.

The environmental site assessment, **Appendix J**, of this EIR, was conducted on the project site to review, evaluate, and document present and past land uses and practices, and visually examine site conditions to identify RECs. Based on the results of the study, there are no RECs identified in connection with the project site.

## Photovoltaic Solar Panels and Cadmium Telluride

The photovoltaic (PV) solar panels that would be installed on the project site would consist of either polycrystalline silicon or thin film technology. Polycrystalline silicon and thin film PV panels may include small amounts of semiconductor or electrically conducting materials encapsulated within the modules that are considered to be hazardous. Because such materials are in a solid and non-leachable state, broken polycrystalline silicon PV and thin film technology panels would not be a source of pollution to surface water, stormwater, or groundwater. Crystalline silicon and thin film modules removed from the site would be recycled or otherwise disposed at an appropriate waste disposal facility.

Although the specific type of PV solar modules has not been selected for the proposed project, it is conceivable that the modules may use cadmium telluride (CdTe) thin film technology. Thin film CdTe solar modules (CdTe PV) would consist of a thin semiconductor layer that is in the environmentally stable form of a compound rather than the leachable form of a metal. The CdTe compound is encapsulated in the PV module with the PV module containing less than 0.1 percent cadmium (Cd) content by weight. Due to optimal optical properties, only a three-micron thin layer of CdTe is used to absorb incident sunlight, with Cd content per 8 square feet of PV module less than that of one C-size flashlight nickel-cadmium (NiCd) battery.

It has been demonstrated that standard operation of CdTe PV systems does not result in cadmium emissions to air, water, or soil. During the PV module manufacturing process, CdTe is bound under high temperature to a sheet of glass by vapor transport deposition, coated with an industrial laminate material, insulated with solar edge tape, and covered with a second sheet of glass. The module design results in the encapsulation of the semiconductor material between two sheets of glass thereby preventing the exposure of CdTe to the environment.

Several peer-reviewed studies have evaluated the environmental, health, and safety aspects of CdTe PV modules. These studies have consistently concluded that during normal operations, CdTe PV modules do not present an environmental risk. CdTe releases are also unlikely to occur during accidental breakage or fire due to the high chemical and thermal stability of CdTe. Disposal risks of end-of-life CdTe PV modules are minimized because of the low solubility of CdTe and because the modules can be effectively recycled at the end of their approximately 30-year life. The PV module manufacturer provides global CdTe module recycling services. Since 2005, end-of-life CdTe PV modules are currently characterized as federal non-hazardous waste and as a California-only hazardous waste. Solar equipment and infrastructure would be recycled as practical or disposed of in compliance with applicable laws. CdTe PV modules are an article of commerce and are not classified as a hazardous material for shipping purposes under either federal or State law. Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10 states that photovoltaic modules are not a fully regulated hazardous waste and are known as “universal wastes” and not subject to the same requirements for waste disposal as other hazardous wastes (DTSC, 2020a).

There are several planned, existing, and permitted solar energy and transmission projects near the project site. The approved BigBeau Solar Project is located to the immediate west of the proposed project. Surrounding operational solar projects include the Valentine Solar Project and Catalina Renewable Energy Project. Additionally, the following projects have been approved in Eastern Kern County: the AVEP Solar Project, the Pacific Wind and PdV Manzanita Projects, the Beacon Photovoltaic Project, GE Energy LLC, LADWP, RE Distributed Solar Projects (Barren Ridge 1, Columbia One, Columbia Two, Great Lakes), Rosamond Solar Project, Kingbird Solar, SEPV Mojave West Solar Project, Fremont Solar (Springbok 2 Solar Farm) Project, Windhub Solar Project, and Eland 1 Solar Project (See **Table 3-4**, *Cumulative Projects List*, in **Chapter 3**, *Project Description*).

## Electromagnetic Fields

Electromagnetic fields (EMFs) are associated with electromagnetic radiation, which is energy in the form of photons. Radiation energy spreads as it travels and has many natural and human-made sources. The electromagnetic spectrum, the scientific name given to radiation energy, includes light, radio waves, and x-rays, among other energy forms. Electric and magnetic fields are common throughout nature and are produced by all living organisms. Concern over EMF exposure, however, generally pertains to human-made sources of electromagnetism and the degree to which they may have adverse biological effects or interfere with other electromagnetic systems.

Commonly known human-made sources of EMF are electrical systems, such as electronics and telecommunications, as well as electric motors and other electrically powered devices. Radiation from these sources is invisible, non-ionizing, and of low frequency. Generally, in most environments, the levels of such radiation added to natural background sources are low.

Electric voltage (electric field) and electric current (magnetic field) from transmission lines create EMFs. Power frequency EMF is a natural consequence of electrical circuits and can be either directly measured using the appropriate measuring instruments or calculated using appropriate information. The proposed project would construct a collection system to interconnect into the California Independent System Operator (CAISO) grid at the existing Southern California Edison (SCE) Whirlwind Substation or approved Rosamond Substation. The alignment is discussed in more detail in **Chapter 3**, *Project Description*, of this EIR.

On January 15, 1991, the California Public Utilities Commission (CPUC) initiated an investigation to consider its role in mitigating the health effects, if any, of electric and magnetic fields from utility facilities and power lines. A working group of interested parties, the California EMF Consensus Group, was created by the CPUC to advise it on this issue. The California EMF Consensus Group's fact-finding process was open to the public, and its report incorporated public concerns. Its recommendations were filed with the CPUC in March 1992. Based on the work of the California EMF Consensus Group, written testimony, and evidentiary hearings, CPUC's decision (93-11-013) was issued on November 2, 1993, to address public concern about possible EMF health effects from electric utility facilities. The conclusions and findings included the following:

*"We find that the body of scientific evidence continues to evolve. However, it is recognized that public concern and scientific uncertainty remain regarding the potential health effects of EMF exposure. We do not find it appropriate to adopt any specific numerical standard in association with EMF until we have a firm scientific basis for adopting any particular value."*

This continues to be the stance of the CPUC regarding standards for EMF exposure. Currently, the State has not adopted any specific limits or regulations regarding EMF levels from electric power facilities. However, the CPUC did adopt a policy that requires electric utilities operating within California agree to incorporate various measures into the construction of new or upgraded power lines and substations, and authorized each utility to develop and publish a set of “EMF Design Guidelines” implementing this policy. As a result, SCE published guidelines to reduce exposure of EMF from electrical utility transmission and distribution facilities. The proposed project is required to be designed to the published guidelines, including siting, construction, operation, and maintenance criteria.

In addition to transmission lines, the proposed project would include a battery energy storage system (BESS) in one of three proposed locations. The BESS would consist of battery storage modules placed in multiple prefabricated enclosures. The energy storage technology and design for the BESS has not been determined at this time but could include any commercially available battery technology, including but not limited to lithium ion, lead acid, sodium sulfur, and sodium or nickel hydride. Either way, the energy storage would occur as direct current (DC) which produce static EMFs and has not been associated with adverse health effects.

## Increase in Ambient Temperatures

All exposed surfaces (e.g., houses, cars, rocks) absorb heat produced by the sun. A “heat island” effect is generated when cities cover miles of land with structures (e.g., concrete buildings and asphalt roads), which absorb and store significantly more heat during the day than undeveloped earth. Additionally, these cities are filled with energy-consuming devices (e.g., engines, appliances, and heating, air-conditioning, and ventilation [HVAC] systems) that generate waste heat.

Solar arrays consist of solar panels mounted on aluminum and steel support structures. The support structures have little or no exposure to sunlight. The project site would not be covered entirely with solar panels. The amount of the sun’s heat absorbed by a solar panel is similar to the amount of the sun’s heat absorbed by open land. However, solar panels store less heat than the earth because they consist of a thin, lightweight glass that is surrounded by airflow. Therefore, heat dissipates quickly from a solar panel compared with solid earth, which dissipates heat slowly. The proposed project would have energy-consuming devices (e.g., inverters). Therefore, the proposed project would generate marginal amounts of waste heat on the project site. However, there is nothing in the record to date that would indicate that the proposed project would significantly increase ambient air temperatures outside the project site.

In a study entitled “*Analysis of the Potential for a Heat Island Effect in Large Solar Farms*,” Fthenakis and Yu from Columbia University and Brookhaven National Laboratory combined models with field data to determine the extent to which PV facilities altered ambient air temperatures (Fthenakis and Yu 2013). Temperatures surrounding the facility were found to cool completely at night and the researchers determined that the PV facility “did not induce a day-after-day increase in ambient temperatures, and therefore, adverse micro-climate changes from a potential PV plant are not a concern.” This study also concluded that increases in temperatures completely dissipated approximately 5 to 18 meters above the facility and that thermal energy “promptly dissipated” with distance from the facility. Remote sensing research produced by Edalat and Stephen from the University of Nevada of Las Vegas in 2017 supports the conclusions of Fthenakis and Yu (2013), demonstrating that land surface temperatures surrounding a solar facility were not significantly impacted by the solar facility (Edalat and Stephen 2017).

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## Increased Noise

Noise from construction would be temporary over a period of up to 18 months for the proposed project. The ambient noise regime in the project vicinity consists of undeveloped, solar farm, and rural residential uses and is a relatively quiet noise environment. The nearest sensitive noise receptors to the proposed project are isolated residential land uses. As discussed in detail in Section 4.13, *Noise*, of this EIR, due to the relatively quiet noise environment in the project area associated with the current undeveloped land uses, temporary or periodic increases in ambient noise levels caused by construction activities could occur at these receptors. However, these increases would be temporary and not expected to disrupt or otherwise adversely affect residential uses in the area.

## Hazardous Materials Transportation

There are no major highways that run in the vicinity of the project site. The nearest highway is SR-14, a four-lane highway located approximately 9 miles east of the proposed project. The transportation of hazardous materials within the State of California is subject to various federal, State, and local regulations. It is illegal to transport explosives or inhalation hazards on any public highway that is not designated for that purpose, unless the use of a highway is required to permit delivery or the loading of such materials (California Vehicle Code, Sections 31602 (b) and 32104(a)). The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials. Information on CHP requirements and regulatory authority is provided in Section 4.9.3, *Regulatory Setting*, below. According to Section 2.5.4 of the Kern County General Plan Circulation Element, SR-14 (approximately 8 miles east) is designated as an adopted commercial hazardous materials shipping route. The project site does not currently contain any uses that generate, transport, use, or dispose of hazardous materials.

## Airports

The nearest public airport to the project site is the Rosamond Skypark, located at 4000 Knox Avenue, Rosamond, approximately 5.5 miles southeast of the project site. A nonoperational private airport landing area is located in the eastern portion of the project site and is owned by the Project Proponent. The proposed project is not located within an Airport Influence Area, per the Kern County Airport Land Use Compatibility Plan.

## Emergency Preparedness

The Kern County Emergency Operations Plan (EOP) provide the basis for a coordinated response before, during, and after a disaster affecting Kern County or other jurisdictions in the operational area. This plan establishes policies and an emergency management organization and assigns roles and responsibilities to ensure the effective management of emergency operations. The plan also identifies sources of external support which might be provided through mutual aid and specific statutory authorities by other jurisdictions, State and federal agencies, and the private sector. The EOP is supported by a number of separately published annexes which further describe the operational or functional response to particular threats and hazards and the basic considerations, actions, and responsibilities of specific emergency response and management disciplines or functions.

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## Fire Hazard Areas

Pursuant to Public Resources Code Sections 4201 to 4204 and Government Code Sections 51175 to 51189, the California Department of Forestry and Fire Prevention (CAL FIRE) is mandated to identify fire hazard severity zones for all communities in California based on fuels, terrain, weather, and other relevant factors. CAL FIRE has mapped fire hazard severity zones (FHSZ) moderate, high, and very high for most regions of California. Local governments must consider CAL FIRE's determination in adopting their own determinations and planning for fire services.

The CAL FIRE requires counties within the State to develop fire protection management plans that address potential threats of wildland fires. The Kern County Wildland Fire Management Plan identifies federal, State, and local responsibility areas for the entire County to facilitate coordination efforts for fire protection services. The project site is sparsely vegetated and not within an area identified by CAL FIRE as having high or very high fire risk, as determined by the Kern County General Plan and CAL FIRE (CAL FIRE, 2023a). According to the CAL FIRE, Kern County Fire Hazards Severity Zone Maps for the Local Responsibility Areas (LRA), portions of the solar array area of the project site are classified as LRA Moderate or LRA Unzoned (CAL FIRE, 2022a). Moderate zones are typically wildland supporting areas of low fire frequency and relatively modest fire behavior. Impacts related to wildfire hazards are further discussed in Section 4.17, *Wildfire*, of this EIR.

### 4.9.3 Regulatory Setting

#### Federal

##### U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (USEPA) was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The USEPA's mission is to protect human health and to safeguard the natural environment – air, water, and land – upon which life depends. The USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for using permits and for monitoring and enforcing compliance. Where national standards are not met, the USEPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

##### Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the EPA to regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

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## **Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act**

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” were enacted by Congress on December 11, 1980. This law (42 United States Code [USC] 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (Title 40, Code of Federal Regulations [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

## **Clean Water Act/Spill Prevention, Control, and Countermeasure Rule**

The Clean Water Act (CWA) (33 USC 1251 et seq., formerly known as the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the United States. As part of the CWA, the EPA oversees and enforces the Oil Pollution Prevention regulation contained in 40 CFR 112, which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement spill prevention, control, and countermeasure (SPCC) plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “Navigable Waters” of the United States.

## **Polychlorinated Biphenyls Regulations**

The EPA prohibited the use of Polychlorinated Biphenyls (PCBs) in the majority of new electrical equipment starting in 1979 and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and their handling are regulated by the provisions of the Toxic Substances Control Act. Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal.

Additionally, Title 40 Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, of the Code of Federal Regulations (CFR) provide specific authorizations allowing electric utilities to continue using transformers and other electrical equipment that contains PCBs for the remainder of their useful lives subject to specific use conditions and disposal requirements.



## Other Regulations

Other federal regulations overseen by the USEPA relevant to hazardous materials and environmental contamination include 40 CFR Parts 100 to 149 -- Water Programs, 40 CFR Parts 239 to 259 -- Solid Wastes, and 40 CFR Parts 260 to 279 -- Hazardous Waste. These regulations designate hazardous substances under the CWA; determine the reportable quantity for each substance that is designated as hazardous; and establish quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

## Occupational Safety and Health Administration

The Occupational Safety and Health Administration's (OSHA's) mission is to ensure the safety and health of U.S. workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910, which include preparation of Health and Safety Plans (HASP). HASPs identify potential hazards associated with a proposed land use and may provide appropriate mitigation measures as required.

## State

### California Building Code, Section 608

Section 608 of the California Building Code includes requirements for battery energy storage systems greater than 20 kWh, which includes the proposed energy storage facilities. Section 608 includes requirements for vehicle impact protection, location, spacing between batteries, egress, security, and fire suppression systems.

### California Public Utilities Commission General Order 95: Rules for Overhead Electric Line Construction

General Order 95 (GO 95) is the key standard governing the design, construction, operation, and maintenance of overhead electric lines within the State of California. It was adopted in 1941 and updated most recently in 2012. GO 95 includes safety standards for overhead electric lines, including minimum distances for conductor spacing, minimum conductor ground clearance, and standards for calculating maximum sag, electric line inspection requirements, and vegetation clearance requirements. The latter, governed by Rule 35, and inspection requirements, governed by Rule 31.2, are summarized below:

- GO 95: Rule 35, *Tree Trimming*, defines minimum vegetation clearances around power lines. Rule 35 guidelines require 10-foot radial clearances for any conductor of a line operating at 110,000 Volts or more, but at less than 300,000 Volts. This requirement would apply to the proposed 220-kV lines.
- GO 95: Rule 31.2, *Inspection of Lines*, requires that lines be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition, and that lines temporarily out of service be inspected and maintained in such condition so as not to create a hazard.

## **Power Line Hazard Reduction (PRC 4292)**

Public Resources Code (PRC) 4292 requires a 10-foot clearance around any tree branches or ground vegetation at the base of power poles carrying more than 110 kV. The firebreak clearances required by PRC 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached and surrounding each dead-end or corner pole, unless such pole or tower is exempt from minimum clearance requirements by provisions of PRC 4296. Project structures would be exempt, with the exception of electrical lines, cable poles, and dead-end structures.

## **Power Line Clearance Required (PRC 4293)**

PRC 4293 provides guidelines for line clearance, including a minimum of 10 feet of vegetation clearance around any conductor operating at 110 kV or higher.

## **Minimum Clearance Provisions (14 CCR 1254)**

With respect to minimum clearance requirements, 14 CCR 1254 presents guidelines pertaining to non-exempt utility poles. The project structures would be exempt from the clearance requirements, with the exception of electrical lines, cable poles, and dead-end structures.

The firebreak clearances required by 14 CCR 1254 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached and surrounding each dead-end or corner pole, unless such pole or tower is exempt from the minimum clearance requirements by the provisions of 14 CCR 1255 or PRC 4296. The radius of the cylindroid is 10 feet, which is measured horizontally from the outer circumference of the specified pole or tower, with the height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylindroid to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole or tower. Flammable vegetation and materials located wholly or partially within the firebreak space would be treated as follows:

- At ground level: Remove flammable materials, including ground litter, duff, and dead or desiccated vegetation that would propagate fire.
- From 0 to 8 feet above ground level: Remove flammable trash, debris, or other materials, grass, and herbaceous and brush vegetation. Remove all limbs and foliage of living trees up to a height of eight feet.
- From 8 feet to the horizontal plane of highest point of the conductor attachment: Remove dead, diseased, or dying limbs and foliage from living sound trees and any dead, diseased, or dying trees in their entirety.

## **Hazardous Materials Release Response Plans and Inventory Act of 1985**

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as unsafe

raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

## **Hazardous Waste Control Act**

The Hazardous Waste Control Act created the State Hazardous Waste Management Program, which is similar to but more stringent than the federal RCRA program. The act is implemented by regulations contained in Title 26 CCR, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the California Department of Toxic Substances and Control (DTSC).

## **Unified Hazardous Waste and Hazardous Materials Management Regulatory Program**

Senate Bill 1082 (1993) created the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a Certified Unified Program Agency (CUPA). The Program Elements consolidated under the Unified Program are as follows:

- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs (i.e., Tiered Permitting);
- Aboveground Petroleum Storage Tank Program;
- Hazardous Materials Release Response Plans and Inventory Program (i.e., Hazardous Materials Disclosure or “Community-Right-To-Know”);
- California Accidental Release Prevention Program (Cal ARP);
- Underground Storage Tank (UST) Program; and
- Uniform Fire Code Plans and Inventory Requirements.

The Unified Program is intended to provide relief to businesses in complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. Most CUPAs have been established as a function

of a local environmental health or fire department. Some CUPAs have contractual agreements with another local agency, a participating agency, which implements one or more Program Elements in coordination with the CUPA. The CUPA in Kern County is the Environmental Health Services Division of the Kern County Public Health Services Department.

## **California Environmental Protection Agency**

The California Environmental Protection Agency (Cal/EPA) was created in 1991 and unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board (CARB), State Water Resource Control Board (SWRCB), Regional Water Quality Control Board (RWQCB), CalRecycle, DTSC, Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one agency. These agencies were placed within the Cal/EPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Their mission is to restore, protect, and enhance the environment and to ensure public health, environmental quality, and economic vitality.

## **Department of Toxic Substances and Control**

DTSC, a department of Cal/EPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the Federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

USC 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

## **California Office of Emergency Services**

In order to protect public health and safety, and the environment, the California Office of Emergency Services (OES) is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release, or threatened release, of hazardous materials. The OES requires that basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and health risks) be available to firefighters, public safety officers, and regulatory agencies. Typically, this information should be included in business plans in order to prevent or mitigate damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code, Article 1—Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2—Hazardous Materials Management (Sections 25531 to 25543.3).

Title 19 CCR, Public Safety, Division 2, Office of Emergency Services, Chapter 4 - Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for hazardous materials business plans. These plans must include

the following: (1) a hazardous material inventory in accordance with Sections 2729.2 to 2729.7, (2) emergency response plans and procedures in accordance with Section 2731, and (3) training program information in accordance with Section 2732. Hazardous materials business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the State. Each business will prepare a hazardous materials business plan if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following:

- 500 pounds of a solid substance;
- 55 gallons of a liquid;
- 200 cubic feet of compressed gas;
- A hazardous compressed gas in any amount; or
- Hazardous waste in any quantity.

## California Occupational Safety and Health Administration

California Occupational safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

## California Highway Patrol

A valid Hazardous Materials Transportation License, issued by the California Highway Patrol (CHP), is required by the laws and regulations of State of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by State regulations; or
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping greater amounts in the same manner.

Additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials are enforced by the CHP under the authority of the State Vehicle Code. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (14 CCR 6 [1] [1150–1152.10]). Inhalation hazards face similar, more restrictive rules and regulations (13 CCR 6 [2.5] [1157–1157.8]). Transportation of radioactive materials is restricted to specific safe routes.

## Local

Construction and operation of the solar facility would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, Willow Springs Specific Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies pertaining to the avoidance of hazards and adverse effects related to hazardous materials.

The policies, goals, and implementation measures in the Kern County General Plan and Willow Springs Specific Plan related to hazards and hazardous materials that are applicable to the proposed project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the proposed project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, of this EIR, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

## **Kern County General Plan**

### ***Chapter 1. Land Use, Open Space and Conservation Element***

#### **1.3 Physical and Environmental Constraints**

##### ***Goal***

Goal 1: To strive to prevent loss of life, reduce personal injuries and property damage, and minimize economic and social diseconomies resulting from natural disaster by directing development to areas that are not hazardous.

##### ***Policy***

Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes 2.6–2.9 and Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in an unmitigated significant impact.

Policy 3: Zoning and other land use controls will be used to regulate, and prohibit, if necessary, future development when physical hazards exist.

#### **1.4. Public Facilities and Services**

##### ***Policy***

Policy 6: The County will ensure adequate fire protection to all Kern County residents.

### ***Chapter 2. Circulation Element***

#### **2.5.4 Transportation of Hazardous Materials**

Transportation-related accidents and spills of hazardous materials pose a serious threat to the traveling public and nearby sensitive land uses. Transportation of hazardous materials poses a short-term threat to public health.

##### ***Goal***

Goal 1: Reduce risk to public health from transportation of hazardous materials.

***Policies***

- Policy 1: The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.
- Policy 2: Kern County and affected cities should reduce use of County-maintained roads and city-maintained streets for transportation of hazardous materials.

***Implementation Measure***

- Measure A: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.

***Chapter 4. Safety Element*****4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint*****Implementation Measure***

- Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

**4.9 Hazardous Materials*****Implementation Measure***

- Measure A: Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.

***Chapter 5. Energy Element*****5.4.5 Solar Energy Development*****Policy***

- Policy 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.

## Willow Springs Specific Plan

A portion of the proposed project is subject to the provisions of the Willow Springs Specific Plan. The Willow Springs Specific Plan was adopted in April 2008 and contains goals, policies, and standards that are compatible with those in the Kern County General Plan, but are unique to the specific needs of the Willow Springs Area. The hazards and hazardous materials-related policies and measures contained in the Willow Springs Specific Plan that are applicable to the proposed project are outlined below. Note that only applicable goals, policies, and standards are included here; those goals, policies, and standards that are not applicable are not included.

### Land Use Element

#### *Goal*

Goal 15 To protect community residents from undue hazards and costs associated with road maintenance, slope instability, improper drainage, and inadequate sewage treatment.

#### *Policy*

Policy 8 Require developers to clean up any identified hazardous waste sites prior to submittal of any land division or development project.

### Safety/Seismic Element

#### *Goal*

Goal 15 To protect community residents from undue hazards and costs associated with road maintenance, slope instability, improper drainage, and inadequate sewage treatment.

#### *Mitigation/Implementation Measure*

Measure 24 In order to combat the stormwater pollution created by the various land uses the following source control mitigation measures are required:

- a) Periodic cleaning (i.e., street sweeping) of paved areas to remove small particle size sediments with absorbed pollutants caused by uses of the area.
- b) Utilize established Best Management Practices (BMPs) for small on-site control of urban runoff water quality. These measures include infiltration trenches, infiltration basins, water quality inlets, vegetative biofilter, grass swales, and porous pavement.

## Kern County Multi-Hazard Mitigation Plan

The latest Kern County Multi-Hazard Mitigation Plan was approved in 2021. The Plan was developed by a Hazard Mitigation Planning Committee and identifies goals, objectives and actions pertaining to mitigating impacts from identified natural hazards. The public at large had an opportunity to comment prior to the completion of the Plan's final draft. FEMA realizes the importance of mitigation planning and offers incentives to communities that develop one. By following FEMA guidelines for approval of this plan, Kern County can be eligible for grant funding intended for mitigation projects (KCFD, 2020).



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## **Kern County Wildland Fire Management Plan**

The Kern County Wildland Fire Management Plan documents the assessment of wildland fire situations throughout the State Responsibility Areas within the County. The Kern County Fire Department Wildland Fire Management Plan provides for systematically assessing the existing levels of wildland protection services and identifying high-risk and high-value areas that are potential locations for costly and damaging wildfires. The goal of the plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success. Based on this assessment, preventive measures are implemented, including the creation of wildfire protection zones.

## **Kern County Fire Code**

Chapter 17.32 of the Kern County Municipal Code details the Kern County Fire Code, which is an adoption of the 2022 California Fire Code and the 2021 International Fire Code with some amendments. The purpose of the Kern County Fire Code is to regulate the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release and/or explosion due to handling of dangerous and hazardous materials, conditions hazardous to life or property in the occupancy and use of buildings and premises, the operation, installation, construction, and location of attendant equipment, the installation and maintenance of adequate means of egress, and providing for the issuance of permits and collection of fees.

## **Kern County Fire Department Unit Strategic Fire Plan**

The KCFD Unit Strategic Fire Plan, adopted in April 2022, is the most current document that assesses the wildland fire situation throughout the State Responsibility Area (SRA) within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. The plan gives an overview of KCFD Battalions and ranks these areas in terms of priority needs as well as identifies the areas of SRA. According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas, Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley (KCFD, 2022).

## **Fire Prevention Standard No. 503-507 Solar Panels**

The Kern County Fire Department Fire Prevention Division adopted Standard No. 503-507 Solar Panels (Ground Mounted, Commercial & Residential) on April 8, 2021. The standard is implemented in accordance with the 2019 CFC and Kern County Ordinance and is an official interpretation of the Kern County Fire Marshal's Office. The standard outlines installation requirements for photovoltaic ground-mounted and roof-mounted solar panels. The proposed project would mount systems for the modules on steel support posts that would be pile driven into the ground and would therefore comply with the ground mounted requirements of this fire prevention standard. Ground mounted solar panel requirements of this standard include water supply, clearance and combustibles, stationary storage battery/energy storage systems, clean agent system permits, fire extinguisher placement, and emergency vehicle access (KCFD, 2021).

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## **Kern County Public Health Services Department/Environmental Health Services Division**

The County of Kern Environmental Health Services Division of the Public Health Services Department is the CUPA for the project area, which provides site inspections of hazardous materials programs (above ground storage tanks, underground storage tanks, hazardous waste treatment, hazardous waste generators, hazardous materials management and response plans, and the California Fire Code). This Department also provides emergency response to hazardous materials events, performing health and environmental risk assessment and substance identification.

### **Kern County and Incorporated Cities Hazardous Waste Management Plan**

In response to the growing public concern regarding hazardous waste management, State Assembly Bill 2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within the local government's jurisdiction.

The Kern County and Incorporated Cities Hazardous Waste Management Plan (Hazardous Waste Plan) was first adopted by Kern County and each incorporated city before September 1988 and was subsequently approved by the State Department of Health Services. The Hazardous Waste Plan was updated and incorporated by reference into the Kern County General Plan in 2004 as permitted by Health and Safety Code Section 25135.7(b) and, thus, must be consistent with all other aspects of the Kern County General Plan.

The Hazardous Waste Plan provides policy direction and action programs to address current and future hazardous waste management issues that require local responsibility and involvement in Kern County. In addition, the Hazardous Waste Plan discusses hazardous waste issues and analyzes current and future waste generation in the incorporated Cities, County, and State and federal lands. The purpose of the Hazardous Waste Plan is to coordinate local implementation of a regional action to affect comprehensive hazardous waste management throughout Kern County. The action program focuses on development of programs to equitably site needed hazardous waste management facilities; to promote onsite source reduction, treatment, and recycling; and to provide for the collection and treatment of hazardous waste from small-quantity generators. An important component of the Hazardous Waste Plan is the monitoring of hazardous waste management facilities to ensure compliance with federal and State hazardous waste regulations.

## **4.9.4 Impacts and Mitigation Measures**

### **Methodology**

The methodology for determining impacts relating to hazardous materials focuses on (1) the potentially significant impacts related to the routine transport, use, or disposal of hazardous materials and the release of hazardous materials into the environment; and (2) proposed project components that could result in environmental contamination.

The methodology for determining impacts relating to wildland fires focuses on the fire severity at the project site and the surrounding areas based on existing State and local maps and land characteristics.

The environmental site assessment study, **Appendix J**, of this EIR, prepared for the project site was conducted in accordance with the American Society for Testing and Materials' Standard of Practice E1527-13 and the standards of care and diligence normally practiced by recognized consulting firms in performing similar services.

## Thresholds of Significance

As established in Appendix G of the CEQA *Guidelines*, the Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria to determine if a project could potentially have a significant adverse effect related to hazards and hazardous materials.

A project would have a significant impact related to hazards and hazardous materials if it would:

- a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school;
- 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;
- 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;
- f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;
- g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires;
- h. 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:

- i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and
- ii. Are associated with design, layout, and management of project operations; and
- iii. Disseminate widely from the property; and

- iv. Cause detrimental effects on the public health or wellbeing of the majority of the surrounding population.

The lead agency determined in the Notice of Preparation/Initial Study (NOP/IS), located in **Appendix A** of this EIR, that the proposed project would not result in significant impacts to some of these environmental issue areas; these issue areas are thus scoped out from further analysis in this EIR. It was determined that the proposed project would not:

- c) Emit hazardous emissions or involves handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;

There are no existing or proposed schools located within one-quarter mile of the project site. The nearest school to the project site is the Tropico Middle School, located approximately 6 miles southeast of the project site in the unincorporated community of Rosamond. Therefore, there would be no impact and no further analysis is required in the EIR.

- 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 create a significant hazard to the public or the environment;

As discussed above, the project site is not identified in any of the California hazardous materials databases. Additionally, the environmental site assessment, **Appendix J**, in this EIR, revealed no evidence of RECs, controlled RECs (CREC), historical RECs (HREC), or de minimis conditions in connection with the project site

- e) 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; or

The project area is not located within an area covered by the Kern County Airport Land Use Compatibility Plan (ALUCP). The nonoperational Project Proponent-owned landing strip is located onsite and is not within the ALUCP. As stated above, the landing strip is not operational, and any remnant would be removed with project construction. The landing strip would be converted into solar array areas and inverters as shown on the site plan. Additionally, the nearest airport to the project site located within the ALUCP is the public Rosamond Skypark airport located approximately 5.5 miles to the southeast. Safety hazards are not anticipated for people residing or working in the project area with respect to the proposed project's proximity to an airport. Therefore, there would be no impact and no further analysis is warranted in the EIR.

- f) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

The project site is located in a remote area with various access roads allowing adequate egress/ingress to the site in the event of an emergency. Additionally, although the proposed project would require closures of public roads, additional onsite access roadways (internal to the project site) would also be constructed. 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. Additionally, increased project-related traffic would not cause a significant increase in congestion and or significantly worsen the existing service levels at intersections on area roads; therefore,

project-related traffic would not affect emergency access to the project site or any other surrounding location. Although the proposed project would require closures of public roads, the proposed project would also construct additional onsite internal access roadways, thus providing adequate roadway access for emergency vehicles. Therefore, impacts would be less than significant, and further analysis of this issue in the EIR is not warranted.

## Project Impacts

### **Impact 4.9-1: The project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

#### ***Construction***

Construction of the proposed project (solar facilities, connection to previously approved interconnection lines, and associated appurtenances) would not involve the routine transport, use, or disposal of substantive quantities of hazardous materials, as defined by the Hazardous Materials Transportation Uniform Safety Act. Most of the hazardous materials use and hazardous waste generated by the proposed project would occur during the temporary construction period and would likely consist of liquid waste, including cleaning fluids, solvents, petroleum products, dust palliative, and herbicides. Some solid hazardous waste, such as welding materials and dried paint, may also be generated during construction. Any hazardous materials that would be transported to the project site during construction, and any hazardous wastes that are produced as a result of the construction of the proposed project would be collected and transported away from the site in accordance with best management practices (BMPs) (see Section 4.10, *Hydrology and Water Quality*, of this EIR). During construction of the proposed project, material safety data sheets for all applicable materials present at the site would be made readily available to onsite personnel. Workers would be trained to properly identify and handle all hazardous materials. Hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. All hazardous waste shipped offsite for recycling or disposal would be transported by a licensed and permitted hazardous waste hauler and disposed of at an approved location. During construction of the facilities, non-hazardous construction debris would be generated and disposed of in local landfills or recycled. Sanitary waste would be managed using portable toilets located at a reasonably accessible onsite location.

Hazardous materials such as petroleum fuels and lubricants used on field equipment would be subject to the Material Disposal and Solid Waste Management Plan, SPCC Plan, and other measures to limit releases of hazardous materials and wastes. Recyclable materials including wood, shipping materials, and metals would be separated, when possible, for recycling. Liquids and oils in the transformers and other equipment would be used in accordance with applicable regulations. The disposal of all oils, lubricants, and spent filters would be performed in accordance with all applicable regulations including the requirements of licensed receiving facilities. Overall, the relatively limited use and small quantities of hazardous materials, and subsequently transport and disposal of such materials, during construction would be controlled through compliance with applicable regulations including the Kern County and Incorporated Cities Hazardous Waste Management Plan. As such, impacts during construction would be less than significant.

## ***Operation***

Operation and maintenance (O&M) activities associated with PV solar facilities are relatively minor when compared to other land uses such as conventional power plants and would require very limited use of hazardous materials and generation of hazardous waste. Any hazardous materials that would be used would be stored onsite and in designated areas in accordance with a Hazardous Materials Business Plan (see below). A security fence would be installed around the perimeter of the proposed project, including along either side of Tehachapi Willow Springs Road and on either side of the existing LADWP transmission line corridor.

Operational activities are limited to monitoring plant performance, conducting scheduled maintenance for onsite electrical equipment, and responding to utility needs for plant adjustment. The proposed project would be operated on an unstaffed basis and monitored remotely. Periodically, personnel would visit the site for inspection, security, maintenance, and system monitoring purposes. Approximately up to 15 part-time and/or full-time staff from the adjacent BigBeau Solar O&M building would operate and maintain the facility. The proposed project staff would use the O&M facility west and immediately adjacent to the project site at the BigBeau Solar Project. The nearby BigBeau O&M building would house the proposed project's electronic controls and communications systems; provide storage for tools, maintenance supplies, and spare parts; and provide onsite office, kitchen, and bathroom facilities for operations staff. No heavy equipment would be necessary during normal project operation. O&M vehicles would include trucks (pickup, flatbed), forklifts, and loaders for routine and unscheduled maintenance, and water trucks for solar panel washing. Large heavy-haul transport equipment and cranes may be brought to the project site infrequently for equipment repair or replacement. Long-term maintenance and equipment replacement would be scheduled in accordance with manufacturer recommendations. Solar panels are warranted for 25 years or longer and are expected to have a life of 30 or more years. Moving parts, such as motors and tracking module drive equipment, motorized circuit breakers and disconnects, and inverter ventilation equipment, would be serviced on a regular basis, and unscheduled maintenance would be conducted as necessary. Compliance with applicable laws and regulations governing the use, storage, transport, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts. Therefore, hazards to the public or the environment arising from the routine use, storage, transport, and disposal of hazardous materials during the proposed project's operation would not occur, and impacts would be less than significant. Mitigation Measure MM 4.9-1 would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to minimize exposure to maintenance workers and/or the public.

The PV modules that would be installed on the project site utilize thin film CdTe or crystalline silicon technology. CdTe is generally bound to a glass sheet by a vapor transport deposition during the manufacturing process, followed by sealing the CdTe layer with a laminate material, and then encapsulating it in a second glass sheet. The modules meet rigorous performance testing standards demonstrating durability in a variety of environmental conditions. The PV modules with thin film CdTe technology conform to the International Electrotechnical Commission (IEC) test standards IEC 61646 and IEC61730 PV as tested by a third-party testing laboratory certified by the IEC. In addition, the PV modules also conform to Underwriters Laboratory (UL) 1703 a standard established by the independent product safety certification organization. In accordance with UL 1703, the PV modules undergo rigorous accelerated life testing under a variety of conditions to demonstrate safe construction and monitor performance. During normal operations, CdTe PV modules do not present an environmental risk. CdTe releases are also unlikely to occur during accidental breakage or fire due to the high chemical and thermal stability of CdTe. Disposal

risks of end-of-life CdTe PV modules are minimized because of the low solubility of CdTe and because the modules can be effectively recycled at the end of their approximately 30-year life. Studies indicate that unless the PV module is purposefully ground to a fine dust, use of CdTe in PV modules do not generate any emissions of CdTe (Fthenakis et al 2003). The proposed project includes operational and maintenance protocols that would be used to identify and remove damaged or defective PV modules during annual inspections. The PV module manufacturer created the first global and comprehensive module collection and recycling program in the PV industry in 2005.

Project operations could require the use of transformer oil at the substation and other hazardous materials at the BESS, which could contain battery acids, as well as lithium ion, lead acid, sodium sulfur, and sodium or nickel hydride. All transformers would be equipped with spill containment areas and battery storage would be in accordance with OSHA requirements such as inclusion of ventilation, acid resistant materials, and spill response supplies. All components would have a comprehensive SPCC plan, in accordance with all applicable federal, State, and local regulations. Dust palliatives and herbicides, if used during operations to control vegetation, may be transported to the project site. These materials would be stored in appropriate containers to prevent accidental release. SR-14 would be the likely designated route for the transport of hazardous materials located on or immediately adjacent to the project site. In addition, implementation of Mitigation Measures MM 4.9-1 would require preparation of a Hazardous Materials Business Plan that would describe proper handling, storage, transport, and disposal techniques and methods to be used to avoid spills and minimize impacts in the event of a spill; such requirements would further reduce impacts related to hazards to a less than significant level.

Further, implementation of the proposed project would not result in the significant risk of EMFs associated with overhead power lines, as the facility would interconnect into either the existing Whirlwind substation or the approved Rosamond substation. In addition, the proposed project would not construct sensitive uses under the existing lines but would adhere to applicable CPUC requirements on location of any gen-tie lines or gen-tie connections. As the State has not adopted any specific limits or regulations regarding EMF levels from electric power facilities, impacts in this regard would be less than significant.

### ***Decommissioning and Disposal***

During the decommissioning and disposal process, it is anticipated that all project structures would be fully removed from the ground. Above-ground equipment that would be removed would include the PV solar panels, electrical wiring, equipment on the inverter pads, and the interconnection transformer pad and associated equipment. Equipment would be de-energized prior to removal, salvaged (where possible), placed in appropriate shipping containers, and secured in a truck transport trailer for shipment offsite. Removal of the PV modules would include removal of the racks on which the solar panels are attached, and their placement in secure transport crates and a trailer for storage, for ultimate transportation to an approved offsite disposal facility or to be recycled.

Once the PV modules have been removed, the racks would be disassembled, and the structures supporting the racks would be removed. All other associated site infrastructure would be removed, including fences, concrete pads that may support the inverters, transformers and related equipment, and underground conduit/electrical wiring. The fence and gates would be removed, and all materials would be recycled to the extent feasible. The area would be thoroughly cleaned and all debris removed. As discussed above, most panel materials would be recycled, with minimal disposal to occur in landfills in compliance with all applicable laws. The PV module manufacturer would likely provide CdTe module collection and recycling services. In any case, current CdTe PV modules pass federal leaching criteria for non-hazardous waste, due in part to the low solubility of CdTe,

which means they would not pose a significant risk for cadmium leaching if they reached a landfill. As mentioned above, studies have consistently concluded that the use of CdTe PV modules do not present an environmental risk.

As described in Section 4.16, *Utilities and Service Systems*, of this EIR, Mitigation Measure MM 4.16-1 requires that an onsite recycling coordinator be designated by the Project Proponent to facilitate recycling of all waste to the extent feasible, through coordination with the onsite contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes. The onsite recycling coordinator shall also be responsible for ensuring that wastes requiring special disposal are handled according to State and County regulations that are in effect at the time of disposal. The contact information of the coordinator shall be provided to the Kern County Planning and Natural Resources Department prior to issuance of building permits.

### ***Mitigation Measures***

Implement Mitigation Measure MM 4.16-1 (see Section 4.16, *Utilities and System Services*, of this EIR, for full mitigation measure text).

**MM 4.9-1:** During the life of the project, including decommissioning, and prior to the issuance of grading or building permits, the project proponent shall prepare and maintain a Hazardous Materials Business Plan (HMBP), as applicable, pursuant to Article 1 and Article 2 of California Health and Safety Code 6.95 and in accordance with Kern County Ordinance Code 8.04.030, by submitting all the required information to the California Environmental Reporting System (CERS) at <http://cers.calepa.ca.gov/> for review and acceptance by the Kern County Environmental Health Services Division/Hazardous Materials Section. The HMBP shall:

- a. Delineate hazardous material and hazardous waste storage areas.
- b. Describe proper handling, storage, transport, and disposal techniques.
- c. Describe methods to be used to avoid spills and minimize impacts in the event of a spill.
- d. Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction and operation.
- e. Establish public and agency notification procedures for spills and other emergencies including fires.
- f. Describe federal, State, or local agency coordination, as applicable, and clean-up efforts that would occur in the event of an accidental release.
- g. Include procedures to avoid or minimize dust from existing residual pesticides and herbicides use that may be present on the site.

The project proponent shall ensure that all contractors working on the project are familiar with the facility's HMBP as well as ensure that one copy is available at the project site at all times. In addition, a copy of the accepted HMBP from CERS shall be submitted to the Kern County Planning and Natural Resources Department for inclusion in the project's permanent record.



### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.9-1 and MM 4.16-1, impacts would be less than significant.

### **Impact 4.9-2: The project would 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.**

#### ***Construction***

According to the California Department of Conservation – Division of Oil, Gas and Geothermal Resources (which as of January 1, 2020 is known as the Geologic Energy Management Division (CalGEM)), the project site is not located within a known oil production field, nor does the project site have any known active or abandoned oil wells. As a result, construction and development of the proposed project is unlikely to expose employees or construction workers to the dangers associated with operating a facility near an oil well.

Construction activities required for the proposed project would involve trenching, excavation, grading, and other ground-disturbing activities. Construction activities would temporarily require use of equipment, such as trucks, excavators, and other powered equipment, and would use potentially hazardous materials such as fuels (gasoline and diesel) and lubricants (oils and greases). In addition, construction may use hazardous materials such as glues, solvents, paints, thinners, or other chemicals. Such materials would be used in quantities typically associated with construction of PV solar facilities and would be transported, handled, stored, and disposed of in accordance with applicable laws and regulations and manufacturers' instructions. Implementation of Mitigation Measure MM 4.9-1 which would provide methods to be used to avoid spills and minimize impacts in the event of a spill by providing procedures for handling and disposing hazardous materials as well as public and agency notification procedures for spills and other emergencies including fires, would reduce this impact to a less-than-significant level.

Despite the relatively open spaces surrounding the project site, nearby sensitive receptors could be exposed to pollutant emissions during construction of the proposed project, resulting in a potentially significant impact. An adverse risk related to exposure to hazardous materials could result from the installation and use of transformers, grading of the site, the application of herbicides, or other construction or operation processes if hazardous materials are not used appropriately during construction. Implementation of Mitigation Measure MM 4.9-2, which regulates the use of herbicides as described below, would reduce impacts related to sensitive receptors to a less-than-significant level.

Based on the age of onsite structures that are proposed for demolition, hazardous building materials such as LBP, ACMs, and PCBs may be present within the structures. These hazardous materials may also be present in the shallow soils. The removal of building materials and disturbance of contaminated soils may result in the release of hazardous materials into the environment. Disturbance and removal of these materials could result in the release of hazardous materials into the environment. Exposure of construction workers or members of the public to these substances could result from direct contact with the substance during demolition and/or grading activities, incidental ingestion of the substance, and/or inhalation of airborne dust released from dried hazardous materials. Implementation of Mitigation Measure 4.9-2, which would ensure proper handling of hazardous building materials (e.g., ACMs and LBPs) and potentially

contaminated soil during construction to ensure the safety of humans and the environment. The Mitigation Measures would reduce potential impacts associated with the upset and accident conditions involving the release of hazardous materials to less-than-significant.

### **Operation**

Operation of the PV modules and inverters would produce no hazardous waste. Each enclosed transformer at the substation would include mineral oil, but secondary containment would be provided in accordance with applicable federal, State, and local laws and regulations. The mineral oil contained in each transformer does not normally require replacement, and mineral oil disposal would be in accordance with all applicable federal, State, and local laws and regulations.

As stated in the environmental setting above, it has been demonstrated that standard operation of polycrystalline silicon and thin film CdTe PV systems does not result in pollution emissions to air, water, or soil. Polycrystalline silicon and thin film CdTe PV modules removed from the site would be recycled or otherwise disposed at an appropriate waste disposal facility. Hazardous materials are unlikely to occur during accidental breakage of the polycrystalline silicon or thin film CdTe solar modules. Similarly, fire damage would not result in the release of hazardous materials. Polycrystalline silicon and thin film CdTe PV modules do not pose a threat to nearby residences for these reasons.

CdTe releases are unlikely to occur from accidental breakage of or fires involving the PV modules. CdTe is a highly stable semiconductor compound due to strong chemical bonding that translates to extremely low solubility in water, low vapor pressure, and a melting point greater than 1,000 degree Celsius (°C). Potential impacts to soil, air, and groundwater quality from broken CdTe PV modules are highly unlikely to pose a potential health risk as they are below both human health screening levels and background levels (Sinha et al., 2012).

Potential CdTe emissions from fire are unlikely to occur at the project site because of the lack of fuel to support a sustained wildfire. Grass fires are the most likely fire exposure scenario for ground-mounted PV systems, and these fires tend to be short-lived due to the thinness of grass fuels. As a result, these fires are unlikely to expose PV modules to prolonged fire conditions or to temperatures high enough to volatilize CdTe, which has a melting point of 1,041°C. Moreover, even if a desert wildfire could reach that temperature, the actual CdTe emissions from a PV module would be insignificant (approximately 0.04 percent) due to encapsulation in the molten glass matrix (Fthenakis et al., 2003).

Potential CdTe emissions from broken PV modules exposed to precipitation are also unlikely. Based on warranty return data, the breakage rate of CdTe PV modules is low, one percent over 25 years, which translates to an average of 0.04 percent per year. This breakage rate is an overestimate because over one-third of PV module breakage occurs during shipping and installation. Modules that break during shipping and installation are removed from the construction site and returned to a manufacturing facility for recycling. Even if the CdTe semiconductor layer becomes exposed to the environment, it strongly resists being released from the PV module into the environment, and CdTe has an extremely low solubility in water.

The CdTe PV modules do not pose a threat to nearby residences. The use of CdTe PV modules at the project site would not result in human or aquatic exposure of cadmium. A recent research article, Fate and Transport Evaluation of Potential Leaching Risks from Cadmium Telluride Photovoltaics (Sinha et al., 2012), further substantiates that during operation, CdTe PV modules do not pose a threat to human health or the environment due to its construction. The study evaluates the worst-case scenario to estimate potential exposures to CdTe compounds in soil, air or groundwater. The results show that exposure point

concentrations in soil, air, and groundwater are one to six orders of magnitude below human health screening levels and below background levels, indicating that it is highly unlikely that exposures would pose potential health risks to onsite workers or offsite residents.

Operational environmental risks for both crystalline silicon and thin film CdTe PV technologies have been evaluated by the International Energy Agency, concluding that they do not present a health risk in the event of exceptional accidents such as fire or breakage, with regards to their use of lead and cadmium compounds, respectively (P. Sinha et al., 2018 and P. Sinha et al., 2019).

In addition, the hazardous materials that would be present in the energy storage facility would be contained within specifications that follow applicable federal, State, and local requirements. OSHA requirements call for the inclusion of appropriate ventilation, acid resistant materials, and presence of spill protection supplies.

Removal and/or maintenance of vegetation may require pesticide and herbicide use during both construction and operation. If not handled properly, use of these products could create a hazard to the public (construction workers, maintenance employees, and nearby residences), resulting in a potentially significant impact. Mitigation Measure MM 4.9-2 would reduce impacts related to use of pesticides and herbicides to a less-than-significant level.

As noted above, the proposed project would not involve the routine transport, use, or disposal of substantial quantities of hazardous materials, as defined by the Hazardous Materials Transportation Uniform Safety Act. The closest designated route for the transport of hazardous materials is SR-14 which is approximately 7 miles from the project site. Adherence to regulations and standard protocols during the storage, transportation, and usage of any hazardous materials would minimize and avoid the potential for significant impacts related to upset and accident conditions.

Overall, adherence to regulations and standard protocols during the storage, transportation, and usage of any hazardous materials, and implementation of Mitigation Measure MM 4.9-1 would minimize or reduce potential impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials, to a less-than-significant level.

### ***Decommissioning and Disposal***

The decommissioning and disposal process is described under Impact 4.9-1, above. Panel materials would either be recycled, or would be disposed of in accordance with local, State, and federal regulations. The PV module manufacturer provides CdTe module collection and recycling services. In any case, current CdTe PV modules pass federal leaching criteria for non-hazardous waste, due in part to the low solubility of CdTe, which means they would not pose a significant risk for cadmium leaching if they reached a landfill. Batteries within the battery energy storage systems would also be recycled to the extent feasible, with minimal landfill disposal.

Mitigation Measure MM 4.16-1 requires that an onsite recycling coordinator be designated by the Project Proponent to facilitate recycling of all feasible waste through coordination with the onsite contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes. The onsite recycling coordinator shall also be responsible for ensuring that wastes requiring special disposal are handled according to State and County regulations that are in effect at the time of disposal. The name and phone number of the coordinator shall be provided to the Kern County Planning and Natural Resources Department prior to issuance of building permits.

## ***Mitigation Measures***

Implementation of Mitigation Measures of MM 4.9-1 and MM 4.16-1, (see Section 4.16, *Utilities and System Services*, of this EIR, for full mitigation measure text), would be required.

- MM 4.9-2:** The Project Proponent shall continuously comply with the following:
- a. The construction contractor or project personnel shall use herbicides that are approved for use in California and are appropriate for application adjacent to natural vegetation areas (i.e., non-agricultural use). Personnel applying herbicides shall have all appropriate State and local herbicide applicator licenses and comply with all State and local regulations regarding herbicide use.
  - b. Herbicides shall be mixed and applied in conformance with the manufacturer's directions.
  - c. The herbicide applicator shall be equipped with splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and material safety data sheets for all hazardous materials to be used. To minimize harm to wildlife, vegetation, and water bodies, herbicides shall not be applied directly to wildlife.
  - d. Products identified as non-toxic to birds and small mammals shall be used if nests or dens are observed; and herbicides shall not be applied if it is raining at the site, rain is imminent, or the target area has puddles or standing water.
  - e. Herbicides shall not be applied when wind velocity exceeds 10 miles per hour. If spray is observed to be drifting to a non-target location, spraying shall be discontinued until conditions causing the drift have abated.
  - f. A written record of all herbicide applications on the site, including dates and amounts, shall be furnished annually to the Kern County Planning and Natural Resources Department.

## ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.9-1, MM 4.9-2, and MM 4.16-1, impacts would be less than significant.

## **Impact 4.9-3: The project would expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.**

The project site is not located within a high fire hazard severity zone (CAL FIRE, 2023a). As mentioned above, the project site is classified as LRA Moderate and LRA Unzoned (CAL FIRE 2007).

However, there is sparse vegetation onsite and site preparation would involve the removal of additional vegetation, although natural vegetation may be maintained if it does not interfere with project construction or the health and safety of onsite personnel. The proposed project would include a BESS, which has a very low likelihood of producing a fire (generally a result of thermal runaway event from an internal short with cascading events) and a very low likelihood of catching fire (due to the non-flammable material that are

used for the structure and absence of flammable vegetation or other materials nearby). However, the BESS still has the possibility of catching fire under the right circumstances (which are rare) or being damaged by fire and may generate fumes and gases that are extremely corrosive in those instances. Dry chemical, carbon dioxide, and foam are the preferred methods for extinguishing a fire involving batteries as water is not useful in extinguishing battery fires. To further increase safety, the battery units are typically low voltage, encased in a steel enclosure, and distanced from combustible materials. They generally incorporate a thermal management system that includes coolant pumps, fans, and a refrigerant system to further maintain cool temperatures within the unit. The containers would be equipped with a door on each end and include fire detection and fire suppression systems. A water storage tank would be installed to provide water supply needed for fire protection and operations, based on consultation with Kern County Fire Department.

As discussed further in Section 4.13, *Public Services*, of this EIR, the Project Proponent would implement Mitigation Measure MM 4.13-1, which would require the preparation and submittal of a Fire Safety Plan to the Kern County Fire Department for review and approval. The purpose of the Fire Safety Plan would be to eliminate causes of fire, prevent loss of life and property by fire, to comply with County and County Fire Protection District standards for solar facilities, and to comply with the OSHA standard of fire prevention, 29 CFR 1910.39. The fire safety plan would address fire hazards of the different components of the proposed project, including the BESS, and would include BMPs to reduce the potential for fire and extinguishment techniques if a fire were to occur. As discussed in more detail in Section 4.17, *Wildfire*, the proposed project would not place the gen-tie and electrical collection system, energy storage facility, or internal/perimeter dirt maintenance roads within a high fire hazard zone, and would clear all necessary vegetation, which would reduce fire risks. Implementation of Mitigation Measure MM 4.13-1 would further reduce potential impacts from wildland fires to a less-than-significant level.

The project site is not adjacent to urbanized areas; however, there are isolated residences in proximity to the project site. While the proposed project is not anticipated to significantly increase the risk of wildfire, Mitigation Measure MM 4.13-1 would be implemented to ensure a fire safety plan for construction, operation and decommissioning of the proposed project is incorporated as part of the project. With mitigation, potential impacts from wildfire would be reduced to a less-than-significant level.

See also Section 4.17, *Wildfire*, of this EIR for additional discussion of wildfire issues.

### ***Mitigation Measures***

Implement Mitigation Measure MM 4.13-1 (see Section 4.13-1, *Public Services*, of this EIR, for full text).

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.13-1, impacts would be less than significant.

**Impact 4.9-4: The project would generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste. Specifically, the proposed project would not exceed the following qualitative threshold: the presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the proposed project is significant when the applicable enforcement agency determines that any of the vectors:**

- i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; or**
- ii. Are associated with design, layout, and management of proposed project operations; or**
- iii. Disseminate widely from the property; or**
- iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population.**

Project-related infrastructure is not expected to result in features or conditions that could potentially provide habitat for vectors such as mosquitoes, flies, cockroaches, or rodents (such as standing water, agricultural products, or agricultural waste). The project site would produce a small amount of solid waste from construction activities. This may include paper, wood, glass, plastics from packing material, waste lumber, insulation, scrap metal and concrete, empty nonhazardous containers, and vegetation waste. These wastes would be segregated, where practical, for recycling. Non-recyclable wastes would be placed in covered dumpsters and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III landfill. Construction and operation of the proposed solar arrays and associated facilities would not produce excessive wastes, standing water, or other features that would attract nuisance pests or vectors. Therefore, impacts would be less than significant.

### ***Mitigation Measures***

No mitigation would be required.

### ***Level of Significance***

Impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

As described in **Chapter 3, *Project Description***, in this EIR, multiple projects, including several utility-scale solar and wind energy production facilities, are proposed throughout Kern County. The geographic scope of impacts associated with hazardous materials generally encompasses the project site and a 0.25-mile-radius area around the project site. A 0.25-mile-radius area allows for a conservative cumulative analysis that ensures that all potential cumulative impacts will be assessed. Similar to other potential impacts, such as those related to geology and soils, risks related to hazards and hazardous materials are

typically localized in nature since they tend to be related to onsite existing hazardous conditions and/or hazards caused by the proposed project's construction or operation. A geographic scope of a 0.25-mile-radius area also coincides with the distance used to determine whether hazardous emissions or materials would have a significant impact upon an existing or proposed school, as discussed above.

Impacts regarding the handling, use, and/or storage of hazardous materials would be project specific and would not cumulatively contribute to impacts. An accident involving a hazardous material release during project construction or operation through upset or accident conditions including demolition of onsite structures that may contain hazardous building materials (e.g., ACMs, LBPs, and PCBs), site grading, and the use and transport of petroleum-based lubricants, solvents, fuels, batteries, herbicides, and pesticides to and from the project site would be location specific. Conformance with existing State and County regulations, as well as project safety design features and the implementation of Mitigation Measure MM 4.9-1 and MM 4.9-2 identified above would further reduce cumulative impacts. In addition, implementation of appropriate safety measures during construction of the proposed project, as well as other cumulative projects, would reduce the impact to a level that would not contribute to cumulative effects. Given the minimal risks of hazards at the project site, cumulative impacts are unlikely to occur. Therefore, impacts would not be cumulatively significant.

Hazardous materials to be used during decommissioning and removal activities are of low toxicity and would consist of fuels, oils, and lubricants. Because these materials are required for operation of construction vehicles and equipment, BMPs would be implemented to reduce the potential for or exposure to accidental spills or fires involving the use of hazardous materials. Impacts from minor spills or drips would be avoided by thoroughly cleaning up minor spills as soon as they occur. While foreseeable projects have the potential to cause similar impacts, it is assumed these projects would also implement similar BMPs. Conformance with existing State and County regulations, as well as implementation of Mitigation Measures MM 4.9-1; MM 4.9-2; MM 4.13-1, of Section 4.13, *Public Services*, in this EIR, (Fire Safety Plan); and MM 4.16-1, of Section 4.16, *Utilities and Service Systems*, in this EIR, (recycling of debris and waste) would further reduce the potential for cumulative impacts. In addition, implementation of appropriate safety measures during construction of the proposed project, as well as any other cumulative project, would reduce the impact to a level that would not contribute to cumulative effects. Therefore, impacts related to hazardous materials would not be cumulatively significant.

As discussed above, the nearest school to the project site is the Tropico Middle School, located approximately 6 miles southeast of the project site in the unincorporated community of Rosamond. Project-related infrastructure would not emit hazardous materials or involve handling hazardous or acutely hazardous materials, substances, or waste within a quarter mile of an existing or proposed school. Given that the proposed project is not in proximity to a school, cumulative impacts are unlikely to occur. Therefore, impacts would not be cumulatively significant.

As discussed above, the project site is not identified in any of the California hazardous materials databases. As such, development of the proposed project would not create a significant hazard to the public or environment. Cumulative impacts are unlikely. Therefore, impacts would not be cumulatively significant.

The project site is not located within an airport land use plan influence area and thus is not expected to result in any cumulative contribution to hazards associated with airports or airstrip land use plans or otherwise provide any cumulatively considerable air traffic hazards.

With regard to an adopted emergency response, as analyzed above, the development of the proposed project would not physically interfere with emergency vehicle access or personnel evacuation from the site. In

addition, while impacts would be less than significant, Mitigation Measure MM 4.14-1, which requires the preparation of a Construction Traffic Control Plan, which requires the Project Proponent obtain Kern County approval of all proposed access road designs prior to construction, would be implemented which would further ensure onsite emergency access is adequate during construction and operation. Cumulative projects are likely to implement similar mitigation measures. Therefore, impacts would not be cumulatively significant.

As analyzed above, to reduce potential impacts to people or structures due to a wildland fire, the proposed project would implement Mitigation Measure MM 4.13-1, which would require the preparation and submittal of a Fire Safety Plan to the Kern County Fire Department for review and approval. In addition, as discussed in more detail in Section 4.17, *Wildfire*, in this EIR, the proposed project would not place the gen-tie and electrical collection system, energy storage facility, or internal/perimeter dirt maintenance roads within a high fire hazard zone, and would clear all necessary vegetation, which would reduce fire risks. Mitigation Measure MM 4.13-1 would be implemented to ensure a fire safety plan for construction and operation of the proposed project is incorporated as part of the project. With mitigation, potential impacts from wildland fires would be reduced to a less-than- significant level. Cumulative projects located in less developed and urbanized areas would likely implement similar mitigation measures to reduce any potential impacts from wildland fires. Therefore, impacts would not be cumulatively significant.

Project-related infrastructure is not expected to result in features or conditions that could potentially provide habitat for vectors such as mosquitoes, flies, cockroaches, or rodents (such as standing water, agricultural products, or agricultural waste). Other cumulative projects would also not be expected to result in providing habitat for vectors. Therefore, the proposed 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 potential for cumulative impacts would be less than significant.

### ***Mitigation Measures***

Implement of Mitigation Measures MM 4.9-1, MM 4.9-2, MM 4.13-1, MM 4.14-1, and MM 4.16-1 (see Sections 4.13, *Public Services*, 4.14, *Traffic and Transportation*, and 4.16, *Utilities and System Services*, in this EIR, for full text).

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.9-1, MM 4.9-2, MM 4.13-1, MM 4.14-1, and MM 4.16-1, cumulative impacts would be reduced to less than significant.



### **4.10.1 Introduction**

This section of the Environmental Impact Report (EIR) describes the hydrological environmental and regulatory settings, addresses potential impacts of the proposed project on hydrology and water quality, and discusses mitigation measures to reduce impacts, where applicable. The information in this section is based on multiple online sources and published documents, as well as the technical documents prepared for the proposed project including the *Biological Resources Technical Report* (**Appendix E.1**; ICF 2023b), which includes the *Jurisdictional Water Report* (Heritage Environmental Consultants 2022); *Geology and Soils Technical Report* (**Appendix H**; ICF 2023e); *Hydrology Assessment Technical Report* (**Appendix K**; ICF 2023f), and *Water Supply Assessment* (**Appendix L**; ICF 2023g); all within this EIR.

### **4.10.2 Environmental Setting**

#### **Regional Setting**

The project site is in the northwestern portion of the Mojave Desert on the northern end of the Antelope Valley Hydrologic Unit (HU). The Antelope Valley HU covers approximately 1.5 million acres (2,400 square miles) and is mostly located in Los Angeles County and Kern County, with a small part in San Bernardino County. Bounded by the San Gabriel Mountains to the south and southwest, the Tehachapi Mountains to the northwest, and a series of hills and buttes that generally follow the San Bernardino County Line to the east, the Antelope Valley HU forms a well-defined triangular point at its western edge. The Antelope Valley HU elevation ranges from 2,300 to 3,500 feet above mean sea level (amsl).

The project site is in the Antelope–Fremont Valleys Watershed. The Gen-tie Options to the Rosamond Substation, solar array, battery complex, and associated equipment would be in the Tropic Hill–Oak Creek subwatershed. The total drainage area of the Tropic Hill–Oak Creek subwatershed is approximately 100,140 acres. Gen-tie Options to the Whirlwind Substation would traverse from the Tropic Hill–Oak Creek subwatershed into the Cottonwood Creek–Tylerhorse Canyon and Sacatara Creek–Kings Canyon subwatersheds (see **Figure 4.10-1**, *Hydrologic Areas*).

Within Tropic Hill–Oak Creek, the study area boundary spans four subwatersheds. From west to east, they include unnamed Hydrographic Unit 12 (180902061702), Burham Canyon, Bean Canyon, and Tropic Hill (**Figure 4.10-2**, *National Hydrographic Database Flow Lines by Sub-Watershed*).

#### **Antelope Valley Hydrological Unit**

The Antelope Valley Hydrological Unit (HU) is geographically unique because it does not outlet to the Pacific Ocean and is considered a closed system. Numerous streams originating in the mountains and foothills either infiltrate into the groundwater basin, evaporate, or flow across the valley floor to eventually pond in the dry lakes near the community of Rosamond and Edwards Air Force Base. Due to the relatively

impervious nature of the dry lake soil and high evaporation rates, water that collects on the dry lakes eventually evaporates rather than infiltrating into the groundwater.

The Antelope Valley Watershed includes a system of dry lakes including the Rosamond, Buckhorn, and Rogers dry lakes as the central watershed terminus. Rosamond, Buckhorn, and Rogers Lakes and their tributaries function as an isolated intrastate watershed system and are non-jurisdictional Waters of the US. The closest playa/dry lake to the project site is Rosamond Lake approximately 10 miles southeast.

The project site is located on a broad alluvial slope called a bajada, and is comprised of a network of alluvial fans, active channels, dormant channels, abandoned channels, braided streams, and floodplains that emanate from the Tehachapi range. Stream channels are generally subject to flow path uncertainty due to rapid diversion of one channel to another in response to blockages and changes in sediment accumulation from previous flow events. This region of the Mojave is characterized by low precipitation, which rarely allows for surface runoff in the highly porous soils and colluvium, which is a material that accumulates at the foot of a steep slope. Parent material from mountain sources is generally only mobilized to lower fan areas during localized major storm events. Streams in this region are generally ephemeral to intermittent, as they only flow in response to rain events. Because of the high infiltration rates of the sediments, consistent stream flow usually only occurs after periods of steady rain, typically during a wet winter. Heavy floods produce visually definable channels in streambeds, and localized flood events can produce overbank flow transporting sediment and debris onto the floodplain.

Perennial water only flows in groundwater discharge areas associated with springs in a few mountain canyons, in Afton Canyon where the regional groundwater table intersects the canyon bottom, and a few other springs. In most areas within the Mojave region, streams will flow only after long periods of steady rain, typically during a wet winter. The periodicity and intensity of such rain events depends on elevation, but in the lower regions, historically, floods may only happen in intervals measured in several years to decades.

## Surface Water Quality

The project area is within the Regional Water Quality Control Board (RWQCB) Region 6 – Lahontan Region. The California 2022 Integrated Report 303d list of impaired water bodies does not list any waterbodies in Kern County (California RWQCB 2022).

The Lahontan Basin Plan sets objectives for waterbodies within the Antelope Valley. These include Lake Palmdale, Little Rock Reservoir, Lower Amargosa Creek, and Piute Ponds. All these waterbodies are outside the project area watersheds.

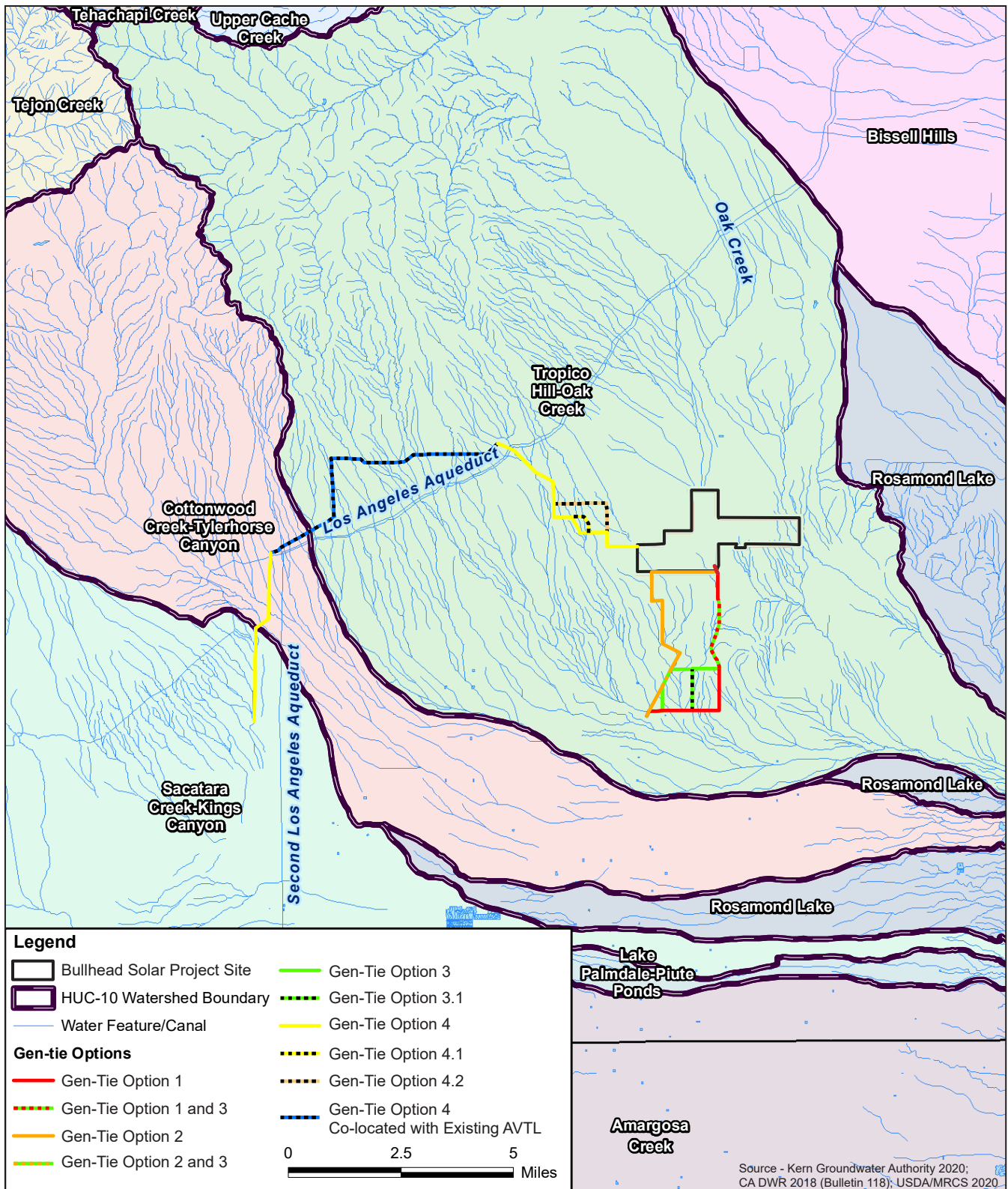
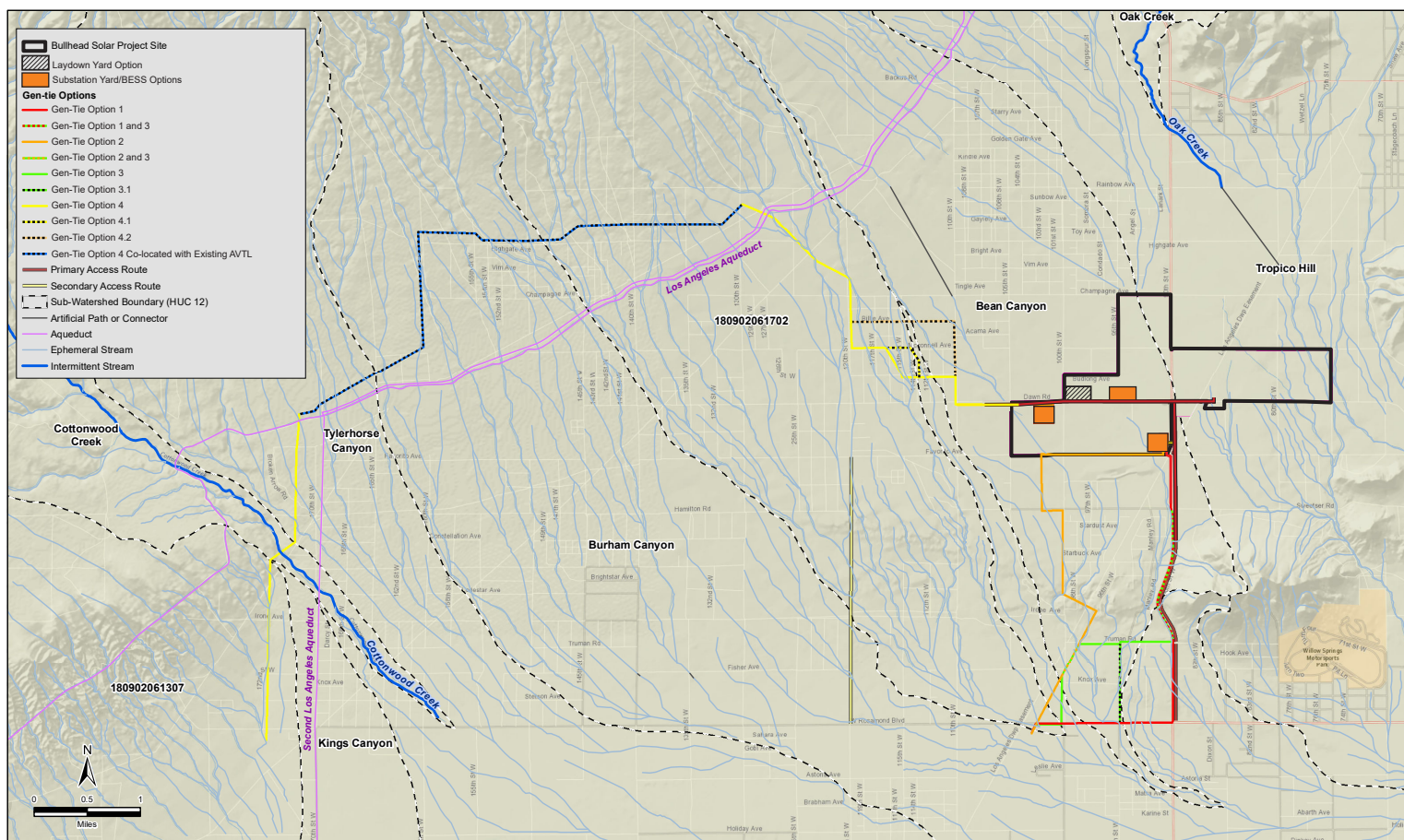


Figure 4.10-1: HYDROLOGIC AREAS



Source: EDF (2022); USGS (2021)

Figure 4.10-2: NATIONAL HYDROLOGIC DATABASE FLOW LINES BY SUB-WATERSHED

## Climate

The climate of the Mojave Desert Basin is characterized by hot, dry summers and cold winters with relatively low annual precipitation. Average temperatures recorded in the unincorporated community of Mojave range from a low of 33° Fahrenheit (F) in December to highs of 98° F in July and August (Western Regional Climate Center, 2023a). The local climate is typical of the high desert areas of California. Winter nights often drop below freezing, and snow is not uncommon. **Table 4.10-1**, *Average Monthly Temperatures and Precipitation for the Antelope Valley, Kern County*, summarizes average temperatures and precipitation for Mojave, CA, which is located approximately 14 miles northeast of the project site, but which can be considered typical of the Antelope Valley, including the project area.

**TABLE 4.10-1: AVERAGE MONTHLY TEMPERATURES AND PRECIPITATION FOR THE ANTELOPE VALLEY, KERN COUNTY**

Station	Elevation	Average Maximum Temperature	Average Minimum Temperature	Average Annual Precipitation
Mojave, CA (Coop ID 045756)	2,735 feet	75.8°F	49.9°F	5.93 in/yr
Mojave 2 Ese, CA (Coop ID 045758)	2,680 feet	76.5°F	47.8°F	6.34 in/yr

SOURCE: Western Regional Climate Center, 2023a, b.

More specifically, the project site is located near the community of Willow Springs, where, according to the nearest weather station of Backus Ranch, temperature ranges from an average monthly high of 98.5 degrees Fahrenheit in July to a low below freezing of 29.9 degrees Fahrenheit in January. Average rainfall is approximately 6.18 inches annually (WRCC, 2023c).

## Site Hydrology

### Surface Hydrology and Drainage

The proposed project is located on generally undeveloped farmland, naturally vegetated land, and disturbed or vacant land. The existing impervious surface area is well under 1 percent. The project site is mainly undeveloped with medium to poor vegetative cover and off-road vehicle trails subject to erosion. The site is on a gently sloping hillside from the northwest toward the southeast.

The topography within the proposed solar array area ranges from 2,600 to 2,760 feet and slopes at an average gradient of 4 percent. Runoff drains from the northwest to the southeast. However due to the relatively low topographic relief, lack of development and minimal vegetation, most of the drainage flow originating in this area infiltrates into the soils onsite.

Across the greater project area, which includes the gen-tie line options and access roads, the elevation ranges from approximately 3,400 feet at the highest gen-tie line point to 2,400 feet. Gen-tie Option to the Whirlwind Substation would be located at the highest elevations and traverse the mountain's outermost gently inclined slope at the base of the mountain and upslope.

The U.S. Geologic Survey's (USGS) National Hydrographic Database classifies Oak and Cottonwood Creeks as intermittent streams, meaning they convey surface water for part of the year, after precipitation events, snowmelt, or from a spring. Cottonwood Creek crosses the Gen-tie Options to the Whirlwind Substation only, but not the solar array area (see **Figure 4.10-2**, *National Hydrographic Database Flow Lines by Sub-Watershed*). Oak Creek, approximately 3 miles north of the study area, directly contributes to a County-delineated flood Hazard Area Map Code 2.5, which crosses the far eastern edge of the study area (see **Figure 4.10-3**, *Flood Hazard Areas*). The General Plan defines Map Code 2.5 as a Special Flood Hazard Area (Zone A), as identified by FEMA, and supplemented by floodplain delineation maps that are approved by Kern County Engineering and Survey Services Department. Under the National Hydrographic Database, the flowlines in the flood hazard area are unnamed, ephemeral streams (see **Figure 4.10-2**, *National Hydrographic Database Flow Lines by Sub-Watershed*), above.

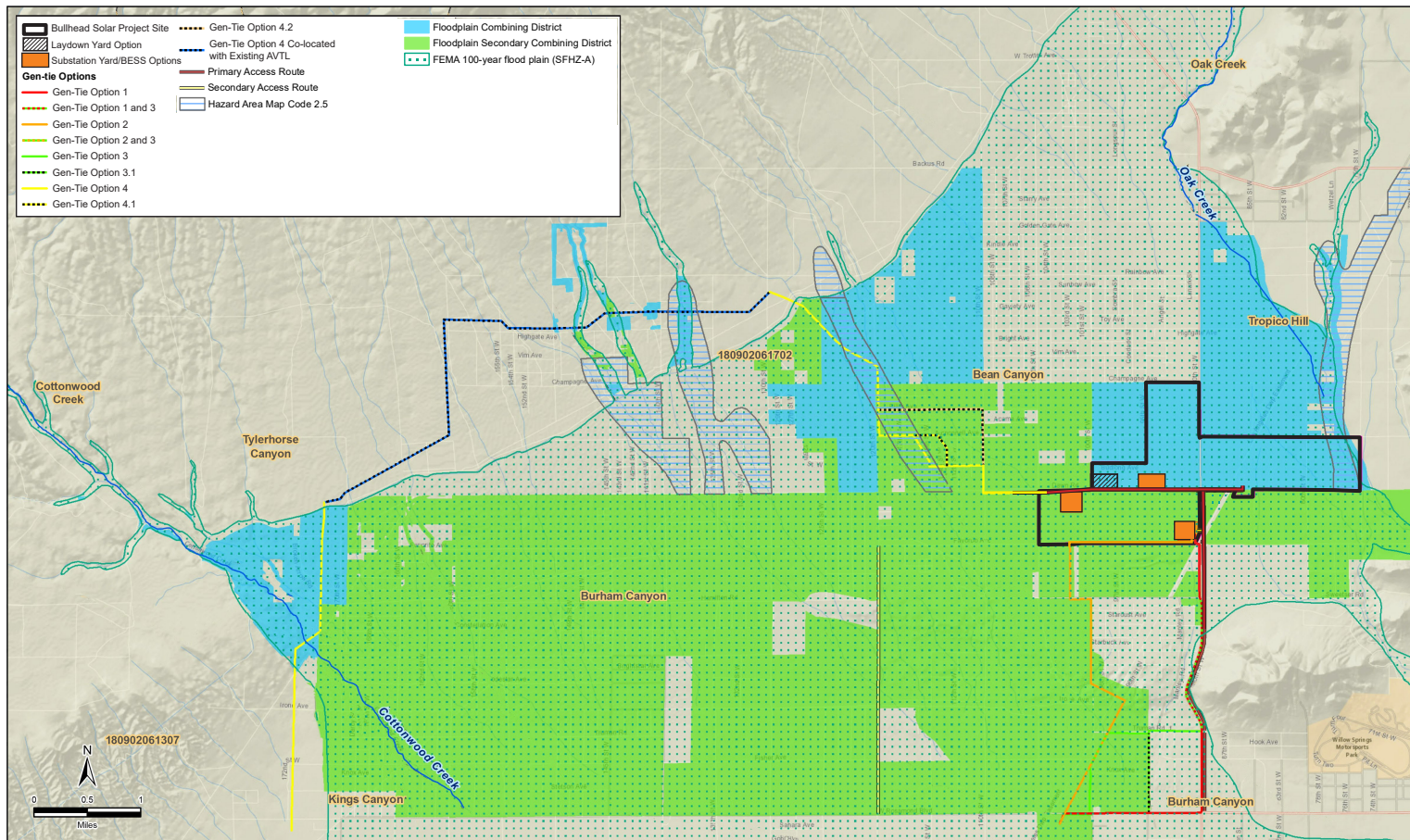
## Floodplains

The Federal Emergency Management Agency (FEMA) has classified Flood Zones for the project area, which are depicted in the Flood Insurance Rate Map (FIRM 06029C3650E). Most of the project area lies in FEMA Special Flood Hazard Area (SFHA) Zone A, otherwise defined as an area subject to the 1 percent annual chance for flooding, commonly referred to as a 100-year flood event (See **Figure 4.10-3**, *Flood Hazard Areas*). FEMA Zone A SFHAs do not have defined floodways or elevations.

Portions of the project area have been delineated as a flood hazard by Kern County engineers and classified as a Map Code 2.5 Flood Hazard in the Kern County General Plan and floodplain combining districts by the Kern County Zoning Ordinance. Floodplain combining districts are defined by Kern County Zoning Ordinance as those areas lying within Zone A on the FEMA FIRM or those areas potentially subject to flooding as designed by Kern County Engineering and Survey Services Department pending reclassification of such areas into the Floodplain Primary District or the Floodplain Secondary Combining Districts. Regulations in the Floodplain Combining District are in addition to the regulations of the base district. As shown on **Figure 4.10-3**, *Flood Hazard Areas*, Map Code 2.5 areas extend into the eastern edge of the study area and cross the Gen-tie Option to the Whirlwind Substation at multiple locations.

## Soil Types and Erosion

Soils in the project site consist predominantly of sandy loams, with most of the site exhibiting Cajon loamy sand and a smaller percentage of Destazo sandy loam mapped inside the project boundary. Refer to the **Appendix H**, *Geology and Soils Technical Report*, in this EIR, for additional details about the soils onsite.



ICF  
Source: EDF (2022), USGS (2021)

Figure 4.10-3: FLOOD HAZARD ZONES

The hydrologic soil group was developed by the U.S. Department of Agriculture to describe whether rainwater is likely to run off the soil or infiltrate it, with soils likely to infiltrate at a higher rate having a classification of A and soils that are most likely to experience little infiltration having a rating of D. As shown in, *Soil Groups Within the Project Site*, soils in the project area tend toward high infiltration rates, and thus would absorb most of the infiltrated moisture rather than creating substantial runoff.

**TABLE 4.10-2: SOIL GROUPS WITHIN THE PROJECT SITE**

<b>Soil Map Description</b>	<b>Percent Slopes</b>	<b>Hydrologic Group</b>	<b>Setting</b>	<b>Drainage</b>
Cajon Loamy Sand	0 to 5	A	Alluvial fans, flood plains	Somewhat excessively drained
Cajon Loamy Sand	2 to 9	A	Alluvial fans	Excessively drained
Cajon Sand	5 to 15	A	Alluvial fans, flood plains	Somewhat excessively drained
Destazo Sandy Loam	0 to 2	B	Basin floor, flood plains	Well drained
Destazo Sandy Loam	5 to 9	B	Basin floor, flood plains	Well drained
Hesperia Fine Sandy Loam	2 to 5	A	Alluvial fans	Well drained
Cajon Loamy Sand	0 to 5	A	Alluvial fans, flood plains	Somewhat excessively drained

SOURCE: NRCS 2019.

## Groundwater Resources Basin

The project site is in the Antelope Valley Groundwater Basin (AVGWB) of the South Lahontan Hydrologic Region and encompasses 1,580 square miles in the western Mojave Desert (CDWR 2004, 2016). The basin is bounded by the Garlock fault zone on the northwest and the San Andreas fault to the southwest, where the Tehachapi Mountains meet the San Gabriel Mountains. The runoff from the northern mountains flows through ridges, buttes, and low hills into Rosamond Lake. Big Rock and Little Rock Creeks alone are estimated to contribute more than 50 percent of the runoff. Total runoff from the San Gabriel Mountains (including runoff from Big Rock and Little Rock Creeks) has been estimated to contribute up to 80 percent of the total natural recharge in the basin.

Historically, the primary sources of natural recharge in AVGWB were precipitation and infiltration of mountain runoff in the alluvial fans at the foot of the mountains. During high runoff, the streams can flow onto the valley floor, which can cause some recharge along drainages and washes near where the streams enter the valleys, although concentrated runoff rarely occurs in the valley except in a few main channels, including Cottonwood Creek. Aquifer recharge proceeds through lateral groundwater underflow from adjacent bedrock areas and basins. Through groundwater development, agricultural irrigation has become an important source of recharge through infiltration of irrigation return flow. The entire AVGWB is estimated to have 68 million to 70 million acre-feet (AF) of storage capacity, with a range in natural recharge of 31,200 to 59,100 AF annually.



Groundwater provides approximately 79 percent of the Antelope Valley basin's water supply. The Sustainable Groundwater Management Act 2019 – Basin Prioritization Process and Results considers Antelope Valley as not critically over-drafted and “very low” priority. Almost 90 percent of the groundwater is adjudicated (**Appendix K**; ICF 2023).

## Jurisdictional Waters

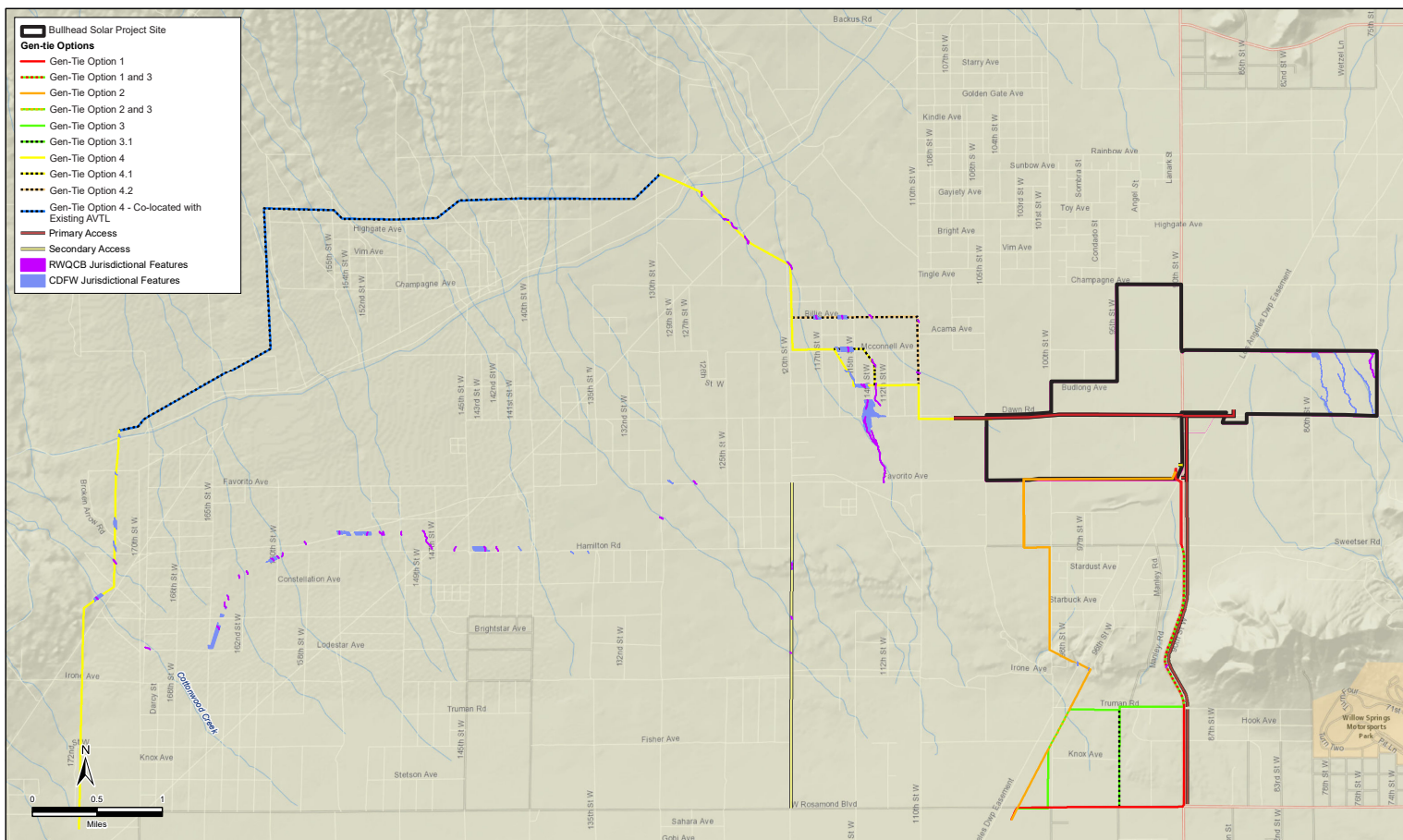
The project site does not contain any surface water bodies that are subject to federal jurisdiction under Section 404 of the Clean Water Act (CWA); all tributaries are drained internally and do not flow to any relatively permanent waters and are therefore isolated and do not connect to any navigable water features. However, the project area contains confirmed RWQCB and California Department of Fish and Wildlife (CDFW) jurisdictional features and features that are likely to be jurisdictional (**Figure 4.10-4, Jurisdictional Waters**), below.

A large portion of the proposed solar facility area is located on either active or fallow agricultural fields or disturbed/developed areas associated with the agricultural areas. Many of these fields have been active for more than 30 years and have changed historic flows throughout the region by intercepting waters from upstream and changing flow regimes downstream. All irrigation for these fields appears to be provided by pumping groundwater and irrigating using center-pivot and movable sprinklers and most of the water is contained within the fields. These fields contain no potentially jurisdictional features. However, there are 4 features within the proposed solar facility area boundary that are likely jurisdictional waters subject to CDFW jurisdiction and/or RWQCB jurisdiction (see **Figure 4.10-4, Jurisdictional Waters**), below.

There are 22 features along the proposed gen-tie routes that are likely jurisdictional waters subject to CDFW jurisdiction and/or RWQCB jurisdiction; 1 of these 22 features also crosses the proposed access routes outside the solar facility area boundary. There are an additional 3 features along the proposed access routes outside the solar facility boundary that are likely jurisdictional waters subject to CDFW jurisdiction and/or RWQCB jurisdiction (see **Figure 4.10-4, Jurisdictional Waters**), below.

In total, there are 29 features that total 13.87 acres and 19,686 linear feet of potentially jurisdictional waters subject to CDFW jurisdiction, of which 19 features are also potentially subject to RWQCB jurisdiction. Potential RWQCB jurisdictional waters total 0.465 acres and 6,152 linear feet.

The features generally flow from the northwest to the southeast over most of the study area. The features are generally characterized as ephemeral channels lacking riparian or desert wash species. Many of the features lack obvious bed or bank characteristics and evidence of concentrated flow and occur in flat to rolling topography. Water is expected to only flow through the features during localized or large rain events. Many of these features are also discontinuous and do not exhibit flow indicators along their entire length. Refer to the **Appendix B.1, Bullhead Solar Project Jurisdictional Waters Report**, in this EIR, for additional details about the potentially jurisdictional features.



Source: EDF (2022); USGS (2021)

**Figure 4.10-4: JURISDICTIONAL WATERS**

## 4.10.3 Regulatory Setting

### Federal

#### Clean Water Act

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA required states to set standards to protect, maintain, and restore water quality through the regulation of point-source and certain nonpoint – source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine RWQCBs. Projects that disturb one or more acres, including the proposed project, are required to obtain NPDES coverage under Construction General Permits.

**Section 401, Water Quality Certification.** Section 401 of the CWA requires that, prior to issuance of any federal permit or license, any activity, including river or stream crossing during road, pipeline, or transmission line construction, which may result in discharges into waters of the U.S., must be certified by the State, as administered by the RWQCB. This certification ensures that the proposed activity does not violate state and/or federal water quality standards. Under Section 401 of the CWA, every applicant for a Section 404 permit that may result in a discharge to a water body must first obtain State Water Quality Certification (WQC). Certifications are issued in conjunction with USACE Section 404 permits for dredge and fill discharges. In addition, an application for Individual Water Quality Certification and/or Waste Discharge Requirements must be submitted for any activity that would result in the placement of dredged or fill material in waters of the State that are not jurisdictional to the USACE, such as isolated wetlands, to ensure that the proposed activity complies with State water quality standards.

**Section 402, National Pollutant Discharge Elimination System.** Section 402 of the CWA authorizes the SWRCB to issue a NPDES General Construction Storm Water Permit (Water Quality Order 2022-0057-DWQ), referred to as the “General Construction Permit.” Construction activities can comply with and be covered under the General Construction Permit provided that they:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off site into receiving waters.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
- Perform inspections of all BMPs.

NPDES regulations are administered by the Lahontan RWQCB at the project site.

**Section 404, Discharge of Dredged or Fill Materials.** Section 404 of the CWA establishes programs to regulate the discharge of dredged and fill material in waters of the U.S., including wetlands. For purposes of section 404 of the CWA, the limits of non-tidal waters extend to the ordinary high water line, defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such

as natural line impressed on the bank, changes in the character of the soil, and presence of debris. When an application for a Section 404 permit is made the applicant must show it has:

- Taken steps to avoid impacts to wetlands or waters of the U.S. where practicable;
- Minimized unavoidable impacts on waters of the U.S. and wetlands; and
- Provided mitigation for unavoidable impacts.

Section 404 of the CWA requires a permit for construction activities involving placement of any kind of fill material into waters of the U.S. or wetlands. A water quality certification pursuant to Section 401 of the CWA is required for Section 404 permit actions. If applicable, construction would also require a request for water quality certification (or waiver thereof) from the Lahontan RWQCB. Project activities would adhere to state and federal water quality standards and would be in compliance with Sections 401 and 404 of the CWA.

**Section 303, Water Quality Standards and Implementation Plans.** Section 303(d) of the CWA (33 U.S. Code 1250, et seq., at 1313(d)) requires states to identify “impaired” water bodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the U.S. Environmental Protection Agency for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of total maximum daily loads (TMDL) requirements. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

## National Flood Insurance Act

FEMA is responsible for managing the National Flood Insurance Program (NFIP), which makes federally-backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. The NFIP, established in 1968 under the National Flood Insurance Act, requires that participating communities adopt certain minimum floodplain management standards, including restrictions on new development in designated floodways, a requirement that new structures in the 100-year flood zone be elevated to or above the 100-year flood level (known as base flood elevation), and a requirement that subdivisions be designed to minimize exposure to flood hazards.

To facilitate identifying areas with flood potential, FEMA has developed Flood Insurance Rate Maps (FIRMs) that can be used for planning purposes, including floodplain management, flood insurance, and enforcement of mandatory flood insurance purchase requirements. Kern County is a participating jurisdiction in the NFIP and, therefore, all new development must comply with the minimum requirements of the NFIP.

## State

### Department of Water Resources

The major responsibilities of the California Department of Water Resources (DWR) include preparing and updating the California Water Plan to guide development and management of the state's water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In

addition, DWR cooperates with local agencies on water resources investigations, supports watershed and river restoration programs, encourages water conservation, explores conjunctive use of ground and surface water, facilitates voluntary water transfers, and, when needed, operates a state drought water bank.

## **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.), passed in 1969, requires protection of water quality by appropriate designing, sizing, and construction of erosion and sediment controls. The Porter-Cologne Act established the State Water Resources Control Board (SWRCB) and divided California into nine regions, each overseen by a RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State’s surface and groundwater supplies and has delegated primary implementation authority to the nine RWQCBs. The Porter-Cologne Act assigns responsibility for implementing the Clean Water Act Sections 401 through 402 and 303(d) to the SWRCB and the nine RWQCBs.

The Porter-Cologne Act requires the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California’s major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters, provide the technical basis for determining waste discharge requirements, identify enforcement actions, and evaluate clean water grant proposals. The basin plans are updated every three years. Compliance with basin plans is primarily achieved through implementation of the NPDES, which regulates waste discharges as discussed above.

The Porter-Cologne Water Quality Control Act requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, which could affect the quality of the “waters of the State,” file a report of waste discharge. Absent a potential effect on the quality of “waters of the State,” no notification is required. However, the Regional Water Quality Control Board (RWQCB) encourages implementation of BMPs similar to those required for NPDES storm water permits to protect the water quality objectives and beneficial uses of local surface waters as provided in the Lahontan Regional Water Quality Control Plan (Basin Plan) (RWQCB, 2021).

## **Sustainable Groundwater Management Act**

The Sustainable Groundwater Management Act (SGMA) requires the formation of local-controlled groundwater sustainable agencies in high- and medium-priority groundwater basins. These groundwater sustainability agencies are responsible for developing and implementing a Groundwater Sustainability Plan (GSP) to ensure the basin is operated within its sustainable yield without causing undesirable results. The Judgment of adjudication for the AVGWB was entered in December 2015. To administer the Judgment, the Court directed appointment of the Watermaster (a five-member board). In 2016, the Watermaster Board and an Advisory Committee were formed. The Board finalized the hiring of a Watermaster Engineer at the end of April 2017 to provide hydrogeological and technical analyses and to guide administrative functions to fulfill the Judgment. Under the Judgment, the Watermaster Engineer has the responsibility of preparing annual reports to the Court and California DWR in accordance with SGMA (California Water Code section 10720.8).

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## Streambed Alteration Agreement (California Fish and Game Code)

California Fish and Game Code Section 1602 protects the natural flow, bed, channel, and bank of any river, stream, or lake designated by CDFW in which there is, at any time, any existing fish or wildlife resources, or benefit for the resources. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state, and requires any person, state or local governmental agency, or public utility to notify the CDFW before beginning any activity that will:

- Substantially divert or obstruct the natural flow of any river, stream or lake;
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

During final engineering and design of a proposed project, if it is determined that any project-related actions would have the potential to necessitate a streambed alteration agreement, such an agreement would be prepared and implemented prior to construction of the proposed project, thus maintaining compliance with Section 1602 of the California Fish and Game Code. A streambed alteration agreement is required if the CDFW determines the activity could substantially adversely affect an existing fish and wildlife resource. The agreement includes measures to protect fish and wildlife resources while conducting the proposed project. The CDFW must comply with CEQA before it may issue a final lake or streambed alteration agreement; therefore, the CDFW must wait for the lead agency to fully comply with CEQA before it may sign the draft lake or streambed alteration agreement, thereby making it final.

## Local

Construction and operation of the solar facility would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, Willow Springs Specific Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to hydrology and water quality. The policies and implementation measures in the Kern County General Plan and Willow Springs Specific Plan related to hydrology and water quality that are applicable to the proposed project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the proposed project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, of this EIR, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

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# Kern County General Plan

## *Land Use, Open Space, and Conservation Element*

### 1.3 Physical and Environmental Constraints

#### *Policies*

- Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes from 2.6 – 2.9, Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.
- Policy 8: Encourage the preservation of the floodplain’s flow conveyance capacity, especially in floodways, to be open space/passive recreation areas throughout the County.
- Policy 9: Construction of structures that impede water flow in a primary floodplain will be discouraged.
- Policy 10: The County will allow lands which are within flood hazard areas, other than primary floodplains, to be developed in accordance with the General Plan and Floodplain Management Ordinance, if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous within the requirements of the Safety Element (Chapter 4) of this General Plan.
- Policy 11: Protect and maintain watershed integrity within Kern County.

#### *Implementation Measures*

- Measure F: The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.
- Measure H: Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.
- Measure J: Compliance with the Floodplain Management Ordinance prior to grading or improvement of land for development or the construction, expansion, conversion or substantial improvements of a structure is required.
- Measure N: Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

## 1.9 Resources

### *Policy*

Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.

## 1.10 General Provisions

### 1.10.6 Surface Water and Groundwater

#### *Policies*

Policy 34: Ensure that water quality standards are met for existing users and future development.

Policy 40: Encourage utilization of community water system rather than the reliance on individual wells.

Policy 41: Review development proposals to ensure adequate water is available to accommodate projected growth.

Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.

Policy 44: Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.

#### *Implementation Measure*

Measure Y: Promote efficient water use by utilizing measures such as:

- (i) Requiring water-conserving design and equipment in new construction;
- (ii) Encouraging water-conserving landscaping and irrigation methods; and
- (iii) Encouraging the retrofitting of existing development with water conserving devices.

## Willow Springs Specific Plan

Portions of the proposed project are subject to the provisions of the Willow Springs Specific Plan. The Willow Springs Specific Plan contains goals, policies, and standards that are compatible with those in the Kern County General Plan but are unique to the specific needs of the Willow Springs Area. The hydrology and water quality-related policies and measures contained in the Willow Springs Specific Plan that are applicable to the proposed project are outlined below. Note that only applicable goals, policies, and standards are included here; those goals, policies, and standards that are not applicable are not included.



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## ***Public Facilities Element***

### ***Goal***

Goal 3 To restrict, if possible, any further and/or unnecessary drawdown of the water table within the plan area.

### ***Policy***

Policy 21 The projects shall comply with all applicable Kern County code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.

## ***Safety/Seismic Element***

### ***Goals***

Goal 7 Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone, and sewer lines, streets, and bridges located in areas of special flood hazard.

Goal 9 Comply with the requirements of the National Flood Insurance Program Regulations, Parts 59 and 60 of Title 44 of the Code of Federal Regulations.

### ***Policy***

Policy 1 New development within the 100-year floodplain shall be regulated in accordance with the Floodplain Management Section of the Department of Planning and Development Services according to the Flood Damage Prevention Ordinance, the Kern Land Division Ordinance, and the Kern County Zoning Ordinance as may be amended from time to time.

### ***Mitigation/Implementation Measures***

Measure 3 Areas within the 100-year floodplain shall be zoned with the appropriate FPP, FP, or FPS designation.

Measure 4 New development within the 100-year floodplain shall be regulated in accordance with the Flood Damage Prevention Ordinance and the Kern County Zoning Ordinance as they may be amended from time to time.

## **Kern County Zoning Ordinance**

### ***Chapter 19.70 Floodplain Combining District***

Section 19.70.040 prohibits uses including the following uses in the Floodplain Combining District, as applicable to the proposed project:

### ***Implementation Measures***

Measure B: All uses that will likely increase the flood hazard or affect the water-carrying capacity of the floodplain beyond the limits resulting from encroachment as specified in Section 19.70.130.

Measure C: Dumping, stockpiling, or storage of floatable substances or other materials which, in the opinion of the Kern County and Survey Services Department, will add to the debris loads of the stream or watercourse, unless protected by flood control devices approved by the Kern County Public Works Department and constructed in accordance with Section 19.70.130.

Measure G: Sources of water supply (e.g., wells, springs) unless protected by flood control devices approved by the Kern County Public Works Department and constructed in accordance with the requirements of the Kern County Health Department so as to minimize infiltration of floodwaters.

### ***Chapter 19.72 Floodplain Secondary (FPS) Combining District***

Section 19.72.040 prohibits uses including the following uses in the Floodplain Secondary Combining District, as applicable to the proposed project:

#### ***Implementation Measures***

Measure B: All uses that will likely increase the flood hazard or affect the water-carrying capacity of the floodplain beyond the limits resulting from encroachment as specified in Section 19.72.130 of this chapter.

Measure C: Dumping, stockpiling, or storage of floatable substances or other materials which, in the opinion of the Kern County Engineering and Survey Services Department, will add to the debris loads of the stream or watercourse.

Measure G: Sources of water supply (e.g., wells, springs) unless protected by flood control devices approved by the Kern County Public Works Department and constructed in accordance with the requirements of the Kern County Health Department so as to minimize infiltration of floodwaters.

## **Kern County Code of Building Regulations**

### ***Kern County Grading Ordinance (17.28)***

**Chapter 17.28 Kern County Grading Code.** Requirements of the Kern County Grading Code will be implemented. A grading permit will be obtained prior to commencement of construction activities. Of particular note with respect to hydrology and water quality is Section 17.28.140, Erosion Control, which addresses the following:

- **Slopes.** The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.
- **Other Devices.** Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.
- **Temporary Devices.** Temporary drainage and erosion control shall be provided as needed at the end of each work day during grading operations, such that existing drainage channels would not be

blocked. Dust control shall be applied to all graded areas and materials and shall consist of applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

## **Kern County Floodplain Management Ordinance (17.48)**

Any construction that takes place within areas of special flood hazards, areas of flood-related erosion hazards, and areas of mudslide (i.e., mudflow) hazards within the jurisdiction of unincorporated Kern County will comply with the requirements and construction design specifications of this ordinance. Any required development permits will be obtained prior to commencement of construction activities. Sections 17.48.250 through 17.48.350 of the ordinance elaborate on the standards of construction in the special flood hazards area.

## **Kern County Development Standards**

The Kern County Development Standards apply to all developments within Kern County that are outside of incorporated cities. These standards establish minimum design and construction requirements that will result in improvements that are economical to maintain and will adequately serve the general public. The requirements set forth in these standards are considered minimum design standards and will require the approval of the entity that will maintain the facilities to be constructed prior to approval by the County.

## **Lahontan Basin Plan**

Each of the nine RWQCBs adopts a Water Quality Control Plan (Basin Plan) which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's groundwater and surface waters, and local water quality conditions and problems. Water quality problems in the regions are listed in these plans, along with the causes, if they are known. Each RWQCB is to set water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of nuisance, with the understanding that water quality can be changed somewhat without unreasonably affecting beneficial uses. The Lahontan Basin Plan sets objectives for waterbodies within the Antelope Valley. These include Lake Palmdale, Little Rock Reservoir, Lower Amargosa Creek, and Piute Ponds. All these waterbodies are outside the project area watersheds.

## **Kern County – Applicability of NPDES Program for a Project Disturbing 1 Acre or Greater**

As closed systems that never contact the ocean or other waters of the U.S., many of the waters within Kern County are technically not subject to protective regulations under the federal NPDES Program.

The Kern County Engineering and Survey Services Department requires the completion of an NPDES applicability form for all construction projects disturbing one or more acre within Kern County. This form

requires the Project Proponent to provide background information on construction activities. Project Proponents must apply for the permit under one of the following four conditions:

1. All storm water is retained onsite and no storm water runoff, sediment, or pollutants from onsite construction activity can discharge directly or indirectly offsite or to a river, lake, stream, municipal storm drain, or offsite drainage facilities.
2. All storm water runoff is not retained onsite, but does not discharge to a Water of the United States (i.e., drains to a terminal drainage facility). Therefore, a SWPPP has been developed and BMPs must be implemented.
3. All storm water runoff is not retained on site, and the discharge is to a Water of the United States. Therefore, a Notice of Intent (NOI) must be filed with the State Regional Water Resources Control Board prior to issuance of the building permit. Also, a SWPPP has been developed and BMPs must be implemented.
4. Construction activity is between 1 to 5 acres and an Erosivity Waiver was granted by the SWRCB. BMPs must be implemented.

## Water Rights Adjudication

A groundwater rights adjudication process has been underway for over 15 years to manage the Antelope Valley basin through the Antelope Valley Integrated Regional Water Management Plan, which includes the project site. The parties to the adjudication include non-governmental overlying users, appropriative users, non-user overlying landowners and federally reserved water rights. The case defines who controls and uses the water in the basin.

In May 2011, the Santa Clara Superior Court issued an official decision determining that the adjudication area is in a state of overdraft and establishing a safe yield for the basin of 110,000 acre-feet per year (AFY), although pumping in the area has ranged up to 150,000 AFY.

On December 23, 2015, Judge Komar issued a final judgment which set in motion court-directed procedures for on the Directors of the Antelope Valley-East Kern Water Agency (AVEK) to create a Watermaster organization empowered to monitor the groundwater basin. In their first meeting of the year following settlement of long-running litigation over water rights adjudication, AVEK, as directed by the court, took action to begin the Watermaster transition process. The judgment specifies that the Watermaster board be made up of five members, including a representative from AVEK; the Los Angeles County Waterworks District 40; one public water supplier selected by District 40, Palmdale Water District (PWD), Quartz Hill Water District (QHWD), Littlerock Creek Irrigation District (LCID), California Water Service Company (Cal Water), Desert Lake Community Services District (DLCSD), North Edwards Water District (NEWD), City of Palmdale, City of Lancaster, Palm Ranch Irrigation District (PRID), and Rosamond Community Services District (RCSD); and two landowner representatives. The Watermaster board was also tasked with arriving at a unanimous decision on a Watermaster engineer. Todd Groundwater was selected as the Watermaster engineer in April 2017 and will assign pumping allocations per user that will be metered and monitored on an annual basis.

## 4.10.4 Impacts and Mitigation Measures

### Methodology

This section analyzes impacts on hydrology and water quality from the implementation of the proposed project based on changes to the environmental setting as described above, identified drainage conditions in the project site, and the current regulatory framework. The proposed project's potential impacts to hydrology and water quality were evaluated using the *Biological Resources Technical Report (Appendix E.1)*, which contains the *Jurisdictional Water Report; Geology and Soils Technical Report; Appendix K, Hydrology Assessment Technical Report*; and the *Appendix L, Water Supply Assessment* prepared for the proposed project all located in this EIR. As well as a variety of resources, including multiple online sources and published documents. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

### 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 on hydrology and water quality.

A project could have a have a significant impact on hydrology and water quality if it would:

- a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would
  - i. Result in substantial erosion or siltation onsite or offsite;
  - ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
  - 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;
  - iv. Impede or redirect flood flows;
- d. Result in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

## Project Impacts

### **Impact 4.10-1: The project would violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality.**

#### ***Construction***

Project construction would include mowing, excavation, and grading portions of the project site. The largest component of impervious surface construction would be the development of the 25-acre BESS/substation site. The area at highest risk of erosion and sedimentation would be the new drainage crossings. The most extensive area of construction would be the foundations of PV modules, tower pads, and temporary construction areas for laydown at more than 1,350 acres. These activities would affect current drainage patterns and erosion on the project site; however, designing the site grading and access roads in compliance with County and Federal standards would prevent substantial alterations to drainage patterns and erosion within the project site.

Potential impacts on water quality from erosion and sedimentation are expected to be localized and temporary during construction. Stormwater runoff from the project site would not discharge to waters of the United States since the project area is within a watershed that is not hydrologically connected to a navigable waterway. However, because the proposed project would disturb more than 1 acre of land area and stormwater would not be contained on site or would be discharged into a terminal drainage facility, according to the Kern County Engineering, Surveying, and Permit Services Department NPDES applicability form, the proposed project would be required to implement a SWPPP during construction. Per Mitigation Measure MM 4.10-1, the SWPPP would include BMPs designed to prevent the occurrence of soil erosion and discharge of other construction-related pollutants that could contaminate water quality and would be applicable to all areas of the proposed project, including the solar array, access roads, and the gen-tie line. In addition, prior to the commencement of construction activities, the Project Proponent would be required to adhere to the requirements of the Kern County Grading Code. This includes implementation of various measures designed to prevent erosion and control drainage onsite, thereby further preventing the potential sedimentation and subsequent degradation of stormwater.

Generally, stormwater in defined ephemeral drainages would be conveyed across project roads via improved at-grade crossings and water is expected to infiltrate into the groundwater rather quickly. The proposed internal access road surfaces to the panels would be flush with the existing and surrounding ground to allow sheet flow to pass over and across the roadway without impeding or adding to the natural flow. While the proposed project would avoid development over most of the drainages onsite, the proposed project would result in both permanent and temporary impacts on waters that are potentially under the jurisdiction of RWQCB and streambed resources regulated by CDFW. The Project Proponent would consult with CDFW and RWQCB to verify the limits of the jurisdiction results presented in the **Appendix E.1, Jurisdictional Waters Report** in this EIR. To comply with state regulations protecting waters, jurisdictional streams would be avoided to the maximum extent practicable. For unavoidable impacts, the following permit and agreements would be obtained, or evidence would be provided from the respective resource agency to Kern County that such an agreement or permit is not required (see Mitigation Measures MM 4.4-15 and MM 4.4-16 in Section 4.4, *Biological Resources* of this EIR):

- A Waste Discharge Requirement issued by the California RWQCB for all project-related disturbances of Waters of the State.
- A Section 1602 Lake or Streambed Alteration Agreement issued by CDFW for all project related disturbances of any streambed or CDFW jurisdictional riparian habitat.

During project construction, any activity that results in the accidental release of hazardous or potentially hazardous materials would result in water quality degradation. Further, any construction activity that results in the accidental release of pollutants, hazardous or potentially hazardous materials would result in water quality degradation. Materials that could contribute to this impact include, but are not limited to, diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, lubricant grease, cement slurry, and other fluids utilized by construction and maintenance vehicles and equipment. Motorized equipment could leak hazardous materials such as motor oil, transmission fluid, or antifreeze due to inadequate or improper maintenance, unnoticed or unrepaired damage, improper refueling, or operator error.

As noted in Section 4.9, *Hazards and Hazardous Materials*, of this EIR, Mitigation Measure MM 4.9-1 would require the Project Proponent to provide a Hazardous Materials Business Plan that would delineate hazardous material and hazardous waste storage areas; describe proper handling, storage, transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill; describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction; and establish public and agency notification procedures for spills and other emergencies, including fires. Therefore, with implementation of Mitigation Measures MM 4.4-15, MM 4.4-16, MM 4.10-1, and MM 4.9-1, impacts to water quality would be less than significant during construction.

### **Operation**

All hazardous materials used during the operational phase of the proposed project would be stored in secure areas with appropriate spill prevention and containment equipment offsite at the BigBeau operations and maintenance (O&M) facility. However, the solar facilities would require limited use of certain hazardous materials onsite for routine operations and maintenance. Accidental release of such materials could include fuels, paints, coatings, lubricants, and transformer oil, which would result in water quality degradation should the materials become entrained in stormwater. This would result in a potentially significant impact on water quality. However, as described above, implementation of Mitigation Measure MM 4.9-1 would require the implementation of a Hazardous Materials Business Plan that would ensure safe handling of hazardous materials onsite and provide the means for prompt cleanup in the event of an accidental hazardous material release. There would be no hazardous materials associated with the interconnections to the gen-tie lines.

Water quality could also be degraded by non-hazardous materials during operation activities. During dry periods, impervious surfaces (i.e., hardscape surfaces such as foundations and buildings) can collect greases, oils, and other vehicle-related pollutants. During storm events, these pollutants can mix with stormwater and degrade water quality. However, per Mitigation Measure MM 4.10-2, a drainage plan would be prepared in accordance with the Kern County Development Standards and Kern County Code of Building Regulations. The drainage plan would include post-construction structural and nonstructural BMPs. Structural BMPs could include the development of a retention basin or basins for the proposed project. Based on other solar projects in the area, the areas of the project site with compacted soils, such as roads and solar array areas, may require retention basins to manage onsite stormwater generated due to reduced vegetative cover, increased compacted soil, and increased impervious surface. The size and location of the retention basin(s) would depend on a number of site conditions, including selected location

for the BESS/Substation site and the amount of new impervious surface within the study area boundary. The sizing and location of the basin(s) would be included in the drainage plan.

With the implementation of Mitigation Measures MM 4.9-1, MM 4.10-1, and MM 4.10-2, project operation would not violate water quality standards or waste discharge requirements, or otherwise degrade water quality.

### **Mitigation Measure**

Implement Mitigation Measures MM 4.4-15, MM 4.4-16, and MM 4.9-1 (see Section 4.4, *Biological Resources*, and Section 4.9, *Hazards and Hazardous Materials*, for full mitigation measure text).

**MM 4.10-1:** Prior to issuance of a grading permit, the Project Proponent/operator shall submit a Stormwater Pollution Prevention Plan (SWPPP) for review and approval by the Kern County Planning and Natural Resources Department and/or Kern County Public Works Department. The SWPPP shall be designed to minimize runoff and shall specify best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sediment or any other pollutants from moving offsite and into receiving waters. The requirements of the SWPPP shall be incorporated into design specifications and construction contracts. Recommended best management practices to be incorporated in the SWPPP may include the following:

- a. Minimization of vegetation removal;
- b. Implementing sediment controls, including silt fences as necessary;
- c. Installation of a stabilized construction entrance/exit and stabilization of disturbed areas;
- d. Properly containing and disposing of hazardous materials used for construction onsite;
- e. Properly covering stockpiled soils to prevent wind erosion;
- f. Proper protections and containment for fueling and maintenance of equipment and vehicles; and
- g. Appropriate disposal of demolition debris, concrete and soil, and aggressively controlling litter.
- h. Cleanup of silt and mud on adjacent street due to construction activity.
- i. Checking all lined and unlined ditches after each rainfall.
- j. Restore all erosion control devices to working order to the satisfaction of the Kern County Planning and Natural Resources Department and/or Kern County Public Works Department after each rainfall run-off.
- k. Install additional erosion control measures as may be required due to uncompleted grading operations or unforeseen circumstances which may arise.

**MM 4.10-2:** Prior to the issuance of a grading permit, the Project Proponent/operator shall complete a hydrologic study and final drainage plan designed to evaluate and minimize potential increases in runoff from the project site. The study shall include, but is not limited to the following:



- a. A numerical stormwater model for the project site that evaluates existing and proposed (with project) drainage conditions during storm events ranging up to the 100-year event.
- b. The study shall also consider potential for erosion and sedimentation in light of modeled changes in stormwater flow across the project area that would result from project implementation.
- c. Engineering recommendations to be incorporated into the project design and applied within the site boundary. Engineering recommendations will include measures to offset increases in stormwater runoff that would result from the project, as well as implementation of design measures to minimize or manage flow concentration and changes in flow depth or velocity so as to minimize erosion, sedimentation, and flooding onsite or offsite.
- d. A specification that the final design of the solar arrays shall include one 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 shall be graded to direct potential flood waters without increasing the water surface elevations more than one foot or as required by Kern County's Floodplain Management Ordinance.
- e. The hydrologic study and drainage plan shall be prepared in accordance with the Kern County Grading Code and Kern County Development Standards, and approved by the Kern County Public Works Department prior to the issuance of grading permits.

### ***Level of Significance after Mitigation***

With implementation of the Mitigation Measures MM 4.4-15, MM 4.4-16, MM 4.9-1, MM 4.10-1, and MM 4.10-2 impacts would be less than significant.

### **Impact 4.10-2: The project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.**

As documented in the **Appendix L, *Water Supply Assessment*** (WSA) water demands during construction would be a maximum 200 acre feet (AF) over an 18-month period (or 133 acre-feet per year [AFY]), and up to 204 AF over an 18.5-year (or 11 AFY) for the O&M period. Water supply needed for both construction and operation would be either from existing onsite wells or the purchase of water from RCSD.

Estimates of the water demand for the agricultural uses on the project site range from 450 AFY to 2,400 AFY procured from onsite water wells. This represents at least a 70 percent reduction during the construction phase and at least a 98 percent reduction during the O&M phase compared to the estimated former agricultural demand. Given the limited amount of water used compared to the water use for agricultural uses, the proposed project is not anticipated to substantially decrease groundwater supplies.

Additionally, construction activities would not prevent or inhibit any incidental groundwater recharge that may occur onsite during precipitation events, because construction activities would not create substantial new impermeable areas. The proposed project construction would introduce new temporary impervious

areas through construction of laydown areas. The remainder of the area would be pervious native material, and water would be allowed to infiltrate onsite and offsite following its natural flow.

The proposed project would result in an increase in impervious surfaces on the site from the equipment foundations as well as the energy storage facilities. The access roads could also increase impervious surface areas if paved or compacted gravel base is effectively impervious. Although the panels and panel foundations are impervious, stormwater falling on the panels would drip off and infiltrate into the surrounding pervious ground surfaces. Otherwise, even if the access roads are paved, the majority of the site would remain pervious and thus would not substantively interfere with groundwater recharge. Therefore, the proposed project would leave large areas of pervious surfaces intact that would continue to absorb stormwater runoff and would thus not result in a significant reduction of groundwater infiltration rates.

Therefore, the proposed project would have a less than significant impact on groundwater supplies and would not substantially interfere with groundwater recharge.

### ***Mitigation Measures***

No mitigation measures required.

### ***Level of Significance***

Impacts would be less than significant.

### **Impact 4.10-3: The project would substantially alter the existing drainage patterns 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 result in substantial erosion and/or sedimentation on- or off-site.**

Site drainage is characterized by shallow sheet flow conditions. Due to the relatively low topographic relief, lack of development and minimal vegetation, most of the drainage flow originating in the project area infiltrates into the soils onsite. There are 19,686 linear feet of potentially jurisdictional waters that flow from the northwest to the southeast. The potentially jurisdictional waters are generally characterized as ephemeral channels with water expected to only flow only during localized or large rain events. Many of these features are also discontinuous and do not exhibit flow indicators along their entire length.

Construction of the proposed project can be divided into two types: long, linear construction related to improved access roads and internal emergency access roads and concentrated site development. Concentrated site development is estimated to cover less than 2 percent of the project site and would include the BESS/Substation site and communication tower pads; these site features can typically avoid or minimize impacts on drainage channels. The internal access roads would be long, linear construction zones and therefore could run cross-gradient to drainage channels and be more difficult to avoid. The proposed project would include construction of the gen-tie line and any associated maintenance/access roads to the line that would cross potentially jurisdictional waters. To minimize these impacts, the proposed project would use an existing transmission corridor, if feasible (i.e., a portion of Whirlwind Gen-tie Option 1 along the Antelope Valley Transmission Line, where new line would be strung on existing electrical poles) and use existing access roads. For new gen-tie line routes, the proposed project is expected to have a negligible

effect on impervious areas and surface flow because the poles and associated concrete foundations would be widely spaced, and their associated surface area would not be a significant factor in the hydrology of the project site and immediately surrounding area.

Additionally, the proposed project would include grubbing, grading, and installation of solar arrays, battery storage modules, and associated infrastructure that could alter existing onsite drainage patterns and flow paths and could potentially affect the way that stormwater from up-gradient areas flows onto the site during major events. These changes could result in increased erosion onsite. Construction of internal access roads and widening a secondary access road may result in alterations to the existing drainage pattern in areas with sheetflow, which could result in localized erosion. Additionally, if the proposed project controls stormwater run-on to the site through berms or other engineered channels, increased concentration of flows could cause head cutting, scour, and other erosional processes. Increases in erosion could result in sedimentation downstream. Further, the impervious surfaces due to development of the proposed project would generate additional stormwater runoff onsite, which could exacerbate potential erosion and sedimentation onsite or downstream.

As described above, the proposed project would implement a SWPPP per Mitigation Measure MM 4.10-1 that would require preservation of existing vegetation and topography to the maximum extent feasible, as well as include erosion and sediment control BMPs designed to prevent erosion and sedimentation from occurring during project construction. Compliance with the Kern County Grading Ordinance is also required, which requires erosion prevention measures. With regard to erosion and sedimentation during project operation caused by increased runoff from impervious surfaces, large amounts of pervious ground surface would remain during project operation that would continue to absorb the majority of surface flows. Further, Mitigation Measure MM 4.10-2 requires the completion of a hydrologic study and final drainage plan for the proposed project prior to the issuance of a grading permit; the plan would demonstrate that the project site has been designed to minimize potential increases in runoff. Minimization of runoff increases could require inclusion of a retention basin onsite to capture high storm flows. Any stormwater management features would be consistent with existing regulatory requirements and would minimize any erosion or sedimentation to less than significant levels. Kern County would also review placement of perimeter fencing and solar array in Flood Hazard Map Code 2.5, Floodplain Combining, and Floodplain Secondary Combining Districts.

Additionally, the Project Proponent would consult with CDFW and RWQCB to verify the limits of the jurisdiction results presented in the *Jurisdictional Waters Report* (see **Appendix E.1**). Jurisdictional waters on the project site would be avoided to the maximum extent practicable and the proposed internal access roads would be flush with the existing and surrounding ground to allow sheet flow to pass over and across the roadway without impeding the flow of jurisdictional features. Implementation of MM 4.4-15 and MM 4.4-16 would also ensure that CDFW and/or RWQCB permits and agreements would be obtained, or evidence would be provided from the respective resource agency to Kern County that such an agreement or permit is not required to mitigate temporary and permanent impacts to jurisdictional waters.

With implementation of Mitigation Measures MM 4.4-15, MM 4.4-16, MM 4.10-1, and MM 4.10-2, impacts would be less than significant.

### **Mitigation Measures**

Implement Mitigation Measures MM 4.4-15, MM 4.4-16, (see Section 4.4, *Biological Resources*, for full mitigation measure text), MM 4.10-1, and MM 4.10-2.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.4-15, MM 4.4-16, MM 4.10-1, and MM 4.10-2, impacts would be less than significant.

**Impact 4.10-4: The project would substantially alter the existing drainage patterns 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite.**

The proposed project would include minimal alteration of existing drainage patterns onsite and in the immediate surrounding area. However, the internal access roads, and access roads for the gen-tie options that include overhead electrical are often cross-gradient to existing drainages and ephemeral streams, making avoidance impossible. The gen-tie access roads are not anticipated to result in substantial increase in the rate or amount of surface runoff that would result in flooding onsite or offsite. Most of the gen-tie project development would be on gravel pads and utilize existing dirt roadways using at-grade crossings, which may act similar to pervious surfaces and encourage sheetflow. The amount of new impervious surface would be less than 2 percent.

The entire project site is within FEMA Special Flood Hazard Area A and, as such, is at risk for flooding and portions of the project site are designated as General Plan 2.5 Flood Hazards. Proposed project development including all project components would comply with the Kern County Floodplain Management Ordinance requirements for development within a 100-year floodplain. In addition, Mitigation Measure MM 4.10-2 would require the preparation of a final hydrologic study and drainage plan prior to issuance of a grading permit that would detail the design and implementation of any necessary stormwater control features to onsite that would ensure runoff is not substantially increased by the proposed facilities. Mitigation Measure MM 4.10-2 would also require that grading for the project facilities does not alter the ground surface such that the extent of flooding during flood events is substantially increased. Therefore, impacts related to flooding would be less than significant.

### ***Mitigation Measures***

Implement Mitigation Measure MM 4.10-2.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.10-2, impacts would be less than significant.

**Impact 4.10-5: The project would create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.**

The project site is located in a remote, rural region with no existing or planned stormwater infrastructure. There are no existing stormwater drainage systems on the project site, and no stormwater drainage systems are proposed as part of the proposed project. The project area is drained by natural stream channels. Internal

access roads and any improvements to existing roads would be designed for at-grade conveyance, such as sheetflow across the roadway to manage stormwater.

The proposed project would be required to adhere to Kern County Public Works Department storm water requirements, which include measures to address stormwater controls on both management of runoff volume and water quality, including controlling erosion and protection of water quality of stormwater runoff. As described above under Impact 4.10-4, a large amount of pervious surfaces would surround the proposed facilities that would continue to absorb runoff thus allowing infiltration of the runoff produced by the new minor impervious surfaces. Further, the drainage plan required by Mitigation Measure MM 4.10-2 would detail any necessary design features required to properly control stormwater runoff onsite; design features would be appropriately sized for storm events per the final hydrology study performed for the site. Impacts related to storm water drainage systems would be less than significant.

### ***Mitigation Measures***

Implementation of Mitigation Measure MM 4.10-2 would be required.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.10-2, impacts would be less than significant.

### **Impact 4.10-6: The project would 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 impede or redirect flood flows.**

The proposed project is entirely within the FEMA-designated SFHA Zone A. Structures that could impede or redirect flood flows would be limited to fences, footings for solar arrays, battery storage modules, the substation, and associated infrastructure. The solar panels would be mounted on steel support posts which spread out across the project site and would not be expected to impede or redirect flood flows. The proposed project would avoid watercourse crossings, as feasible. Implementation of Mitigation Measure MM 4.10-2 would require preparation of a drainage plan that would design project facilities to have one-foot of freeboard clearance above the 100-year flood depths for the solar arrays or the finished floor of any permanent structures, in accordance with Kern County design standards. Per Mitigation Measure MM 4.10-2, grading for the proposed project would be designed so that water surface elevations during flood events would not be increased by more than one foot. Internal and perimeter access roads would follow natural contours to the extent practical. In general, design longitudinal grades would not exceed 10 percent, with a maximum of 15 percent for short sections. Areas of unstable or highly erodible soils would be avoided. Implementation of Mitigation Measure MM 4.10-2 would reduce impacts associated with impeding or redirecting flood flows. Therefore, impacts related to flooding would be less than significant.

### ***Mitigation Measures***

Implement Mitigation Measure MM 4.10-2.

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***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.10-2, impacts would be less than significant.

**Impact 4.10-7: The project would result in flood hazard, tsunami, seiche zones, risk release of pollutants due to project inundation.**

The proposed project is entirely within the FEMA-designated SFHA Zone A and portions of the far eastern and western extent cross into General Plan Flood Hazard delineated areas. As discussed more thoroughly in Section 4.9, *Hazards and Hazardous Materials*, the proposed project would not include the use, storage, or disposal of significant quantities of hazardous materials. During construction and O&M, Mitigation Measure MM 4.9-1 would require the Project Proponent to provide a Hazardous Materials Business Plan that would delineate hazardous material and hazardous waste storage areas; describe proper handling, storage, transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill; describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction; and establish public and agency notification procedures for spills and other emergencies, including fires. Hazardous materials would be used outside of natural drainage channels to the extent feasible during construction and operation of the proposed project. Implementation of Mitigation Measure MM 4.9-1 would minimize impacts and risk of release of pollutants due to project inundation. Per Mitigation Measure MM 4.10-2, a drainage plan would be prepared in accordance with the Kern County Development Standards and Kern County Code of Building Regulations. The drainage plan would include measures to offset increases in stormwater runoff that would result from implementation of the proposed project, as well as design measures to minimize or manage flow concentration and changes in flow depth or velocity. The Floodplain Management Ordinance outlines floodplain development requirements to avoid the potential for flood damage to release pollutants into the environment.

The project site is more than 100 miles from the nearest coastline, within a valley surrounded by mountainous terrain, and at an elevation about 2,600 feet above sea level; therefore, the project site is not within a tsunami zone.

A seiche is a large wave generated in an enclosed body of water in response to ground-shaking. The proposed project is not within a seiche zone, nor are there significant bodies of water uphill (northwest) of the project site.

With the implementation of Mitigation Measures MM 4.9-1 and MM 4.10-2, project operation would not result in a risk of release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. Impacts would be less than significant.

***Mitigation Measures***

Implement Mitigation Measures MM 4.9-1 (see Section 4.9, *Hazards and Hazardous Materials*, in this EIR, for full mitigation measure text) and MM 4.10-2.

***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.9-1 and MM 4.10-2, impacts would be less than significant.

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**Impact 4.10-8: The project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.**

The project site is located within the South Lahontan RWQCB and is subject to the applicable requirements of the Basin Plan administered by the RWQCB in accordance with the Porter-Cologne Water Quality Control Act. The proposed project is not subject to a sustainable groundwater management plan and, therefore, is not under a specific Groundwater Sustainability Plan (GSP) area. Although the proposed project is not within a GSP required area, the project site is within the AVGWB, which is under an existing adjudication. As discussed above, the proposed project would include required BMPs and drainage control requirements that would be consistent with the Basin Plan.

As discussed in Impact 4.10-2, construction and operation of the proposed project is not anticipated to substantially decrease groundwater supplies or interfere with groundwater recharge such that the proposed project may impede sustainable groundwater management of the basin. The AVGWB is actively managed by the court appointed Watermaster. The basin was adjudicated in December 2015 to reduce groundwater level declines and subsidence. The Final Judgment was entered on December 23, 2015, and is posted on the Watermaster website for reference ([www.avwatermaster.net](http://www.avwatermaster.net)). A native safe yield of 82,300 AF per year was established by the court for the Antelope Valley Area of Adjudication, and the adjudication parties were divided into various classes to establish respective water rights among groundwater producers. To achieve sustainable groundwater elevations, groundwater production would be reduced (i.e., ramped down) over a 7-year period (2016–2022) to a final Production Right. Potential water-supply sources are groundwater using a landowner’s production rights, groundwater through Rosamond Community Services District, groundwater from the Antelope Valley–East Kern Water, and surface water imports from the State Water Project. The supply for construction and O&M demand can be readily met through use of groundwater production rights secured by the Project Proponent, which has completed a Watermaster-approved water supply agreement to satisfy the needs of the project construction of 1 acre feet of permanent production rights and 200 acre feet of carry over water rights within the Antelope Valley Groundwater Basin. The proposed project would not conflict with or obstruct implementation of a sustainable groundwater management plan. Impacts would be less than significant.

***Mitigation Measures***

No mitigation would be required.

***Level of Significance***

Impacts would be less than significant.

**Cumulative Setting, Impacts, and Mitigation Measures**

As described in **Chapter 3, *Project Description***, of this EIR, there are approximately 40 solar and non-solar projects proposed or approved throughout the western Antelope Valley in Kern County. All projects are located within the Antelope Valley HU and AVGWB.

Similar to the proposed project, all cumulative projects would not discharge to waters of the United States due to their location within the Antelope Valley, which is a closed basin with no outlet to the Pacific Ocean.

Regardless, Mitigation Measure MM 4.10-1 would require the proposed project to prepare and implement a SWPPP in accordance with County requirements. Similarly, all projects that disturb one or more acre would be required to prepare a SWPPP, which would include BMPs designed to prevent the mixture of sediment and other pollutants with stormwater and degrading water quality. Furthermore, the proposed project would implement a Hazardous Materials Business Plan as part of Mitigation Measure MM 4.9-1 that would require appropriate handling of hazardous materials onsite to ensure they do not come into contact with stormwater and affect water quality. All other projects in the vicinity that would handle hazardous materials would be required to comply with hazardous material regulations. Therefore, cumulative scenario impacts associated with water quality degradation would not be cumulatively considerable, and the proposed project would not contribute to a cumulative impact on water quality.

With regard to water supply, the proposed project could obtain its water supply from the AVGB. The Basin is in a state of overdraft. The Water Supply Assessment determined that there are sufficient supplies for both project construction and operation. The proposed project's use of water would be highest during construction which is still much less than the current water demand associated with the agricultural uses. Therefore, the project's water use, in combination with other cumulative scenario projects requiring water from the AVGB would be less than significant.

With respect to erosion, drainage, and flooding, the proposed project would implement Mitigation Measure MM 4.10-2, which would minimize direct impacts on erosion, drainage, and flooding. It is anticipated that other cumulative scenario projects would be required to implement similar measures, in order to minimize erosion, drainage, and flooding related impacts. Additionally, drainage related impacts from cumulative scenario projects would be primarily localized. Therefore, cumulative scenario impacts on erosion, drainage, and flooding are not anticipated to be cumulatively considerable, and the proposed project would not contribute to a cumulative impact on flooding, erosion, or drainage.

### ***Mitigation Measures***

Implement Mitigation Measures MM 4.4-15 and 4.4-16 (see Section 4.4, *Biological Resources*, of this EIR, for full mitigation measure text), MM 4.9-1 (see Section 4.9, *Hazards and Hazardous Materials*, in this EIR, for full mitigation measure text) MM 4.10-1, and MM 4.10-2.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.4-15, MM 4.4-16, MM 4.9-1, MM 4.10-1, and MM 4.10-2 impacts would be less than significant.



### **4.11.1 Introduction**

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting of the proposed project for impacts that may affect land use and planning. It also describes the environmental and regulatory setting and discusses the need for mitigation measures where applicable. The information in this section is based primarily, but not exclusively, on a review of the project's consistency with the Kern County General Plan, the Willow Springs Specific Plan, and the Kern County Zoning Ordinance.

### **4.11.2 Environmental Setting**

#### **Onsite Land Uses**

The project site is located on approximately 1,343 acres, comprised of 22 privately owned parcels in the southern unincorporated area of Kern County, California adjacent to the previously approved BigBeau Solar project. Parcel 358-051-03 would be used by the Project Proponent as a connector road to the BigBeau Solar project. The parcel is part of the proposed project and project study area for purposes of analysis under the California Environmental Quality Act (CEQA) but would not be included in the CUP boundary. As such the CUP boundary includes 1,333 acres, comprised of 21 parcels.

The proposed project contains 842 acres (approximately 63% of the project site) within the Kern County General Plan and approximately 500 acres (approximately 37% of the project site) within the Willow Springs Specific Plan (WSSP). The entire project is subject to the provisions of the Kern County Zoning ordinance. **Table 4.11-1, Existing Project Site and Surrounding Properties, Existing Land Use, Existing General Plan Map Code Designations, and Existing Zoning**, identifies the existing land use, the existing general plan land use designation, and the existing zoning for the project site and surrounding areas. The project site has the following Kern County General Plan Land Use Designations: 2.5: flood hazard, 4.1: accepted county plan areas (WSSP), 8.1: intensive agriculture (minimum 20-unit acre parcel size), map code 8.3: extensive agriculture (minimum 20-unit acre parcel size). The project site is also within the Willow Springs Specific Plan and is designated as follows: 3.3: other facilities, 5.3 – 10 dwelling units /gross acre, 5.6- 2.5 gross acres per dwelling unit, 6.2: General commercial. Additionally, the project site is within two Kern County zone districts (Exclusive Agriculture (A) and Estate (E)), and four Kern County combining zone districts (Residential Suburban Combining, Floodplain Combining, Floodplain Secondary Combining and Mobile Home Combining). Approximately 840 acres of the project site are within the Kern County Agricultural Preserve No. 24 boundary. No parcels within the project site are subject to a Williamson Act Land Use Contract.

Many of the lands surrounding the project site have either been approved for or are in the planning stages of development for solar or wind energy facilities. This area of the county is recognized by the National Renewable Energy Laboratory (NREL) as having solar and wind resources suitable for renewable energy

development. The BigBeau Solar Project, located to the immediate west of the proposed project, was approved by the Kern County Board of Supervisors in June 2020.

**TABLE 4.11-1: EXISTING PROJECT SITE AND SURROUNDING PROPERTIES, EXISTING LAND USE, EXISTING GENERAL PLAN MAP CODE DESIGNATIONS, AND EXISTING ZONING**

	Existing Land Use	Existing General/Specific Plan Map Code Designations	Existing Zoning
<b>Project Site</b>	<b>Agricultural</b>	<b>8.1 Intensive Agriculture;</b> <b>8.3 (Extensive Agriculture;</b> <b>8.3/ 2.5 (Extensive Agriculture Flood Hazard Overlay);</b> <b>5.3/4.4, 5.5, 5.6, (Residential) Willow Springs Specific Plan;</b> <b>6.2 (General Commercial) Willow Springs Specific Plan</b>	<b>A (Exclusive Agriculture);</b> <b>E (Estate 2.5 Acre, Residential Suburban, Mobilehome Combining, Flood Plain Secondary);</b> <b>E (Estate 5 Acre, Mobilehome Combining, Flood Plain Secondary)</b>
<b>North</b>	Agricultural, Vacant Land, Rural Residential, Wind and Solar Development	8.1 (Intensive Agriculture); 8.3 (Extensive Agriculture 20 Acres); 8.3/2.5 (Extensive Agriculture 20-80 Acres, Flood Hazard Overlay); 8.5 (Resource Management)	A (Exclusive Agriculture, Flood Plain); PL (Platted Lands, Residential Suburban, Flood Plain)
<b>South</b>	Agricultural, Vacant Land, Rural Residential	1.1(State and Federal Land); 3.1 (Parks and Recreation Areas); 3.2 (Educational Facilities); 5.5 (Residential-Maximum 1 Unit/Net Acre); 5.3/4.4 (Residential-Maximum 10 Units/Net Acre, Comprehensive Plan Area- WSSP); 5.6 (Residential, Min 2.5 Gross Acres/Unit);	A (Exclusive Agriculture, Flood Plain Secondary); E (Estate 5 Acre, Residential Suburban Combining, Flood Plain Secondary); E (Estate 2 ½ Acre, Residential Suburban Combining, Flood Plain Secondary); E (Estate 2 ½ Acre, Residential Suburban Mobile Home Combining, Flood Plain Secondary); E (Estate 1 Acre, Residential Suburban Combining, Flood Plain Secondary); OS (Open Space)

**TABLE 4.11-1: EXISTING PROJECT SITE AND SURROUNDING PROPERTIES, EXISTING LAND USE, EXISTING GENERAL PLAN MAP CODE DESIGNATIONS, AND EXISTING ZONING**

	Existing Land Use	Existing General/Specific Plan Map Code Designations	Existing Zoning
		5.7 (Residential-1 Unit/per 5 Acres); 6.2 (General Commercial); 8.1 (Intensive Agriculture); 8.5 (Resource Management)	
<b>East</b>	Agricultural, Vacant Land, Rural Residential, Solar Development	8.3 (Extensive Agriculture, Flood Plain); 8.5 (Resource Management); 5.7 (Residential-1 Unit/per 5 Acres)	A (Exclusive Agriculture); A (Exclusive Agriculture, Flood Plain); E (Estate 5 Acre, Residential Suburban Combining, Flood Plain Secondary); E (Estate 2 ½ Acre, Residential Suburban Combining, Flood Plain Secondary)
<b>West</b>	Solar and Wind Development	5.3/4.4 (Residential-Maximum 10 Units/Net Acre, Comprehensive Plan Area- WSSP); 5.6 (Residential, Min 2.5 Gross Acres/Unit); 5.7 (Residential-1 Unit/per 5 Acres); 8.5 (Resource Management)	A (Exclusive Agriculture, Floodplain) A (Exclusive Agriculture, Flood Plain Secondary)

## Kern County General Plan

As shown in **Table 4.11-1** and **Figure 4.11-1: Existing General/Specific Plan Designations Map**, the project site has the following Kern County General Plan land use designations:

- Resource
  - Map Code 8.1 (Intensive Agriculture - minimum 20-acre parcel size)
  - Map Code 8.3 (Extensive Agriculture - minimum 20-acre parcel size)
- Environmental constraints overlay
  - Map Code 2.5 (Flood Hazard)

According to the Kern County General Plan, the Intensive Agriculture (minimum 20-acre parcel size) land use designation applies to areas devoted to the production of irrigated crops or having a potential for such use. Typical uses include irrigated cropland; orchards; vineyards; horse ranches; growing nursery stock

ornamental flowers and Christmas trees; fish farms; beekeeping; ranch and farm facilities and related uses; one single-family dwelling unit; cattle feed yards; dairies; dry land farming; livestock grazing; water storage; groundwater recharge areas; mineral, aggregate, and petroleum exploration and extraction; hunting clubs; wildlife preserves; farm labor housing; public utility uses; and agricultural industries. The minimum allowable parcel size in the Intensive Agriculture category is 20 acres gross.

The Extensive Agriculture (minimum 20-acre parcel size) land use designation applies to agricultural uses involving large amounts of land with relatively low value-per-acre yields. Typical uses include livestock grazing, farming, and woodlands. The minimum allowable parcel size in the Extensive Agriculture category is 20 acres gross.

The Flood Hazard land use designation is for land identified on the FIRM of the FEMA and floodplain delineating maps that have been approved by the Kern County Public Works Department – Floodplain Management Section as Special Flood Hazard Areas (Zone A).

Solar facilities are an allowable use within each of the General Plan designations listed above.

## Willow Springs Specific Plan

The Willow Springs Specific Plan (WSSP) was adopted in 1992. Its goals, policies, and standards are compatible with those of the General Plan but are tailored to the particular needs of the expanded Willow Springs area. The purpose of the WSSP is to define the planning requirements of a designated area to ensure orderly development. As shown in **Table 4.11-1** and **Figure 4.11-1**, *Existing General/Specific Plan Designations Map*, in **Chapter 3, Project Description**, in this EIR, the WSSP land use designations within the project site are as follows:

- Map Code 3.3 (Other Facilities)
- Map Code 5.3 (10 Dwelling Units per Gross Acre)
- Map Code 5.6 (2 1/2 Gross Acres per Dwelling Unit)
- Map Code 6.2 (General Commercial)

The Other Facilities land use designation applies to existing facilities used for public or semipublic services. According to WSSP Map Codes 5.1 through 5.8, land use designation distributes residential uses according to density designations. Each density category indicates the maximum density within the designation. Below are the residential land use designations within the project area.

- The Map Code 5.3 (10 Units per Gross Acre) land use designation applies to residential uses where the minimum allowable development is 10 dwelling units per gross acre.
- The Map Code 5.6 (2 1/2 Gross Acres per Dwelling Unit) land use designation applies to residential uses where the minimum allowable parcel size is 2.5 gross acres per dwelling unit.
- The Map Code 6.2 (General Commercial) land use designation is for areas devoted to retail and service facilities of less intensity than regional facilities, providing a broad range of goods and services that serve the day-to-day needs of nearby residents and neighborhoods.

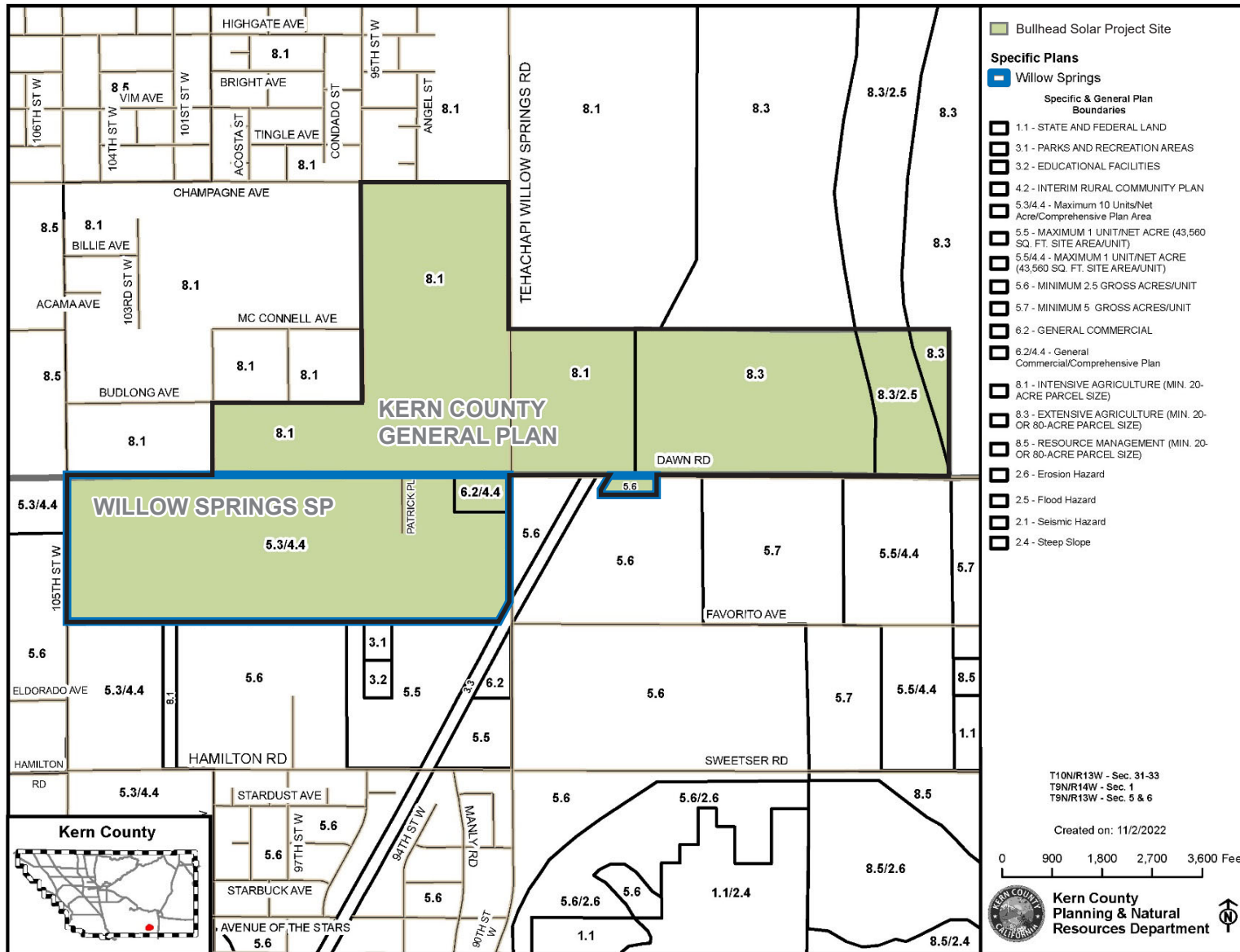


Figure 4.11-1: EXISTING GENERAL/SPECIFIC PLAN DESIGNATIONS MAP

## Kern County Zoning Ordinance

The zoning districts are defined in Title 19 of the Zoning Ordinance of Kern County. As shown in **Table 4.11-1** and **Figure 4.11-2**, *Existing Zoning Classifications Map*, the identified 22 parcels that make up the project site have a mix of zone-classifications, which include:

- Exclusive Agriculture (A) – The purpose of the 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. Solar facilities are allowed on land zoned for agricultural use with approval of a Conditional Use Permit in accordance with Section 19.12.030 of the Kern County Zoning Ordinance.
- Estate (E) - The purpose of the E District is to designate areas suitable for larger lot residential living environments. Uses are limited to those typical of and compatible with quiet residential neighborhoods.

## Surrounding Land Uses

The project site is generally bounded by Favorito Avenue to the south, Champagne Avenue to the north, 105th Street West and the BigBeau Solar Project to the west, and 80th Street West to the east. The project site is bisected by Tehachapi Willow Springs Road. Primary access to the project site is provided by SR-14 (Antelope Valley Freeway) on Rosamond Boulevard to Tehachapi Willow Springs Road. A secondary route to the site is from 120th Street West, heading north from Rosamond Boulevard

Areas surrounding the project site include undeveloped lands, rural residential, active and fallow agricultural lands, access roadways, the California aqueduct, high-voltage transmission line corridors, and solar and wind development uses to the north, south, east and west of the project site.

**North:** Existing land uses to the north of the project site include agricultural, vacant land, rural residential, and wind and solar development. Existing General/Specific Plan Map Code Designations include 8.1 (Intensive Agriculture); 8.3 (Extensive Agriculture 20 Acres); 8.3/2.5 (Extensive Agriculture 20-80 Acres, Flood Hazard Overlay); and 8.5 (Resource Management). Existing Zoning includes A (Exclusive Agriculture, Flood Plain); and PL (Platted Lands, Residential Suburban, Flood Plain).

**South:** Existing land uses to the south of the project site include agricultural, vacant land, and rural residential. Existing General/Specific Plan Map Code Designations include 1.1 (State and Federal Land); 3.1 (Parks and Recreation Areas); 3.2 (Educational Facilities); 5.5 (Residential-Maximum 1 Unit/Net Acre); 5.3/4.4 (Residential-Maximum 10 Units/Net Acre, Comprehensive Plan Area- WSSP); 5.6 (Residential, Min 2.5 Gross Acres/Unit); 5.7 (Residential-1 Unit/per 5 Acres); 6.2 (General Commercial); 8.1 (Intensive Agriculture); and 8.5 (Resource Management). Existing Zoning includes A (Exclusive Agriculture, Flood Plain Secondary); E (Estate 5 Acre, Residential Suburban Combining, Flood Plain Secondary); E (Estate 2 ½ Acre, Residential Suburban Combining, Flood Plain Secondary); E (Estate 2 ½ Acre, Residential Suburban Mobile Home Combining, Flood Plain Secondary); E (Estate 1 Acre, Residential Suburban Combining, Flood Plain Secondary); and OS (Open Space).

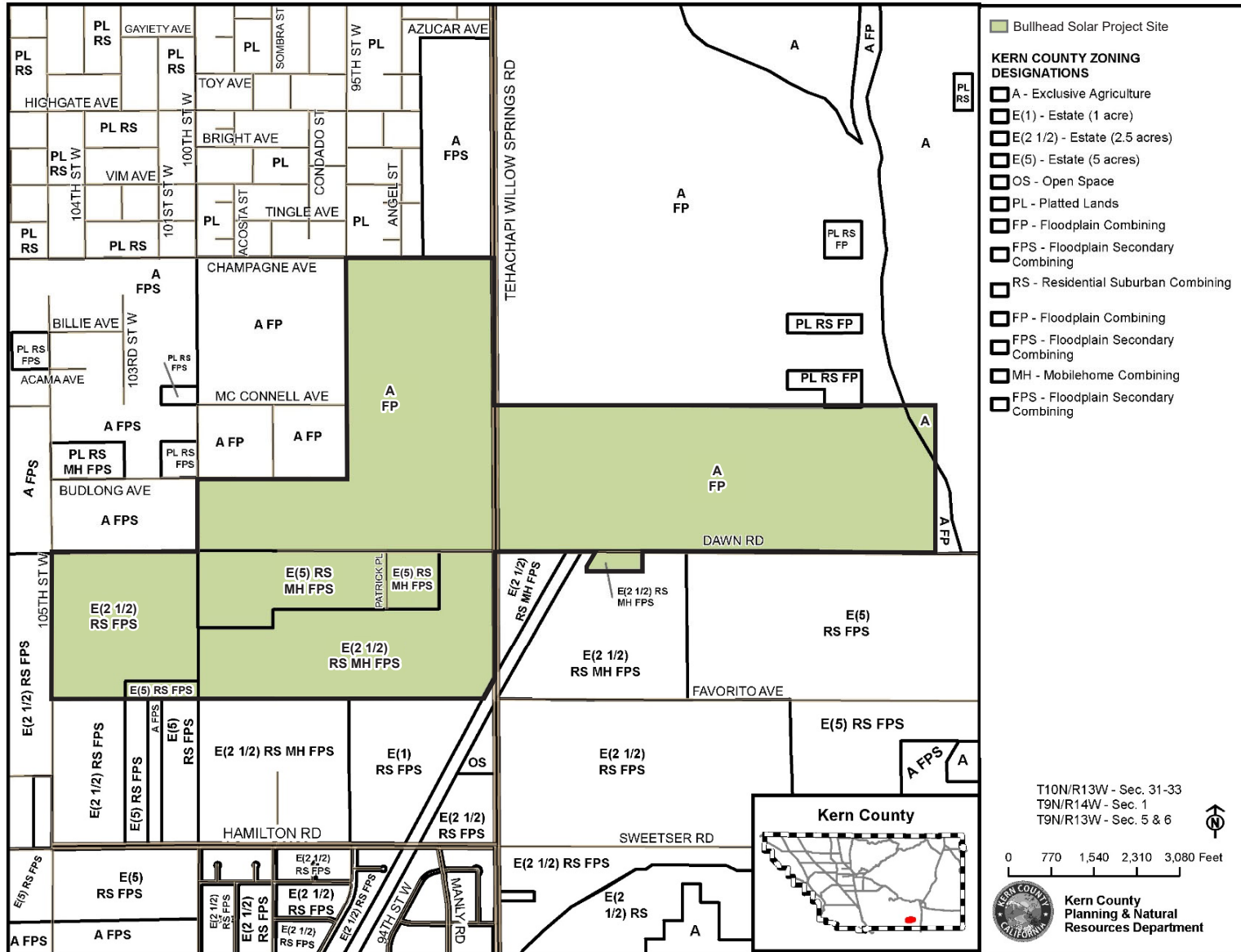


Figure 4.11-2: EXISTING ZONING CLASSIFICATIONS MAP

**East:** Existing land uses to the east of the project site include agricultural, vacant land, rural, residential, and solar development. Existing General/Specific Plan Map Code Designations include 8.3 (Extensive Agriculture, Flood Plain); 8.5 (Resource Management); and 5.7 (Residential-1 Unit/per 5 Acres). Existing Zoning includes A (Exclusive Agriculture); A (Exclusive Agriculture, Flood Plain); E (Estate 5 Acre, Residential Suburban Combining, Flood Plain Secondary); and E (Estate 2 ½ Acre, Residential Suburban Combining, Flood Plain Secondary).

**West:** Existing land uses to the west of the project site include solar and Wind Development. Existing General/Specific Plan Map Code Designations include 5.3/4.4 (Residential-Maximum 10 Units/Net Acre, Comprehensive Plan Area- WSSP); 5.6 (Residential, Min 2.5 Gross Acres/Unit); 5.7 (Residential-1 Unit/per 5 Acres); and 8.5 (Resource Management). Existing Zoning includes A (Exclusive Agriculture, Floodplain) and A (Exclusive Agriculture, Flood Plain Secondary).

### 4.11.3 Regulatory Setting

#### Federal and State

##### The Desert Renewable Energy Conservation Plan

The DRECP is a comprehensive plan that provides for renewable energy and transmission development projects and for the conservation of sensitive species and ecosystems in California's Mojave and Colorado/Sonoran deserts. It was prepared by the California Energy Commission (CEC), the California Department of Fish and Wildlife (CDFW), BLM, and the U.S. Fish and Wildlife Service in September 2014. The Commission manages approximately 340,533 acres of school lands.

Phase I of the DRECP was approved in September of 2016; as part of Phase I, the BLM has prepared a Record of Decision (ROD) approving its Land Use Plan Amendment (LUPA) to the California Desert Conservation Area (CDCA) Plan, and Bishop and Bakersfield Resource Management Plans (RMPs). The LUPA represents the public-lands component of the DRECP, identifying areas appropriate for renewable energy development, as well as areas important for biological, environmental, cultural, recreation, social, and scenic conservation, consistent with the FLPMA multiple use and sustained yield requirements. The amendments have been designed to result in an efficient and effective biological conservation and mitigation program providing renewable energy project developers with permit streamlining and cost containment while at the same time conserving, restoring, and enhancing natural communities and related ecosystems.

#### Local

Land use and planning decisions within and adjacent to the project site are guided and regulated by the Kern County General Plan, Willow Springs Specific Plan and Kern County Zoning Ordinance. The Kern County General Plan and Willow Springs Specific Plan contains goals, objectives, and policies and provides an overall foundation for establishing land use patterns. For this land use impact analysis, this section lists all relevant goals, objectives, policies, and implementation measures related to the proposed project. The Zoning Ordinance contains regulations through which the General Plan's provisions are implemented. The most relevant regulations pertaining to solar energy development are presented below.



## Kern County General Plan

The Kern County General Plan is a policy document designed to provide long-range guidance for planning decisions that affect the growth and resources of unincorporated Kern County. Included in the Kern County General Plan is the Land Use, Open Space, and Conservation Element, which provides for a variety of land uses for future economic growth while also assuring the conservation of Kern County's agricultural, natural, and resource attributes. Within the Land Use, Open Space and Conservation Element, policy areas are separated by overlay designations, known as "Map Codes", which are identified on the Kern County General Plan maps for each section of the County and include the following categories: (1) non-jurisdictional land (State and federal); (2) environmental constraints overlay; (3) public facilities; (4) non-jurisdictional land (accepted county plan areas, rural communities and specific plan required); (5) residential; (6) commercial; (7) industrial; and (8) resource. Each Map Code/overlay area contains specific goals, policies, and implementation measures to guide development within them.

As discussed above, the project site is located within both the Willow Springs Specific Plan and the Kern County General Plan and includes the following land use designations: 8.1 Intensive Agriculture; 8.3 (Extensive Agriculture); 8.3/ 2.5 (Extensive Agriculture Flood Hazard Overlay); 5.3/4.4, 5.5, 5.6, (Residential) Willow Springs Specific Plan; 6.2 (General Commercial) Willow Springs Specific Plan. Each Map Code/overlay area contains specific goals, policies, and implementation measures to guide development within them.

In addition to the Land Use, Open Space, and Conservation Element, the Kern County General Plan includes other elements related to circulation, noise, and energy. Each element establishes goals, policies, and implementation measures that guide planning decisions in unincorporated Kern County. The goals, policies, and implementation measures relevant to the proposed project are listed below.

### ***1. Land Use, Open Space, and Conservation Element***

#### **1.3 Physical and Environmental Constraints**

##### ***Goal***

Goal 1: To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

##### ***Policies***

Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained ((Map Code 2.1 (Seismic Hazard), Map Code 2.2 (Landslide), Map Code 2.3 (Shallow Groundwater), Map Code 2.5 (Flood Hazard), Map Codes from 2.6 – 2.9, Map Code 2.10 (Nearby Waste Facility), and Map Code 2.11 (Burn Dump Hazard)) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.

Policy 3: Zoning and other land use controls will be used to regulate, and prohibit, if necessary, future development when physical hazards exist.

- Policy 9: Construction of structures that impede water flow in a primary floodplain will be discouraged.
- Policy 10: The County will allow lands which are within flood hazard areas, other than primary floodplains, to be developed in accordance with the General Plan and Floodplain Management Ordinance, if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous within the requirements of the Safety Element (Chapter 4) of this General Plan.
- Policy 11: Protect and maintain watershed integrity within Kern County.

### ***Implementation Measures***

- Measure D: Review and revise the County's current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.
- Measure F: The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.
- Measure H: Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.
- Measure J: Compliance with the Floodplain Management Ordinance prior to grading or improvement of land for development or the construction, expansion, conversion or substantial improvements of a structure is required.
- Measure N: Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

## **1.4 Public Facilities and Services**

### ***Goals***

- Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.
- Goal 5: Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.

### ***Policies***

- Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.

- Policy 6: The County will ensure adequate fire protection to all Kern County residents.
- Policy 7: The County will ensure adequate police protection to all Kern County residents.
- Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the CEQA documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

### ***Implementation Measures***

- Measure B: Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the site of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.
- Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.
- Measure D: Involve utility providers in the land use and zoning review process.
- Measure J: Ensure that the Superintendent of Schools and the respective school districts are informed of development proposals and are afforded the opportunity of evaluating their potential effect on the physical capacity of school facilities.
- Measure L: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.

## **1.8 Industrial Policies**

### ***Policies***

- Policy 6: Encourage upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering.
- Policy 7: Require that industrial uses provide design features such as screen walls, landscaping, increased heights or setbacks, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to light, noise, sound, and vibration.

## **1.9 Resource**

### ***Goals***

- Goal 1: To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.
- Goal 3: To ensure that the development of resource areas minimizes effects of neighboring resource lands.

- Goal 5: Conserve prime agricultural lands from premature conversion.
- Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

***Policies***

- Policy 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.
- Policy 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.
- Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.
- Policy 12: Areas identified by the Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service) as having high range-site value should be conserved for Extensive Agriculture uses or as Resource Reserve, if located within a County water district.

***Implementation Measures***

- 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.

**1.10 General Provisions*****Goal***

- Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

**1.10.1 Public Services and Facilities*****Policies***

- Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.
- Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

### ***Implementation Measures***

Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.

Measure D: Involve utility providers in the land use and zoning review process.

Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the County's Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.

## **1.10.2 Air Quality**

### ***Policies***

Policy 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.

Policy 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:

- (1) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
- (2) 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.

Policy 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.

Policy 21: The County shall support air districts efforts to reduce PM10 and PM2.5 emissions.

Policy 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.

***Implementation Measures***

Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.

Measure 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.

Measure 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.

Measure J: The County should include PM10 control measures as conditions of approval for subdivision maps, site plans, and grading permits.

**1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation**

***Policy***

Policy 25: The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.

***Implementation Measures***

Measure K: Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.

- Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.
- Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.
- Measure N: The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.
- Measure O: On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

### **1.10.5 Threatened and Endangered Species**

#### ***Policies***

- Policy 27: Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.
- Policy 28: County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.
- Policy 29: The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
- Policy 31: Under the provisions of the California Environmental Quality Act, the County, as lead agency, will solicit comments from the California Department of Fish and Game and the U.S. Fish and Wildlife Service when an environmental document is prepared.
- Policy 32: Riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

#### ***Implementation Measures***

- Measure Q: Discretionary projects shall consider effects to biological resources as required by CEQA.
- Measure R: Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.

### **1.10.6 Surface Water and Groundwater**

#### ***Policies***

- Policy 34: Ensure that water quality standards are met for existing users and future development.
- Policy 41: Review development proposals to ensure adequate water is available to accommodate projected growth.

- Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.
- Policy 44: Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.

#### ***Implementation Measure***

- Measure Y: Promote efficient water use by utilizing measures such as: (i) Requiring water-conserving design and equipment in new construction; (ii) Encouraging water-conserving landscaping and irrigation methods; and (iii) Encouraging the retrofitting of existing development with water conserving devices.

### **1.10.7. Light and Glare**

#### ***Policies***

- Policy 47: Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.
- Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.

#### ***Implementation Measure***

- Measure AA: The County shall utilize *CEQA Guidelines* and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.

## ***Chapter 2. Circulation Element***

### **2.1 Introduction**

#### ***Goals***

- Goal 4: Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.
- Goal 5: Maintain a minimum [level of service] LOS D for all roads throughout the County.

### **2.3.3 Highway Plan**

#### ***Goals***

- Goal 5: Maintain a minimum Level of Service (LOS) D.



**Policies**

Policy 1: Development of roads within the County shall be in accordance with the Circulation Diagram Map. The charted roads are usually on section and mid-section lines. This is because the road center line can be determined by an existing survey.

Policy 3: This plan's road-width standards are listed below. These standards do not include state highway widths that would require additional right-of-way for rail transit, bike lanes, and other modes of transportation. Kern County shall consider these modifications on a case-by-case basis.

- Expressway [Four Travel Lanes] Minimum 110-foot right-of-way;
- Arterial [Major Highway] Minimum 110-foot right-of-way;
- Collector [Secondary Highway] Minimum 90-foot right-of-way;
- Commercial-Industrial Street Minimum 60-foot right-of-way; and
- Local Street [Select Local Road] Minimum 60-foot right-of-way.

**Implementation Measure**

Measure A: The Planning Department shall carry out the road network Policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which implements the Kern County Development Standards that includes road standards related to urban and rural planning requirements. These ordinances also regulate access points. Planning Department can help developers and property owners in identifying where planned circulation is to occur.

**2.3.4 Future Growth****Goal**

Goal 1: To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.

**Policies**

Policy 2: The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below Level of Service (LOS) D. Utilization of the CEQA process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.

Policy 4: As a condition of private development approval, developers shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along State routes are necessary then roads shall be built to Caltrans standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved

Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.

Policy 5: When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.

Policy 6: The County may accept a developer's road into the county's maintained road system. This is at Kern County's discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.

### ***Implementation Measure***

Measure C: Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards. 2.3.6 Vacation of Existing or Recorded Future Streets, Highways, or Public Easements.

## **2.3.6 Vacation of Existing or Recorded Future Streets, Highways, or Public Easements**

### ***Goal***

Goal 1: Provide a means for guiding decisions on vacating public roads.

### ***Policies***

Policy 1: A road vacation influencing the construction or operation of expressway, an arterials or collector highway may occur with, or after, amending this Element. Kern County will not vacate any public expressway, arterial or collector highway right-of-way without amendment to this Element. The County will need to amend the right-of way status to local or commercial-industrial streets.

Policy 2: A study, prepared at the applicant's expense, shall accompany the road vacation application. The study should provide information that will aid in finding the importance of the entire length of the right-of-way. The study would include a review of existing and proposed land uses and localized traffic modeling. This will help Kern County decide what corresponding changes are needed to the Land Use, Open Space and Conservation Element, or affected specific plan. This also will help Kern County decide if additional public road services or other traffic management are required elsewhere.

Policy 3: If the road vacation applicant is a private entity, all costs for the public hearing shall be borne by the applicant. Also, costs associated with providing any necessary additional public road services or other traffic management caused by the road vacation shall be paid by the applicant.

Policy 4: The vacation of a road shall not take away legal access to adjacent properties or "land-lock" any legal lot or parcel of record. Legal access shall be determined through a report submitted with the application for road vacation.

Policy 5: If Kern County determines that the right-of-way is not needed for circulation in the general area, a road vacation may be authorized. An acceptable project shall be determined through

a report submitted with the road vacation application and in keeping with traffic modeling parameters of this Plan.

- Policy 6: A road vacation may be authorized if physical conditions such as natural, or manmade topography prevent rational extension of the facility. Physical conditions affecting roadways shall be determined through a report submitted with the road vacation application.
- Policy 7: A road vacation shall only affect public, recorded rights-of-way or public service easements. The potential effects of a road vacation upon rights-of-way and easements are to be determined by a report submitted with the road vacation application. A vacation of private access or private service easement is not under County jurisdiction. Kern County considers these matters "civil" actions. These civil actions should be acted upon accordingly.
- Policy 8: A road vacation may be authorized if the right-of-way is not improved or used for its original purpose. Existing improvements and facility use shall be determined by a report submitted with the road vacation application.
- Policy 9: A road vacation may be authorized to remove excess right-of-way caused by relocation, or at the beginning of a general plan amendment proceeding. Excess right-of-way shall be determined through a report submitted with the road vacation application.
- Policy 10: A road vacation may be approved if there is an agreement to close a public street. A road vacation may be approved with acknowledgment of an impassable street. A road vacation may be approved with a land division map over the area of vacation if the project has comparable methods of vehicular access.
- Policy 11: A road vacation procedure may be used for considering public service easement or utility service easement abandonments. The procedure is the same as any public right-of-way vacation.
- Policy 12: A vacation of improved road right-of-way, or public service easement, should not occur until the lead agency makes findings. One important finding is the land is no longer needed for public use. A vacation of improved road right-of-way, or public service easement, should not occur until the right-of-way is superseded by relocation, and improved to acceptable Kern County Development standards. The Board of Supervisors shall have accepted the replacement facility into the maintained road system.
- Policy 13: A general vacation proceeding (consistent with State of California Streets and Highway Code) will require a public hearing when the vacation affects existing in place facilities or is a project caused by relocating right-of-way.
- Policy 14: A summary vacation shall be consistent with State of California Streets and Highway Code. A summary vacation may be used when the right-of-way does not exist, is unused, or moved. A summary vacation may be used where right-of-way is impassable, unnecessary for present or prospective public use, or is excess or public service easement land.

### **2.3.10 Congestion Management Programs**

State law requires that urbanized counties (including Kern County) prepare an annual congestion management program (CMP). City and county eligibility for new gas tax subventions is contingent upon

their participation in the congestion management program. To qualify for funding provided through the State Transportation Improvement Program (STIP) or the Federal Transportation Improvement Program (FTIP), the regional transportation agency must keep current a Regional Transportation Program (RTP) that contains the CMP. Also, the CMP offers local jurisdictions the opportunity to find cooperative solutions to the multi-jurisdictional problems of air pollution and traffic congestion.

The CMP has links with air quality requirements. The California Clean Air Act requires that cities and counties implement transportation control measures (TCMs) to attain, and maintain, the State air quality standard.

### **Goals**

Goal 1: To satisfy the trip reduction and travel demand requirements of the Kern Council of Government's Congestion Management Program.

### **2.5.1 Trucks and Highways**

The Kern County road network handles a high ratio of heavy truck traffic. State highways carry most of this traffic. Most of the trucks are interstate carriers. As such, interstate trucking is not under the direct control of County officials. In as much as this traffic affects County residents and taxpayers, they need actions to guarantee State highways in Kern County receive a fair share of California's transportation investment.

### **Goals**

Goal 1: Provide for Kern County's heavy truck transportation in the safest way possible.

Goal 2: Reduce potential overweight trucks.

Goal 3: Use State Highway System improvements to prevent truck traffic in neighborhoods.

### **Policies**

Policy 1: Caltrans should be made aware of the heavy truck activity on Kern County's roads.

### **2.5.4 Transportation of Hazardous Materials**

#### **Goal**

Goal 1: Reduce risk to public health from transportation of hazardous materials.

#### **Policy**

Policy 1: The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.

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## **Chapter 3. Noise Element**

### **3.3 Sensitive Noise Areas**

#### **Goals**

- Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.
- Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.

#### **Policies**

- Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.
- Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise
- Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.
- Policy 7: Employ the best available methods of noise control.

#### **Implementation Measures**

- Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.
- Measure C: Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.
- Measure F: Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB  $L_{dn}$  and interior noise levels in excess of 45 dB  $L_{dn}$ .
- Measure G: At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:
- a) Be the responsibility of the applicant.
  - b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
  - c) Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.

- Measure I: Noise analyses shall include recommended mitigation, if required, and shall:
- a) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
  - b) Include estimated noise levels, in terms of CNEL, for existing and projected future (10 – 20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
  - c) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
  - d) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.
- Measure J: Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.

## ***Chapter 4. Safety Element***

### **4.1 Introduction**

#### ***Goal***

- Goal 1: Minimize injuries and loss of life and reduce property damage.

### **4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint**

#### ***Implementation Measures***

- Measure A: All hazards (geologic, fire, and flood) should be considered whenever a Planning Commission or Board of Supervisor’s action could involve the establishment of a land use activity susceptible to such hazards.
- Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

### **4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure**

#### ***Policy***

- Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

***Implementation Measure***

- Measure B: Require geological and soils engineering investigations in identified significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.
- Measure C: The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible in accordance with State and County regulations.

**4.5 Landslides, Subsidence, Seiche, and Liquefaction*****Policies***

- Policy 3: Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

**4.6 Wildland and Urban Fire*****Policies***

- Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.
- Policy 3: The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.
- Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- Policy 6: All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

***Implementation Measures***

- Measure A: Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

**4.9 Hazardous Materials*****Implementation Measure***

- Measure A: Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.

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## **Chapter 5. Energy Element**

### **5.2 Importance of Energy to Kern County**

#### ***Policies***

- Policy 8: The County should work closely with local, state, and federal agencies to assure that energy projects (both discretionary and ministerial) avoid or minimize direct impacts to fish, wildlife, and botanical resources, wherever practical.
- Policy 10: The County should require acoustical analysis for energy project proposals that might impact sensitive and highly-sensitive uses in accordance with the Noise Element of the General Plan.

### **5.4.5 Solar Energy Development**

#### ***Goal***

- Goal 1: Encourage safe and orderly commercial solar development.

#### ***Policies***

- Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.
- Policy 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.
- Policy 4: The County shall encourage solar development in the desert and valley regions previously disturbed, and discourage the development of energy projects on undisturbed land supporting state or federally protected plant and wildlife species.

### **5.4.7 Transmission Lines**

#### ***Goal***

- Goal 1: To encourage the safe and orderly development of transmission lines to access Kern County's electrical resources along routes, which minimize potential adverse environmental effects.

#### ***Policy***

- Policy 5: The County should discourage the siting of above-ground transmission lines in visually sensitive areas.

## **Willow Springs Specific Plan**

The proposed project is subject to the provisions of the Willow Springs Specific Plan. The Willow Springs Specific Plan was adopted in April 2008 and contains goals, policies, and standards that are compatible with those in the Kern County General Plan but are unique to the specific needs of the Willow Springs



Area. The boundary of the Willow Springs Specific Plan was determined by various requests for residential, commercial, and industrial land uses and resulted in an expansion of the original plan by an area of 5,760 acres. The result was a Specific Plan area encompassing 50,560 acres. This project is the largest Specific Plan area in Kern County. Included in the Willow Springs Specific Plan is the Land Use, Circulation, Housing, Noise, Seismic Safety and Safety Element, Scenic Highways Element, and Open Space and Conservation. Within the Land Use Element, the Willow Springs Specific Plan includes sections for generalized land use designations, which include non-jurisdictional, physical constraints, public facilities, special treatment areas, residential, commercial, industrial, and resource.

Each element establishes goals, policies, and implementation measures that guide planning decisions in the Willow Springs Specific Plan area. The goals, policies, and implementation measures relevant to the proposed project are listed below.

### ***Land Use Element***

#### ***Policies***

- Policy 2: Encourage only those industries that do not significantly increase air pollution levels.
- Policy 5: Encourage the maintenance of visual aesthetics in all new construction.
- Policy 6: Require developers to clean up any identified hazardous waste sites prior to submittal of any land division or development project.
- Policy 8: New and/or existing developments shall comply with the Kern County Zoning Ordinance and this Specific Plan. Where conflicts appear, the more restrictive requirements shall prevail.
- Policy 10: Require that construction sites be provided with a soil retardant measure approved by the County of Kern (Department of Planning and Development Services and the Environmental Health Services Department) to reduce fugitive dust or blowing sand.
- Policy 11: Retain vegetation until actual construction begins.

#### ***Resource***

##### ***Goal***

- Goal 3: Encourage retention of productive agricultural and dormant mineral resources by imposing a restriction on allowing urban type land uses on nearby adjacent lands.

##### ***Policies***

- Policy 1: Provide a method encouraging the preservation of agricultural land.
- Policy 2: Initial development within the Update area shall, when possible, be directed towards previously impacted areas (i.e., agricultural fields).
- Policy 3: To ensure compliance with applicable State and federal laws and to protect the biological resources present in the Specific Plan area.

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**Mitigation/Implementation Measures**

- Measure 15: Where possible, project development within the Specific Plan Update area shall be designed to avoid displacement or destruction of Joshua tree habitat, to the satisfaction of the Kern County Agricultural Commissioner's Office. Areas adjacent to the woodland shall have a 50-foot setback from the Joshua tree plants. Within that setback, a native plant cover should be restored to natural habitat values to serve as a bugger, if such plant cover is not present.
- Measure 16: A Joshua Tree Preservation and Transportation Plan shall be developed by the applicants for each parcel where Joshua trees are located on site. The plan shall be submitted to the Kern County Agricultural Commissioner's office for review and approval to grading permit issuance.
- Measure 23: A Joshua Tree Preservation and/or Transplantation Plan shall be developed by applicants of discretionary projects for each parcel where Joshua trees are located on site. The plan shall be submitted to the Kern County Agricultural Commissioner for review and approval prior to grading permit issuance.
- Measure 24: Prior to issuance of any grading permits for individual projects, individual project applicants shall consult with the Regional Water Quality Control Board, State Department of Fish and Game and/or U.S. Fish and Wildlife Service, and the Army Corps of Engineers to identify potentially required permits. Compliance with this measure will be confirmed through the submittal of a letter (in conjunction with submittal of grading permit applications) to the County demonstrating compliance with the above-mentioned agencies.
- Measure 25: Prior to issuance of grading permits, individual project applicants shall obtain appropriate permits as determined necessary by the Regional Water Quality Control Board, U.S. Fish and Wildlife Service, State Department of Fish and Game, and Army Corps of Engineers.

**Air Quality Element****Goal**

- Goal 1: Imposition of appropriate mitigation measures to reduce where practical to do so, the effect short-term and long-term projects have on the area which involve grading activities, erosion controls, revegetation of disturbed sites, and provisions to introduce into the plan area a competitive job market to reduce travel times.

**Policy**

- Policy 1: Compliance with the Mitigation/Implementation Measures and enactment of an approved Air Quality Attainment Plan.

**Mitigation/Implementation Measures**

- Measure 1: To mitigate potential dust generation impacts, the Willow Springs Specific Plan Update project shall comply with applicable County regulations (to the satisfaction of the Kern County Air Pollution Control District), which require specific dust control measures.

- Measure 2: During construction, all grading activities shall be ceased during periods of high winds (i.e., greater than 30 miles per hour [mph]). To assure compliance with this measure, grading activities are subject to periodic inspections by County staff.
- Measure 3: Construction equipment shall be fitted with the most modern emission control devices and be kept in proper tune. Motors out of proper tune can result in emissions that vastly exceed recommended standards.
- Measure 4: The project applicants shall, to the extent feasible, implement applicable control measures contained in the Attainment Plan in effect at the time of adoption of this Specific Plan, by the Air Pollution Control District in 1991. (See Environmental Impact Report Air Quality for additional recommended mitigation measures, page 162.).
- Measure 7: All phases of the Willow Springs Specific Plan Update project shall comply with applicable rules and regulations of the Kern County Air Pollution Control District.

### ***Biological Resources***

#### ***Policies***

- Policy 1: Where possible, development shall be designated to avoid displacement of sensitive species.
- Policy 2: Focused surveys shall be conducted by a County-approved biologist to establish the presence or absence of sensitive species.
- Policy 3: Initial development within the area covered under the Willow Springs Specific Plan, when possible, will be directed towards previously impacted areas.

### ***Cultural Resources***

#### ***Goal***

- Goal 1: To preserve cultural resources contained on sensitive sites located within the Willow Springs Specific Plan area.

#### ***Policies***

- Policy 1: Archaeological investigations shall be required of specific properties proposed for development. These sites are identified in the Environmental Impact Report under Cultural Resources – Literature and Records Search, page 77, and are listed as: CA-KER-2819, 2820, 2821; CA-KER-522, 1969, 2592, 2593, 2599, 2595 and 2714; CA-KER-129, 273, 298, 302, 303. (Record on file Southern San Joaquin Valley Information Center in Bakersfield – California State University of Bakersfield. (2)
- Policy 2: Recorded archaeological sites shall be subjected to individual studies prior to development.
- Policy 15: Require cultural resources report for those areas with high probability for prehistoric activity prior to issuance of any grading permits.

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## ***Seismic Safety and Safety Element***

### ***Goals***

- Goal 7: Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone, and sewer lines, streets, and bridges located in areas of special flood hazard.
- Goal 9: Comply with the requirements of the National Flood Insurance Program Regulations, Parts 59 and 60 of Title 44 of the Code of Federal Regulations.
- Goal 15: To protect community residents from undue hazards and costs associated with road maintenance, slope instability, improper drainage, and inadequate sewage treatment.

### ***Policies***

- Policy 1: New development within the 100-year floodplain shall be regulated in accordance with the Floodplain Management Section of the Department of Planning and Development Services according to the Flood Damage Prevention Ordinance, the Kern Land Division Ordinance, and the Kern County Zoning Ordinance as may be amended from time to time.
- Policy 7: Compliance with site-specific issues, goals, policies, and implementation measures contained in the Seismic/Safety Element of the Kern County General Plan.
- Policy 9: All new construction in the plan area shall comply with Chapter 23 of the Uniform Building Code (UBC), which includes building pad and foundation design standards for structures in UBC Seismic Zone IV.

### ***Mitigation/Implementation Measures***

- Measure 3: Areas within the 100-year floodplain shall be zoned with the appropriate FPP, FP, or FPS designation.
- Measure 4: New development within the 100-year floodplain shall be regulated in accordance with the Flood Damage Prevention Ordinance and the Kern County Zoning Ordinance as they may be amended from time to time.
- Measure 24: In order to combat the stormwater pollution created by the various land uses the following source control mitigation measures are required:
- a) Periodic cleaning (i.e., street sweeping) of paved areas to remove small particle size sediments with absorbed pollutants caused by uses of the area.
  - b) Utilize established Best Management Practices (BMPs) for small on-site control of urban runoff water quality. These measures include infiltration trenches, infiltration basins, water quality inlets, vegetative biofilter, grass swales, and porous pavement.

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## ***Public Facilities Element***

### ***Goal***

Goal 3: To restrict, if possible, any further and/or unnecessary drawdown of the water table within the plan area.

### ***Policies***

Policy 2: In evaluating a development application, Kern County will consider both its physical and fiscal impact on the local school district and other public facilities. If it is found that the district or facilities involved will, as a result, require additional facilities or incur costs requiring additional local revenues, the development project will be required as a condition of approval to contribute funds to the district for the costs directly attributable to the project.

Policy 4: New development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.

### ***Mitigation/Implementation Measures***

Measure 6: The siting and establishment of solid waste transfer stations, landfills, recycling center, and cleanup programs shall be in accordance with Kern County's Solid Waste Management Plan.

Measure 10: New development shall contribute its pro rata share for circulation improvements, school impact fees, park land dedications/fees, and possible biota impact fees. As additional impact fees are adopted, they shall be incorporated into the Specific Plan text.

Measure 11: The school district, along with the developer, shall provide Kern County with an alternative funding method, should an alternative be submitted with an impending development.

Measure 21: The projects shall comply with all applicable Kern County code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.

Measure 24: Consideration shall be given to implementation of the following measure to reduce the impacts associated with solid waste generation:

- a) Compacting refuse would substantially reduce the number of refuse hauling trips and allow for more effective and sanitary disposal.
- b) Each project applicant shall comply with guidelines set forth by Kern County in accordance with AB 939 which mandates recycling programs for each jurisdiction in California and shall agree to be subject to universal collection for one- to four-unit residential projects and commercial.
- c) Where feasible, a community recycling center should be implemented to provide convenient recycling opportunities.
- d) Studies shall be conducted by Kern County prior to issuance of building permits, to determine a feasible location for an alternate landfill upon reaching capacity at Mojave-Rosamond concurrent with development approvals. County should initiate studies to site alternative landfill.

- e) Each project applicant shall comply with guidelines set forth by Kern County in accordance with AB 939 which mandates recycling programs for each jurisdiction in California and shall agree to be subject to universal collection for one- to four-unit residential projects and commercial.

Measure 25: The applicants are subject to school assessment fees pursuant to AB 2926.

### **Noise Element**

#### **Goals**

- Goal 2: To minimize disruption to the quality of life resulting from excessive noise.
- Goal 3: To maintain reasonable noise level standards, consistent with the Kern County Noise Element.

#### **Policies**

- Policy 1: Noise emissions from new development will be controlled and off-site levels limited to the standards of the Kern County General Plan Noise Element.
- Policy 3: Land uses will be categorized in the following manner, and the noise level standards adopted in accordance with the Kern County Noise Element:
- **Sensitive Land Uses.** Noise level does not affect the successful operation of these particular activities. A wide variety of uses can be included in this category, including public utilities, transportation systems, and other noise-related uses.
  - **Moderately Sensitive Land Uses.** Some degree of noise control must be present if these activities are to be successfully carried out. Included here are general business and recreational uses.
  - **Sensitive Uses.** Lack of noise control will severely impact these uses, reducing the quality of life. This category primarily contains residential uses.
  - **Highly Sensitive Uses.** A high degree of noise control is necessary for the successful operation of these activities. Examples include hospitals and churches.

#### **Mitigation/Implementation Measures**

- Measure 2: The implementation measures of the Kern County Noise Element are hereby adopted by reference.

### **Circulation Element**

#### **Goals**

- Goal 5: To maintain public safety within the plan area by providing a more direct and efficient circulation system for law enforcement and fire protection vehicles.
- Goal 7: To provide an adequate circulation system which will support the proposed land uses.

**Policies**

Policy 7: Require the widening of impacted roadways to handle increased traffic generated by new development.

Policy 8: Encourage resourceful air quality improvement and reduction methods.

**Mitigation/Implementation Measures**

Measure 9: A traffic study in accordance with the requirements of Kern County and Caltrans, as appropriate, shall be submitted for all discretionary projects. Study shall demonstrate consistency with the Willow Springs Specific Plan.

Measure 13: The Traffic Impact Fee Program implements Mitigation Measure 10 of the Willow Springs Final Environmental Impact Report (EIR).

**Water Quality and Availability****Goal**

Goal 1: To ensure that new developments are provided with an adequate water supply and wastewater disposal/treatment facilities.

**Policies**

Policy 1: Water supply method and wastewater disposal/treatment facility shall be as required by Kern County.

Policy 2: Separate environmental documentation shall be required for the methods of water supply and wastewater disposal/treatment selected.

**Mitigation/Implementation Measures**

Measure 4: The individual project applicants shall adhere to the following guidelines as established by the Department of Water Resources for flood damage prevention:

**General Provision****Goal**

Goal 9: Fire flow provisions and on-site fire protection standards (i.e., sprinklers/water storage) shall be in compliance with minimum standards provided by the Kern County Fire Department.

**Kern County Zoning Ordinance**

Title 19 of the Kern County Ordinance provides a description of permitted uses for the various zoning classifications within the County. The Zoning Ordinance consists of two primary parts: a Zoning Map that delineates the boundaries of zoning districts; and a Zoning Code that explains the purpose of the districts, specifies permitted and conditional uses, and establishes development and performance standards. The intent of the Zoning Code is to protect public health, safety, and the general welfare of residents and visitors

in the County. Together with the Zoning Map, the Zoning Code identifies the particular uses permitted on each parcel of land in the County and sets forth regulations and standards for development to ensure that the policies, goals, and objectives of the General Plan are implemented. In addition to land use regulations, the Zoning Code contains development standards that can lessen a new structure's impacts on a location or area. These standards control the height, setbacks, parking, lot coverage, gross floor area, etc. for new structures. The Zoning Code also regulates which uses are permitted in each of the County's zoning districts to ensure compatibility between land uses.

## Regional Transportation Plan

The Kern County Council of Governments adopted the *2022 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS)* on July 21, 2022. The RTP is updated every four years and serves as a blueprint for the region's transportation system, encompassing various modes including freight, intermodal, and aviation. Included in the 2022 RTP is the Sustainable Communities Strategy (SCS) required by California's Sustainable Communities and Climate Protection Act, of Senate Bill (SB) 375. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing needs Allocation (RHNA) ensuring consistency between low-income housing need and transportation planning. The SCS is included to specifically address emissions reductions from passenger vehicle travel, including 9 percent per capita reductions by 2020 and 15 percent per capita by 2035, compared to baseline year 2005. The plan contains seven core goals.

1. Mobility—Improve the mobility of people and freight.
2. Accessibility—Improve accessibility to, and the economic wellbeing of, major employment and other regional activity centers.
3. Reliability—Improve the reliability and safety of the transportation system.
4. Efficiency—Maximize the efficiency and cost effectiveness of the existing and future transportation system.
5. Livability/Quality of Life—Promote livable communities and satisfaction of consumers with the transportation system.
6. Sustainability—Provide for the enhancement and expansion of the system, while minimizing effects on the environment.
7. Equity—Ensure an equitable distribution of the benefits among various demographics and user groups.

## Kern County's Solid Waste Management Plan

The Solid Waste Management Plan is a comprehensive guide for all solid waste management activities in the County. The plan identifies the existing solid waste generation and disposal facilities in Kern County, estimates future solid waste disposal demand, and identifies programs to meet this future need.



## Kern County and Incorporated Cities Hazardous Waste Management Plan

The Kern County and Incorporated Cities Hazardous Waste Management Plan focuses on the siting of hazardous waste disposal facilities, the transport of hazardous waste in the County, protection of water resources from hazardous waste contamination, and public education concerning the use and disposal of hazardous waste.

### 4.11.4 Impacts and Mitigation Measures

#### Methodology

The potential impacts associated with the proposed project are evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses, in consideration of the applicable planning goals identified above. Compliance with the aforementioned policies is illustrated in consistency tables provided in the project Impacts section below. The change in the land use on the project site is significant if the proposed project results in the effects described in the thresholds of significance below. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

#### 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 on land use.

A project could have a have a significant adverse effect on land use if the project would:

- a. Physically divide an established community; or
- b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

#### Project Impacts

##### **Impact 4.11-1: The project would cause a significant environmental impact due to physically dividing an established community.**

The proposed project would be developed on primarily open desert land, and active or fallow agricultural land. The project site is approximately 8 miles northwest of the community of Rosamond, and 2 miles north of the community of Willow Springs. Areas surrounding the project site include undeveloped lands, rural residential, active and fallow agricultural lands, access roadways, the California aqueduct, high-voltage transmission line corridors, and solar and wind development uses to the north, south, east and west of the project site. There are no communities immediately adjacent to the project site. The proposed project is not anticipated to physically divide or restrict access to the Community of Willow Springs or any other

community. Therefore, impacts related to the physical division of an established community would be less than significant.

### ***Mitigation Measures***

No mitigation would be required.

### ***Level of Significance***

Impacts would be less than significant.

### **Impact 4.11-2: The project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.**

The Kern County General Plan, Willow Springs Specific Plan, and the Kern County Zoning Ordinance establish land use policies and regulations that are applicable to the proposed project. The following discussion evaluates the proposed project's consistency with these plans, policies and regulations for which the County has jurisdiction. The proposed project would require approval of Amendments to the Land Use Element of the Willow Springs Specific Plan, approval of Amendments to the Circulation Element of both the Kern County General Plan and the Willow Springs Specific Plan, approval of Changes in Zone Classification and approval of Conditional Use Permits for the project site.

The proposed project would use high-efficiency commercially available solar PV modules that are Underwriters Laboratory (UL) listed or approved by another nationally recognized testing laboratory. Materials commonly used for solar PV modules include monocrystalline silicon, polycrystalline silicon, amorphous silicon, cadmium telluride (CdTe), and copper indium selenide/sulfide. As stated above, the proposed project would generate up to 270 MW of renewable electrical energy with a BESS capable of storing approximately 270 MW, or 1,080 MWh of storage capacity. The proposed project includes PV panels, inverters, converters, generators, foundations, transformers, and preferred and optional gen-tie routes to the Rosamond and Whirlwind Substations, only one of which would be constructed. The project also includes laydown yards, a meteorological station, a microwave/ communication tower, and a substation. The proposed project site would develop modules using either fixed tilt or tracker technology.

### ***Kern County General Plan and Willow Springs Specific Plan***

The proposed project would require approval of Amendments to the Land Use Element of the Willow Springs Specific Plan, approval of Amendments to the Circulation Element of both the Kern County General Plan and the Willow Springs Specific Plan.

- Amendments to the Land Use Element of the Willow Springs Specific Plan as follows (See **Table 4.11-2, Project Assessor Parcel Numbers (APNs), Acreage, Existing and Proposed Map Codes Designations and Zone Classifications** and **Figure 4.11-3, Proposed General/Specific Plan Designations Map**):
  - Specific Plan Amendment No. 43, Map No. 231 from Map Code 5.3/4.4 (Maximum 10 Units per Net Acre/Comprehensive Planning Area) to Map Code 5.3 (Maximum 10 Units per Net Acre) on approximately 288 acres, and from Map Code 6.2/4.4 (General

- Commercial/Comprehensive Planning Area) to Map Code 6.2 (General Commercial) on approximately 15 acres; and
- Specific Plan Amendment No. 35, Map No. 232 from Map Code 5.3/4.4 (Maximum 10 Units per Net Acre/Comprehensive Planning Area) to Map Code 5.3 (Maximum 10 Units per Net Acre) on approximately 160 acres;
  - Amendment to the Circulation Element of the Kern County General Plan as follows (See **Figure 4.11-4, Proposed Kern County General Plan and Willow Springs Specific Plan Circulation Map**):
    - General Plan Amendment No. 8, Map No. 214 to remove future road reservations on section and mid-section lines within the project boundaries of Sections 31, 32, and 33 of Township 10 North, Range 13 West, (SBB&M);
  - Amendments to the Circulation Element of the Willow Springs Specific Plan as follows (See **Figure 4.11-4, Proposed Kern County General Plan and Willow Springs Specific Plan Circulation Map**):
    - Specific Plan Amendment No. 42, Map No. 231 to remove future road reservations on section and mid-section lines within the project boundaries of Section 6, Township 9 North, Range 13 West, SBB&M; and
    - Specific Plan Amendment No. 36, Map No. 232 to remove future road reservations on section lines with the project boundaries of Section 1 of Township 9 North, Range 14 West, SBB&M

As such, with approval of the Amendments to the Kern County General Plan, the proposed project would be consistent with applicable land use policies and regulations, and impacts related to consistency with the General Plan would be less than significant.

**TABLE 4.11-2: PROJECT ASSESSOR PARCEL NUMBERS (APNS), ACREAGE, EXISTING AND PROPOSED MAP CODES DESIGNATIONS AND ZONE CLASSIFICATIONS**

APN	Zone Map	GIS Acres	KCGP or Willow Springs	General Plan Designation	Proposed General Plan Designation	Existing Zoning	Proposed Zoning
346-032-10	214	158.2	KCGP	8.1	8.1	A FP	A FP
346-032-12	214	41.4	KCGP	8.1	8.1	A FP	A FP
346-032-15	214	41.3	KCGP	8.1	8.1	A FP	A FP
346-032-20	214	80.8	KCGP	8.1	8.1	A FP	A FP
346-032-21	214	78.6	KCGP	8.1	8.1	A FP	A FP
346-032-53	214	283	KCGP	8.3; 8.1	8.3; 8.1	A FP	A FP
346-240-26	214	158.8	KCGP	8.3; 8.3/2.5	8.3; 8.3/2.5	A FP; A	A FP; A
315-011-01	231	42.9	Willow Springs	5.3/4.4	5.3	E (5) RS MH FPS	A FPS
315-011-04	231	15.1	Willow Springs	6.2/4.4	6.2	E (2 1/2) RS MH FPS	A FPS

**TABLE 4.11-2: PROJECT ASSESSOR PARCEL NUMBERS (APNs), ACREAGE, EXISTING AND PROPOSED MAP CODES DESIGNATIONS AND ZONE CLASSIFICATIONS**

APN	Zone Map	GIS Acres	KCGP or Willow Springs	General Plan Designation	Proposed General Plan Designation	Existing Zoning	Proposed Zoning
315-011-05	231	15.7	Willow Springs	5.3/4.4	5.3	E (2 1/2) RS MH FPS	A FPS
315-011-06	231	39.4	Willow Springs	5.3/4.4	5.3	E (2 1/2) RS MH FPS	A FPS
315-011-08	231	10.3	Willow Springs	5.3/4.4	5.3	E (2 1/2) RS MH FPS	A FPS
315-011-09	231	48.5	Willow Springs	5.3/4.4	5.3	E (2 1/2) RS MH FPS	A FPS
315-011-11	231	29.5	Willow Springs	5.3/4.4	5.3	E (2 1/2) RS MH FPS	A FPS
315-011-51	231	27.6	Willow Springs	5.3/4.4	5.3	E (2 1/2) RS MH FPS	A FPS
315-011-58	231	27.9	Willow Springs	5.3/4.4	5.3	E (5) RS MH FPS	A FPS
315-011-59	231	20.7	Willow Springs	5.3/4.4	5.3	E (5) RS MH FPS	A FPS
315-011-60	231	23.6	Willow Springs	5.3/4.4	5.3	E (5) RS MH FPS	A FPS
315-011-61	231	22.7	Willow Springs	5.3/4.4	5.3	E (2 1/2) RS MH FPS	A FPS
315-050-40	231	7.1	Willow Springs	5.6	5.6	E (2 1/2) RS MH FPS	A FPS
358-052-01	232	160.1	Willow Springs	5.3/4.4	5.3	E (2 1/2) RS FPS & E (5) RS FPS	A FPS
<b>Proposed Solar Project Total Acreage</b>							<b>1,333</b>

**TABLE 4.11-2: PROJECT ASSESSOR PARCEL NUMBERS (APNs), ACREAGE, EXISTING AND PROPOSED MAP CODES DESIGNATIONS AND ZONE CLASSIFICATIONS**

APN	Zone Map	GIS Acres	KCGP or Willow Springs	General Plan Designation	Proposed General Plan Designation	Existing Zoning	Proposed Zoning
358-051-03 <sup>1</sup>	232	10.2	Willow Springs	5.6	5.6	E (2 1/2) RS MH FPS	A FPS
<b>Proposed Project Total Acreage</b>							<b>1,343</b>

1. APN 358-051-03 is a connector road; it is part of the project’s study area but not a part of the CUP boundary.

Willow Springs Specific Plan Map Code Designations

- 4.4 = Comprehensive Plan Area
- 5.3 = Residential, 10 Dwelling Units/Net Acre Maximum; 4,254 Sq. Ft. Area/Unit
- 5.6 = Residential, Min 2.5 Gross Acres/Unit
- 6.2 = General Commercial

Kern County General Plan Map Code Designations

- 2.5 = Flood Hazard Overlay
- 8.1 = Intensive Agriculture (Min. 20 Acre Parcel Size)
- 8.3 = Extensive Agriculture (Min. 20 Acre Parcel Size)

Kern County Zone Designations

- A= Exclusive Agriculture
- E(2 ½)= Estate, 2 ½ Acre Minimum
- E(5)= Estate, 5 Acre Minimum
- FP= Floodplain, Combining District
- FPS= Floodplain Secondary, Combining District
- MH= Mobilehome Combining District
- RS= Residential Suburban, Combining District

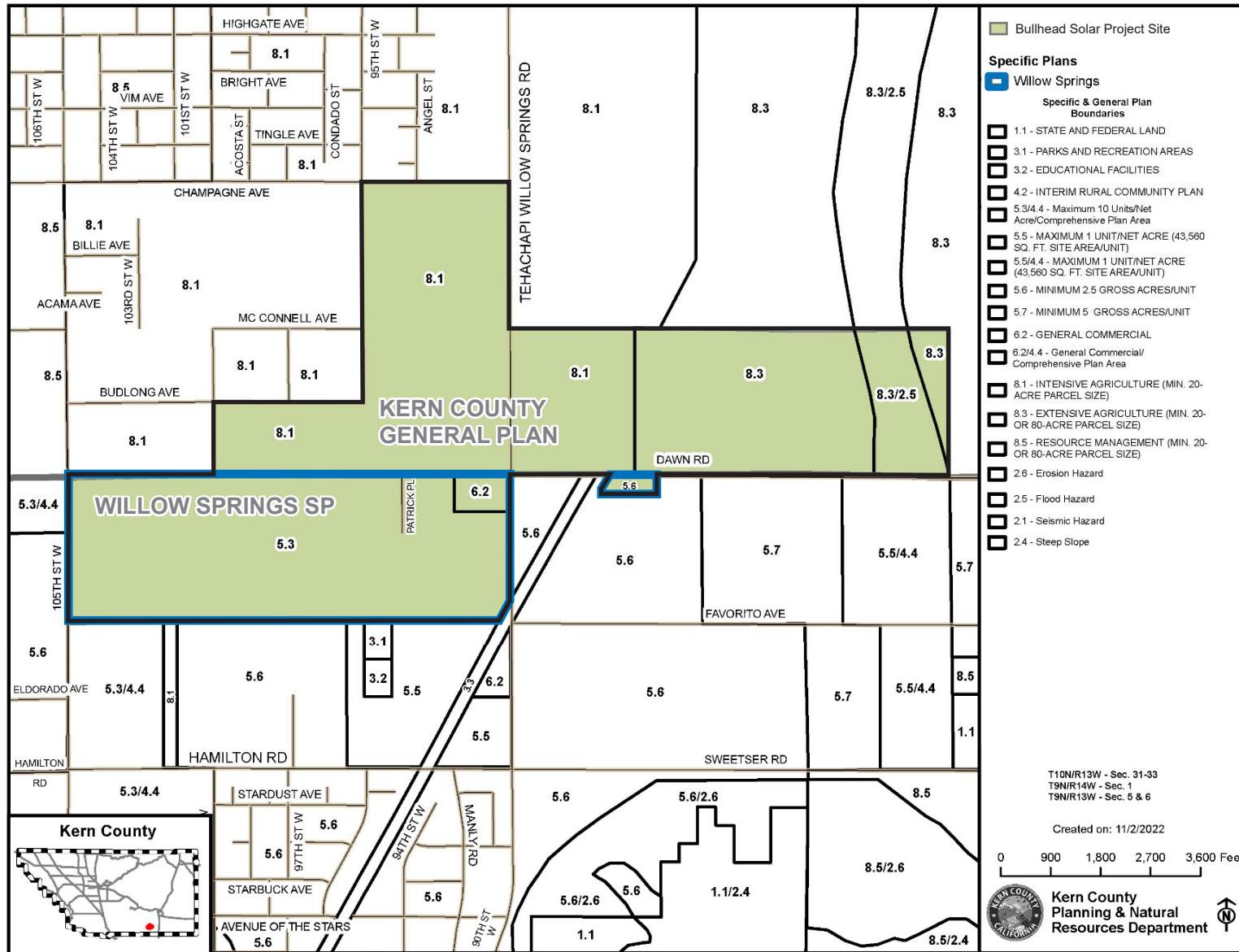


Figure 4.11-3: PROPOSED GENERAL/SPECIFIC PLAN DESIGNATIONS MAP

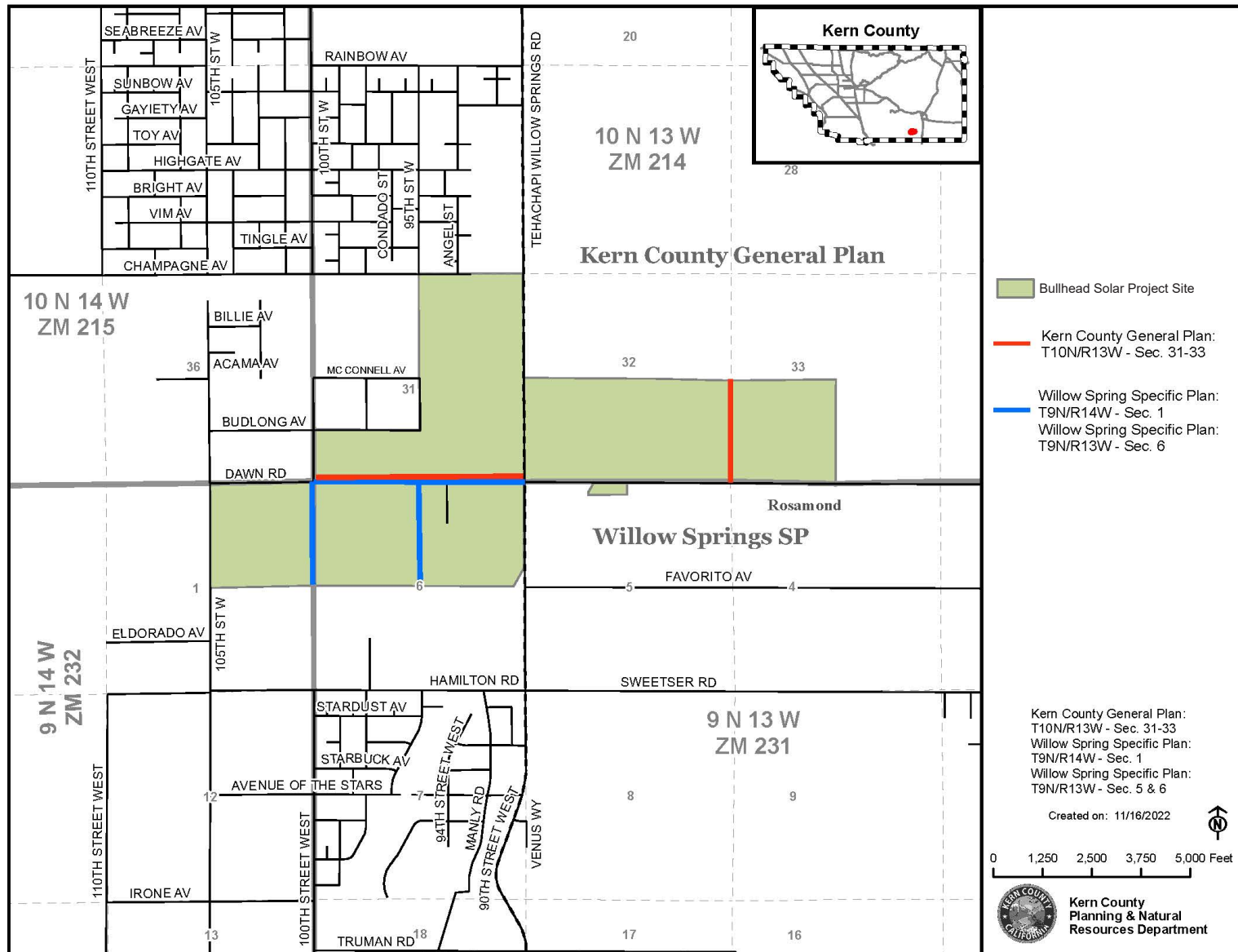


Figure 4.11-4: PROPOSED KERN COUNTY GENERAL AND WILLOW SPRINGS SPECIFIC PLAN CIRCULATION MAP

**Table 4.11-3**, *Consistency Analysis with Kern County General Plan for Land Use*, presents an evaluation of the project's consistency with the Kern County General Plan. The table lists the goals and policies identified above in the regulatory setting and provides analysis on the project's general consistency with overarching policies. Additionally, the table provides goals and policies of issue areas that are presented in more detail in other sections of the EIR. As evaluated in detail in **Table 4.11-3**, *Consistency Analysis with Kern County General Plan for Land Use*, the proposed project is consistent with the goals and policies of the Kern County General Plan.

**Table 4.11-4**, *Consistency Analysis with Willow Springs Specific Plan for Land Use*, presents an evaluation of the project's consistency with the Willow Springs Specific Plan. The table lists the goals and policies identified above in the regulatory setting and provides analysis on the project's general consistency with overarching policies. Additionally, the table provides goals and policies of issue areas that are presented in more detail in other sections of the EIR. As evaluated in detail in **Table 4.11-4**, *Consistency Analysis with Willow Springs Specific Plan for Land Use*, the proposed project is consistent with the goals and policies of the Willow Springs Specific Plan.

### **Kern County Zoning Ordinance**

As described above, the proposed project is subject to the provisions of the Kern County Zoning Ordinance. Changes in Zone Classifications as follows (See **Table 4.11-2**, *Project Assessor Parcel Numbers (APNs), Acreage, Existing and Proposed Map Codes Designations and Zone Classifications* and **Figure 4.11-2**, *Existing Zoning Classifications Map* and **Figure 4.11-5**, *Proposed Zoning Classifications Map*):

- Zone Classification Change No. 158, Map No. 231 from E(5) RS MH FPS (Estate, 5 Acres, Residential Suburban, Mobile Home Combining, Flood Plain Secondary Combining) to A FPS (Exclusive Agriculture, Flood Plain Secondary Combining), or a more restrictive district, on approximately 115 acres and from E (2 ½) RS MH FPS (Estate, 2 ½ Acres, Residential Suburban, Mobilehome Combining, Flood Plain Secondary Combining) district, to A FPS (Exclusive Agriculture, Flood Plain Secondary Combining), or a more restrictive district, on approximately 215.7 acres; and
- Zone Classification Change No. 36, Map No. 232 from E (5) RS FPS (Estate, 5 Acres, Residential Suburban, Flood Plain Secondary Combining) district on approximately 8.4 acres, and E 2 ½ RS FPS (Estate, 2 ½ Acres, Residential Suburban, Flood Plain Secondary Combining) district on approximately 161.9 acres to A FPS (Exclusive Agriculture, Flood Plain Secondary Combining), or a more restrictive district.
- Conditional Use Permits to allow for the construction and operations of a combined approximate 270 MW solar facility, as well as ancillary structures including an approximate 270 MW battery storage system with up to 1,080 MWh of storage capacity, on approximately 1,333 acres within the A (Exclusive Agriculture) Zone District pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance (in Zone Maps 214, 231, and 232) (See **Figure 4.11-6**, *Proposed Facility Conditional Use Permits*):
  - Conditional Use Permit No. 48, Map No. 214 for approximately 842 acres;
  - Conditional Use Permit No. 121, Map No. 231 for approximately 331 acres; and
  - Conditional Use Permit No. 50, Map No. 232 for approximately 160 acres



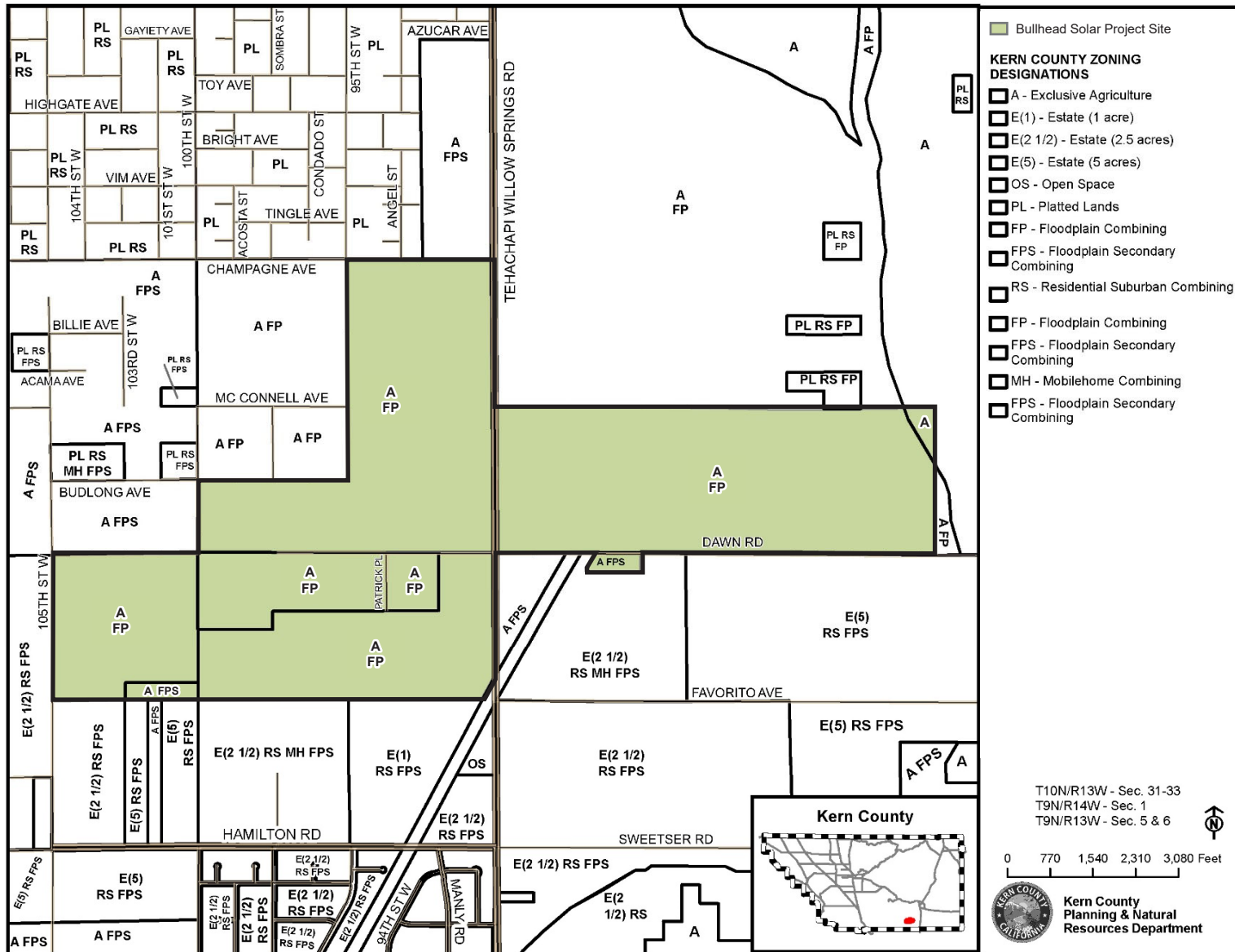


Figure 4.11-5: PROPOSED ZONING CLASSIFICATIONS MAP

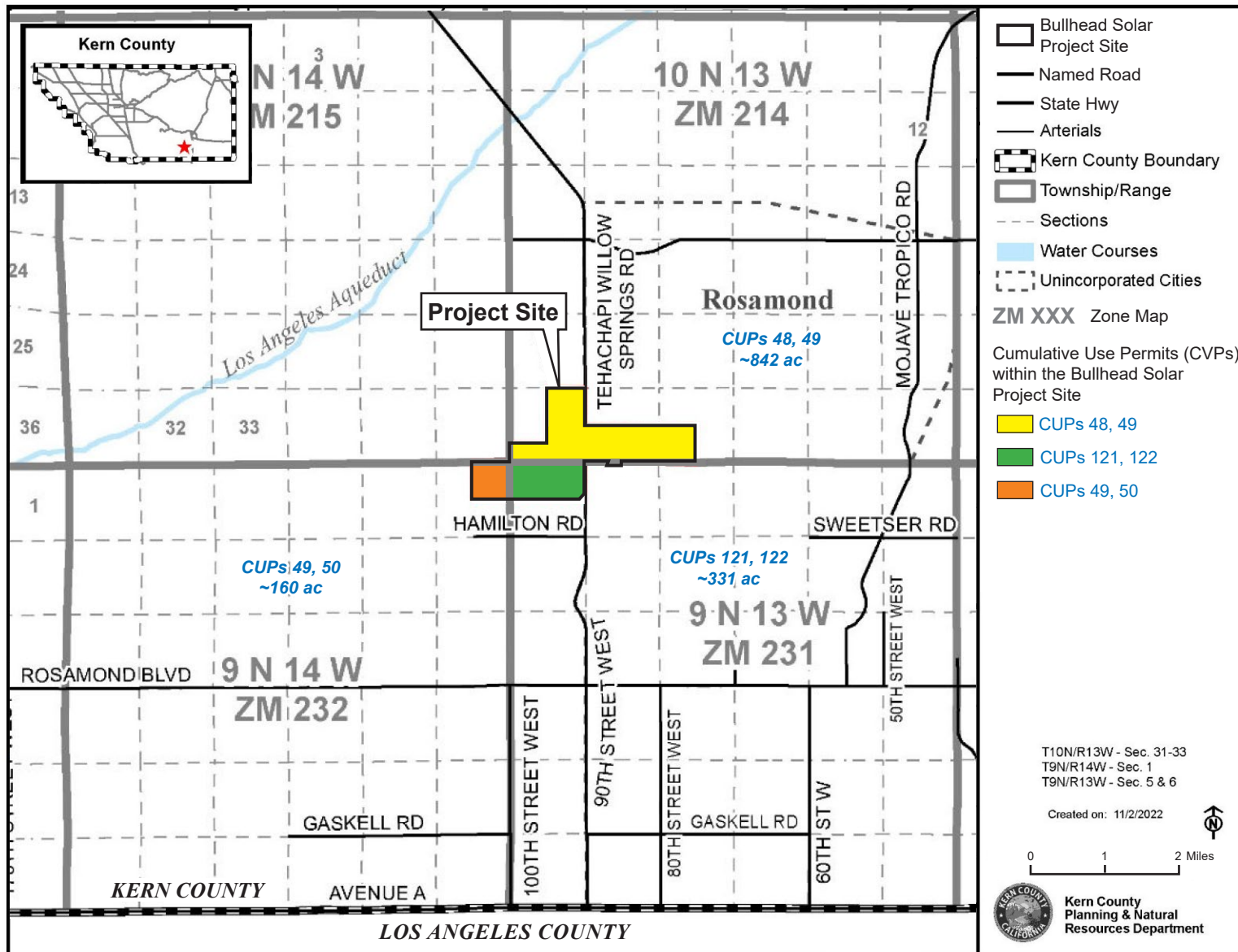


Figure 4.11-6: PROPOSED FACILITY CONDITIONAL USE PERMITS

- Conditional Use Permits to allow the construction and operation of a microwave telecommunications tower, within the A (Exclusive Agriculture) Zone District pursuant to Section 19.12.030.F of the Kern County Zoning Ordinance (in Zone Maps 214, 231, and 232):
  - Conditional Use Permit No. 49, Map No. 214;
  - Conditional Use Permit No. 122, Map No. 231; and
  - Conditional Use Permit No. 49, Map No. 232

As such, with approval of the Zone Classification change and the CUPs, the proposed project would be consistent with applicable land use policies and regulations, and impacts related to consistency with the Zoning Ordinance would be less than significant.

### ***Mitigation Measures***

No mitigation measures are required.

### ***Level of Significance***

Impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

The geographic scope for cumulative impact analysis is a six-mile buffer around the project site's boundaries. This scope was selected to analyze the cumulative impact to regional land use patterns of project development in the area, and because there is some uniformity to existing land use patterns in this region. As shown in **Table 3-4, *Cumulative Projects List***, in this EIR, projects are proposed within the geographic scope, including approximately seven solar projects. While the surrounding area is still relatively rural in nature, the project, along with related projects, has the potential to contribute to a cumulative influence on proposed land uses in and around the project site.

The anticipated impacts of the proposed project in conjunction with cumulative development in the area of the project site would increase urbanization and result in the loss of agricultural space. However, potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment. As described in **Table 4.11-3, *Consistency Analysis with Kern County General Plan for Land Use***, the proposed project would be consistent with the goals and policies of the Kern County General Plan. In addition, with approval of the Specific Plan Amendments, Zone Changes, and CUPs, development of solar facilities for the proposed project would be an allowable use that would not conflict with the land use or zoning classification for the project site. Therefore, as proposed the project would be consistent with the goals and policies of the Kern County General Plan and the Kern County Zoning Ordinance and would therefore not contribute to a cumulatively considerable impact regarding land use.

Furthermore, all related projects would be required to separately undergo environmental review on a case-by-case basis in accordance with the requirements of CEQA. Each related project would also be required to demonstrate consistency with all applicable planning documents governing the project site, including the Kern County General Plan, the Kern County Zoning Ordinance, and the Willow Springs Specific Plan. Should potential impacts be identified, appropriate mitigation would be prescribed that would likely reduce potential impacts to a less than significant level.

With regard to cumulative effects of utility-sized solar power generation facilities, there is a potential that outside factors, such as the development of newer technology, change in State or national policy that encourages the construction of such facilities, or other economic factors, could result in the abandonment of such facilities. Unlike other facilities that, once constructed, can be retrofitted and utilized for another specific use, solar power generation facilities have little opportunity for other uses should the project not be in operation. The potential for the cumulative effects caused by the abandonment of multiple solar facilities in Kern County could result in impacts on surrounding land uses should it be determined that these facilities are no longer viable commercial operations. Therefore, Mitigation Measure MM 4.11-1, which would require the implementation of a decommissioning plan to be carried out by the Project Proponent once the life of the proposed project has ended, has been included to establish safeguards to ensure the maintenance of the health, safety, and welfare of the citizens of the County. While it is the intent of Kern County to promote the use of an alternative to fossil-fuel-generated electrical power in areas of the County that are identified to have suitable characteristics for production of commercial quantities of solar PV-generated electrical power, it is necessary to protect surrounding landowners from potential impacts associated with the abandonment of such facilities. With the implementation of Mitigation Measure MM 4.11-1, cumulative land use impacts would be less than significant.

### ***Mitigation Measures***

**MM 4.11-1:** Prior to issuance of any building permit, the project operator shall provide for review and approval by the Kern County Engineering, Surveying, and Permit Services Department or a County-contracted consulting firm at a cost to be borne by the project operator. The Decommission Plan shall factor in the cost to remove the solar panels and support structures, replacement of any disturbed soil from removal of support structures, and control of fugitive dust on the remaining undeveloped land. Salvage value for the solar panels and support structures shall be included in the financial assurance calculations. The assumption, when preparing the estimate, is that the project operator is incapable of performing the work or has abandoned the solar facility, thereby requiring Kern County to hire an independent contractor to perform the decommissioning work. In addition to submitting a Decommission Plan, the project operator shall post or establish and maintain financial assurances with Kern County related to the deconstruction of the site as identified on the approved Decommission Plan in the event that at any point in time the project operator determines it is not in the company's best interest to operate the facility.

The financial assurance required prior to issuance of any building permit shall be established using one of the following:

- a) An irrevocable letter of credit;
- b) A surety bond;
- c) A trust fund in accordance with the approved financial assurances to guarantee the deconstruction work will be completed in accordance with the approved decommission plan; or
- d) Other financial assurances as reviewed and approved by the respective County administrative offices, in consultation with the Kern County Planning and Natural Resources Department.

The financial institution or Surety Company shall give the County at least 180 days notice of intent to terminate the letter of credit or bond. Financial assurances shall be reviewed annually by the Kern County Engineering, Surveying, and Permit Services Department or County contracted consulting firm(s) at a cost to be borne by the project operator to substantiate those adequate funds exist to ensure deconstruction of all solar panels and support structures identified on the approved Decommission Plan. Should the project operator deconstruct the site on their own, the County will not pursue forfeiture of the financial assurance.

Once deconstruction has occurred, financial assurance for that portion of the site will no longer be required and any financial assurance posted shall be adjusted or returned accordingly. Any funds not utilized through decommission of the site by the County shall be returned to the project operator.

Should any portion of the solar field not be in operational condition for a consecutive period of twelve 12 months that portion of the site shall be deemed abandoned and shall be removed within sixty (60) days from the date a written notice is sent to the property owner and solar field owner, as well as the project operator, by the County. Within this sixty (60) day period, the property owner, solar field owner, or project operator may provide the director of the Kern County Planning and Natural Resources Department a written request and justification for an extension for an additional twelve (12) months. The Kern County Planning and Natural Resources Director shall consider any such request at a Director's Hearing as provided for in Section 19.102.070 of the Kern County Zoning Ordinance. In no case shall a solar field that has been deemed abandoned be permitted to remain in place for more than forty-eight (48) months from the date, the solar facility was first deemed abandoned.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.11-1, cumulative impacts would be less than significant.

## **Project Consistency with the Kern County General Plan**

**Table 4.11-3**, *Consistency Analysis with Kern County General Plan Policies for Land Use*, provides summarizes the consistency of the proposed project with all applicable goals and policies of the Kern County General Plan and relevant planning documents that are applicable to the project site.

## **Project Consistency with the Willow Springs Specific Plan**

**Table 4.11-4**, *Consistency Analysis with Willow Springs Specific Plan Policies for Land Use*, provides summarizes the consistency of the proposed project with all applicable goals and policies of the Willow Springs Specific Plan and relevant planning documents that are applicable to the project site.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>KERN COUNTY GENERAL PLAN CHAPTER 1, LAND USE, OPEN SPACE AND CONSERVATION ELEMENT</b>		
<b>1.3 Physical and Environmental Constraints</b>		
<p><b>Goal 1:</b> To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.10-2.</p>	<p>Consistent with this policy, the project would develop a solar PV power generation and storage facility that is not located on a hazardous site. See Section 4.9, <i>Hazards and Hazardous Materials</i>, of this EIR. As described in Section 4.7, <i>Geology and Soils</i>, of this EIR, the project site is not transected by a known active or potentially active fault and is not located within a State of California Alquist-Priolo Earthquake Fault Zone. In addition, construction of the proposed project would be subject to all applicable ordinances of the Kern County Building Code (Chapter 17.08). Adherence to all applicable regulations would mitigate any potential impacts associated with fault rupture adjacent to the proposed project site. Based on the absence of any known active faults that cross, or are located in close proximity to, the project site and project compliance with applicable ordinances of the Kern County Building Code, the potential impact of fault rupture would be less than significant. Additionally, the proposed project would implement the recommendations of the final design level geotechnical report. The final report’s recommendations would be consistent with the Kern County Building Code (Chapter 17.08) and the most recent version of the California Building Code. As described in Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR, the project site is located within the 100-year floodplain and is classified as having a 1 percent annual chance of flooding. Implementation of Mitigation Measure MM 4.10-2 would require preparation of a drainage plan that would design project facilities to have one-foot of freeboard clearance above the calculated maximum flood depths for the solar arrays or the finished floor of any permanent structures and grading for the project would be designed so that water surface elevations during flood events would not be increased by more than one foot. Further, the project would be developed in accordance with the General Plan and Floodplain Management Ordinance.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 1:</b> Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 (Seismic Hazard), Map Code 2.2 (Landslide), Map Code 2.3 (Shallow Groundwater), Map Code 2.5 (Flood Hazard), Map Codes from 2.6 – 2.9, Map Code 2.10 (Nearby Waste Facility), and Map Code 2.11 (Burn Dump Hazard)) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.</p>	Consistent.	<p>Thus, final review of the proposed project by the Kern County Planning and Natural Resources Department, as well as adherence to all applicable local, state and federal regulations, would ensure that the proposed project would not pose significant environmental or public health and safety hazards. As such, with implementation of mitigation measures the project would be consistent with this goal.</p> <p>See 1.3, <i>Physical and Environmental Constraints</i>, Goal 1, of the Kern County General Plan, above.</p>
<p><b>Policy 3:</b> Zoning and other land use controls will be used to regulate, and prohibit, if necessary, future development when physical hazards exist.</p>	Consistent.	<p>See 1.3, <i>Physical and Environmental Constraints</i>, Goal 1, of the Kern County General Plan, above.</p>
<p><b>Policy 9:</b> Construction of structures that impede water flow in a primary floodplain will be discouraged.</p>	Consistent with implementation of Mitigation Measure MM 4.10-2.	<p>See Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR. As described therein, project facilities would be designed to maintain clearance above the maximum flood depths and grading would not substantially increase flooding depths. Further, the project would be developed in accordance with the General Plan and Floodplain Management Ordinance and would implement Mitigation Measure MM 4.10-2, as described above. Therefore, the proposed project would be consistent with this policy.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 10:</b> The County will allow lands which are within flood hazard areas, other than primary floodplains, to be developed in accordance with the General Plan and Floodplain Management Ordinance, if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous within the requirements of the Safety Element (Chapter 4) of this General Plan.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.10-2.</p>	<p>See Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR. As described therein, the project would not increase the potential for flooding beyond existing conditions. Flooding in this location would not result in a safety hazard, as the project would not establish a substantial permanent population on-site. Further, the project would be developed in accordance with the General Plan and Floodplain Management Ordinance and would implement Mitigation Measure MM 4.10-2, as described above. Therefore, the proposed project would be consistent with this policy.</p>
<p><b>Policy 11:</b> Protect and maintain watershed integrity within Kern County.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.9-1 and MM 4.10-1.</p>	<p>As discussed in Section 4.10, <i>Hydrology and Water Quality</i>, of the EIR, the project site would implement best management practices (BMPs) during construction to avoid impacts to water quality. Implementation of Mitigation Measure MM 4.10-1 requires the Project Proponent to submit a Stormwater Pollution Prevention Plan (SWPPP) for review and approval prior to the issuance of a grading permit. The SWPPP shall be designed to minimize runoff and shall specify best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sediment or any other pollutants from moving offsite and into receiving waters. As described in Section 4.9, <i>Hazards and Hazardous Materials</i>, of this EIR, the project would also implement Mitigation Measure MM 4.9-1 which would require the Project Proponent to provide a Hazardous Materials Business Plan to reduce mixing of pollutants with stormwater onsite, thereby maintaining the integrity of the watershed.</p>
<p><b>Measure D:</b> Review and revise the County’s current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2</p>	<p>The project would implement Mitigation Measure MM 4.10-2 which would require the preparation of a hydrologic study and drainage plan. The hydrologic study and drainage plan shall be prepared in accordance with the Kern County Grading Code and Kern County Development Standards. Since project construction would disturb well over an acre of ground, the project would implement Mitigation Measure MM 4.10-1, in</p>



**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Measure F:</b> The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.	Consistent with implementation of Mitigation Measure MM 4.10-2	which the project operator would conform to the requirements of Kern County’s National Pollutant Discharge Elimination System (NPDES) Program through the preparation of a SWPPP that would include erosion control and sediment control BMPs designed to prevent disturbed soils from moving offsite. The proposed project would also be required to implement a drainage plan that would minimize the potential for changes in onsite drainage patterns that could increase erosion and sedimentation (See Section 4.10, <i>Hydrology and Water Quality</i> , for more details). A grading permit would be obtained from the County prior to commencement of construction activities. According to Chapter 17.28 of the Kern County Grading Ordinance, this includes submittal of grading plans to the County for review prior to issuance of a grading permit and grading activities on the project site. County review of grading plans would ensure that appropriate erosion control measures have been implemented on site. Therefore, the proposed project would be consistent with this measure.
<b>Measure H:</b> Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.	Consistent with implementation of Mitigation Measure MM 4.10-2.	See Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR. The project facilities would be designed to maintain clearance above the maximum flood depths and grading would not substantially increase flooding depths. Further, the project would be developed in accordance with the General Plan, Floodplain Management Ordinance and Mitigation Measure MM 4.10-2. Therefore, the proposed project would be consistent with this measure.
<b>Measure H:</b> Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.	Consistent with implementation of Mitigation Measure MM 4.10-2.	As described in Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR, the project site is located within the 100-year floodplain and is classified as having a 1 percent annual chance of flooding. Further, the project would be developed in accordance with the General Plan, Floodplain Management Ordinance and Mitigation Measure MM 4.10-2. Therefore, the proposed project would be consistent with this measure.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure J:</b> Compliance with the Floodplain Management Ordinance prior to grading or improvement of land for development or the construction, expansion, conversion or substantial improvements of a structure is required.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.10-2.</p>	<p>See 1.3, <i>Physical and Environmental Constraints</i>, Measure H, of the Kern County General Plan, above.</p>
<p><b>Measure N:</b> Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.10-1.</p>	<p>Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR, discusses impacts related to soil-disturbing activities and required compliance with Kern County’s National Pollutant Discharge Elimination System (NPDES) Applicability legislation, which requires projects to comply with the State Water Resources Control Board’s Construction General Permit, as applicable. Further, as the project is larger than one-acre in size, the project would implement Mitigation Measure MM 4.10-1, which would include the development of a SWPPP, which includes BMPs consistent with Regional Water Quality Control Board.</p>
<p><b>1.4 Public Facilities and Services</b></p>		
<p><b>Goal 1:</b> Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.13-2 through MM 4.13-4.</p>	<p>As discussed in Section 4.13, <i>Public Services</i>, of this EIR, the project would implement Mitigation Measure MM 4.13-2 to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services and facilities. Further, Mitigation Measures MM 4.13-3 and MM 4.13-4 would provide a tax to the Kern County Auditor/Controller for all years of operation.</p>
<p><b>Goal 5:</b> Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.</p>	<p>Consistent.</p>	<p>Public utility impacts are evaluated in Section 4.16, <i>Utilities and Service Systems</i>, of this EIR. As described therein, the project site is located within the Antelope Valley Groundwater Basin; as described above, the adjudication process for the Antelope Valley Groundwater Basin was completed in 2015 which established a safe yield of 110,000 AFY. Because the amount of the water required for the project would be minimal</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Policy 1:</b> New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.	Consistent with implementation of Mitigation Measure MM 4.13-2.	<p>and would be obtained from an existing source with existing water rights, impacts related to water supply would be less than significant and there would be sufficient water supply for other uses in Kern County. Water supply is discussed in more detail in Section 4.16, <i>Utilities and Service Systems</i>, of this EIR.</p> <p>The proposed project would construct and operate a 270 MW solar facility. The proposed project would consider four options for gen-tie routes, although only one route would be constructed. All options involve the proposed project connecting to existing solar infrastructure. All infrastructure improvements associated with the proposed project would be fully funded by the Project Proponent. No further improvements are anticipated as a part of the project. However, should improvements be made, the Project Proponent would coordinate with the County to ensure that the cost of the infrastructure improvement is properly funded. Additionally, as discussed in Section 4.13, <i>Public Services</i>, the project would implement Mitigation Measure MM 4.13-2 to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services. The project would also implement Mitigation Measures MM 4.13-3 and MM 4.13-4, if the project is sold to a city, county, or utility company with assessed taxes that total less than \$3,000 per megawatt per year, then that entity shall pay the taxes plus the amount necessary to equal the equivalent of \$3,000 per megawatt. The amount shall be paid for all years of operation.</p>
<b>Policy 3:</b> Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.	Consistent with implementation of	Public utility impacts are evaluated in Section 4.16, <i>Utilities and Service Systems</i> , of the EIR. As described therein, the project would have less-than-significant impacts on water,

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
	Mitigation Measure MM 4.16-1.	wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities. With the implementation of Mitigation Measure MM 4.16-1, a recycling coordinator would ensure the separation and proper disposal of recyclable materials and solid waste during construction and operation, resulting in less than significant impact to solid waste providers.
<b>Policy 6:</b> The County will ensure adequate fire protection to all Kern County residents.	Consistent with implementation of Mitigation Measure MM 4.13-2.	See 1.4, <i>Public Services and Facilities</i> , Goal 1, above. The project would implement Mitigation Measure MM 4.13-2, to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services.
<b>Policy 7:</b> The County will ensure adequate police protection to all Kern County residents.	Consistent with implementation of Mitigation Measure MM 4.13-2.	See 1.4, <i>Public Services and Facilities</i> , Goal 1, above. The project would implement Mitigation Measure MM 4.13-2, to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services.
<b>Policy 15:</b> Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the CEQA documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.	Consistent with implementation of Mitigation Measure MM 4.13-2.	See 1.4, <i>Public Services and Facilities</i> , Policy 3, above. Also, the project would implement Mitigation Measure MM 4.13-2, to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure B:</b> Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the site of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.13-2</p>	<p>See 1.4, <i>Public Services and Facilities</i>, Goal 1, above. The project would implement Mitigation Measure MM 4.13-2, to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services.</p>
<p><b>Measure C:</b> Project developers shall coordinate with the local utility service providers to supply adequate public utility services.</p>	<p>Consistent.</p>	<p>Project effects related to utilities are discussed in Section 4.16, <i>Utilities and Service Systems</i>, of this EIR. The project would result in less-than-significant impacts to utilities. Furthermore, the proposed project would include the development of a solar PV power generating facility that would produce approximately 270 MW and would store up to 270 MWh of energy, both of which would be delivered to the grid, reducing dependence on fossil fuel-based energy. This energy would be available to utility providers to serve customers and meet electricity demand.</p>
<p><b>Measure D:</b> Involve utility providers in the land use and zoning review process.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.16-1.</p>	<p>See 1.4, <i>Public Services and Facilities</i>, Policy 3, above. All applicable project documents have been sent to utility providers for review and comment. These providers will continue to be notified of all publicly available documents.</p>
<p><b>Measure J:</b> Ensure that the Superintendent of Schools and the respective school districts are informed of development proposals and are afforded the opportunity of evaluating their potential effect on the physical capacity of school facilities.</p>	<p>Consistent.</p>	<p>The Kern County Superintendent of Schools was informed of this project during the project’s Notice of Preparation of a Draft Environmental Impact Report. See 1.4, <i>Public Services and Facilities</i>, Goal 1, above; the project would be subject to CIC fees that would contribute to future school facility improvements.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure L:</b> Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.13-1 and MM 4.13-2.</p>	<p>Impacts to fire protection services are evaluated in Section 4.13, <i>Public Services</i>, of this EIR. Mitigation Measure MM 4.13-1 requires implementation of a fire safety plan during project construction and operation that would include notification procedures and emergency fire precautions to help reduce fire risks and the consequential need for fire protection services onsite. The project would implement Mitigation Measure MM 4.13-2, to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities and assuring the provision of adequate public services and facilities.</p>
<p><b>1.8 Industrial Policies</b></p>		
<p><b>Policy 6:</b> Encourage upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.1-1 through MM 4.1-3.</p>	<p>Impacts to visual character are evaluated in Section 4.1, <i>Aesthetics</i>, of this EIR. Mitigation Measures MM 4.1-1 through MM 4.1-3 would reduce visual impacts associated with the proposed project by limiting vegetation removal, planting native vegetation, providing privacy fencing, reducing the visibility of project features, and ensuring that the site is kept free of debris and trash. Native vegetation would be left in place around the proposed project area where feasible, allowing for a natural screening of project components.</p>
<p><b>Policy 7:</b> Require that industrial uses provide design features such as screen walls, landscaping, increased heights or setbacks, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to light, noise, sound, and vibration.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.1-1 through MM 4.1-3.</p>	<p>See 1.8, <i>Industrial Policies</i>, Policy 6 above.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>1.9 Resources</b>		
<p><b>Goal 1:</b> To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.</p>	Consistent.	<p>The project site is located on land that is zoned as A (Exclusive Agriculture), or proposed to be rezoned to A (Exclusive Agriculture) and implementation of the proposed project would preclude agricultural uses on the project site. Other uses besides agriculture, including solar energy generation and storage, are permitted within the A and A-1 Districts with the approval of a CUP. The project would not involve additional changes in the existing environment besides those described in this EIR and would not directly lead to other projects that would result in the loss of agricultural land. Additionally, as discussed in Section 4.2, <i>Agriculture and Forestry Resources</i>, the project would convert 401 acres of Farmland of Statewide Importance and Unique Farmland, it would only result in loss of a small portion (less than 1 percent) of the harvested agricultural land within Kern County and as mentioned above, the project site has not been used for irrigated agriculture for the past five years. Project impacts related to converting Unique Farmland, or Farmland of Statewide Importance to nonagricultural use would be less than significant. Therefore, the proposed project would be consistent with this goal.</p>
<p><b>Goal 2:</b> Protect areas of important mineral, petroleum, and agricultural resource potential for future use.</p>	Consistent.	<p>See 1.9, <i>Resource</i>, Goal 1, above. The project site is not designated as a mineral resource zone.</p>
<p><b>Goal 3:</b> Ensure the development of resource areas minimize effects on neighboring resource lands.</p>	Consistent.	<p>The solar facilities are compatible with surrounding agricultural uses, solar energy production facilities, wind energy, and other resource management land uses.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Goal 5:</b> Conserve prime agricultural lands from premature conversion	Consistent.	As discussed in Section 4.2, <i>Agriculture and Forestry Resources</i> , the project would convert 401 acres of Farmland of Statewide Importance and Unique Farmland, it would only result in loss of a small portion (less than 1 percent) of the harvested agricultural land within Kern County and as mentioned above, the project site has not been used for irrigated agriculture for the past five years. At the end of its operating life, infrastructure associated with the solar facility would be removed, which would allow the project site to return to agricultural use subject to future water availability. The project includes a zone change to A (Exclusive Agriculture) so that the entire project site would be zoned for agriculture, which would encourage future agricultural uses on the project site subject to future water availability, rather than non-agricultural or residential uses. Project impacts related to converting Unique Farmland, or Farmland of Statewide Importance to nonagricultural use would be less than significant. Therefore, the proposed project would be consistent with this goal.
<b>Goal 6:</b> Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.	Consistent.	Consistent with this policy, the proposed project would develop a solar PV power generating facility designed to produce approximately 270 MW of solar power. The project would develop a clean energy source that would create fewer fossil fuel emissions; thus, protecting the environment.
<b>Policy 1:</b> 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.	Consistent.	Impacts on natural resources are avoided or minimized through the design of the project and would not affect long term use of the site. The project implements the General Plan policy of maximizing utilization of available solar resources.
<b>Policy 7:</b> 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.	Consistent.	See 1.9, <i>Resource</i> , Goal 5, of the Kern County General Plan, above.



**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

<b>Goals and Policies</b>	<b>Consistency Determination</b>	<b>Project Consistency</b>
<p><b>Policy 11:</b> Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.10-2.</p>	<p>As discussed in Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR, the project would be required to adhere to the Kern County Development Standards and Kern County Code of Building Regulations which require site drainage plans that include development standards designed to protect water quality. Specifically, the Project Proponent would be required to prepare and submit a drainage plan to the Kern County Public Works Department, for approval of post-construction structural and nonstructural BMPs that could include Low Impact Development (LID) features such as drainage swales for collection of runoff prior to offsite discharge. Routine structural BMPs are intended to address water quality impacts related to drainage that are inherent in development. As discussed in Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR, the proposed project would likely require one or more retention basins to meet County drainage requirement. Consistent with this policy, the proposed project would require the submission of a drainage plan to the County for review and would implement Mitigation Measure MM 4.10-2, which requires a final hydrologic study and drainage plan designed to evaluate and minimize potential increases in runoff from the project site.</p>
<p><b>Policy 12:</b> Areas identified by the Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service) as having high range-site value should be conserved for Extensive Agriculture uses or as Resource Reserve, if located within a County water district.</p>	<p>Consistent.</p>	<p>See 1.9, <i>Resource</i>, Goal 5, of the Kern County General Plan, above.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure F:</b> 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.</p>	<p>Consistent.</p>	<p>As discussed in Section 4.2, <i>Agriculture and Forestry Resources</i>, the project would convert 401 acres of Farmland of Statewide Importance and Unique Farmland, it would only result in loss of a small portion (less than 1 percent) of the harvested agricultural land within Kern County and as mentioned above, the project site has not been used for irrigated agriculture for the past five years. Project impacts related to converting Unique Farmland, or Farmland of Statewide Importance to nonagricultural use would be less than significant. Therefore, the proposed project would be consistent with this goal.</p>
<p><b>1.10 General Provisions</b></p>		
<p><b>Goal 1:</b> Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.13-2.</p>	<p>Consistent with this goal, the proposed project requires consideration and approval of a Conditional Use Permit as well as other discretionary actions that ensure compliance with all policies. The project would implement Mitigation Measure MM 4.13-2 to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services.</p>
<p><b>1.10.1 Public Services and Facilities</b></p>		
<p><b>Policy 9:</b> New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.13-2.</p>	<p>See 1.4, <i>Public Facilities and Services</i>, Goal 1, above. Impacts to public services are evaluated in Section 4.13, <i>Public Services</i>, of this EIR. The project would implement Mitigation Measure MM 4.13-2 to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 15:</b> Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.13-2.</p>	<p>Public service impacts are evaluated in Section 4.13, <i>Public Services</i>, of this EIR. This EIR serves to comply with this policy. The project would implement Mitigation Measure MM 4.13-2, to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities.</p>
<p><b>Policy 16:</b> The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.</p>	<p>Consistent.</p>	<p>See 1.4, <i>Public Facilities and Services</i>, Goal 1 and Policy 1, above.</p>
<p><b>Measure C:</b> Project developers shall coordinate with the local utility service providers to supply adequate public utility services.</p>	<p>Consistent.</p>	<p>See 1.4, <i>Public Facilities and Services</i>, Policy 3, above.</p>
<p><b>Measure D:</b> Involve utility providers in the land use and zoning review process.</p>	<p>Consistent.</p>	<p>See 1.4, <i>Public Facilities and Services</i>, Policy 3, above.</p>
<p><b>Measure E:</b> All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the County’s Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.</p>	<p>Consistent.</p>	<p>Water and wastewater impacts are evaluated in Section 4.10, <i>Hydrology and Water Quality</i>, and Section 4.16, <i>Utilities and Service Systems</i>, of this EIR. No septic system or wastewater disposal is proposed for the proposed project; wastewater generated during the operations phase would be accommodated in the adjacent previously approved BigBeau Solar O&amp;M facility. Therefore, the project would not adversely affect any existing wastewater treatment facilities. No impact would occur.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>1.10.2 Air Quality</b>		
<p><b>Policy 18:</b> 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.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-3.</p>	<p>Air quality and GHG impacts are evaluated in Sections 4.3, <i>Air Quality</i>, and 4.8, <i>Greenhouse Gas Emissions</i>, of this EIR. Consistent with this policy, the proposed project would implement Mitigation Measures MM 4.3-1 through MM 4.3-3, which would reduce impacts to air quality to the extent feasible. Air quality mitigation measures include diesel emission-reduction measures during construction, fugitive dust control measures, and Valley Fever exposure minimization measures.</p>
<p><b>Policy 19:</b> 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:</p> <ol style="list-style-type: none"> <li>(1) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and</li> <li>(2) 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.</li> </ol>	<p>Consistent.</p>	<p>See 1.10.2, <i>Air Quality</i>, Policy 18, above. This EIR serves to comply with this policy. The project cannot reduce impacts to less than significant even with required mitigation. Appropriate findings under CEQA would be required to be made by the decision makers in order to approve the project despite the significant and unavoidable cumulative impacts on air quality.</p>
<p><b>Policy 20:</b> 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.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.3-2</p>	<p>Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i>, of this EIR. As discussed therein, implementation of Mitigation Measure MM 4.3-2 would further reduce fugitive dust emissions during construction and operation, in compliance with the adopted rules and regulations of the Eastern Kern County Air Pollution Control District on ministerial permits.</p>
<p><b>Policy 21:</b> The County shall support air districts efforts to reduce PM<sub>10</sub> and PM<sub>2.5</sub> emissions.</p>	<p>Consistent with implementation of</p>	<p>Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i>, of this EIR. As discussed in that section, implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2 would further</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 22:</b> 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.</p>	<p>Mitigation Measures MM 4.3-1 and MM 4.3-2.</p> <p>Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-3.</p>	<p>reduce PM<sub>10</sub> and PM<sub>2.5</sub> emissions during construction and operation.</p> <p>Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i>, of this EIR. Consistent with this policy, the proposed project would implement Mitigation Measures MM 4.3-1 through MM 4.3-3, which would reduce impacts to air quality to the extent feasible. The project would be in compliance with all applicable Eastern Kern County Air Pollution Control District, rules and regulations.</p>
<p><b>Measure F:</b> All discretionary permits shall be referred to the appropriate air district for review and comment.</p>	<p>Consistent.</p>	<p>Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i>, of this EIR. Consistent with this measure, the necessary discretionary permits shall be referred to the Eastern Kern Air Pollution Control District for review and comment.</p>
<p><b>Measure G:</b> Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:</p> <ul style="list-style-type: none"> <li>a. Minimizing idling time.</li> <li>b. Electrical overnight plug-ins.</li> </ul>	<p>Consistent with implementation of Mitigation Measures MM 4.3-1</p>	<p>Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i>, of this EIR. Consistent with this measure, implementation of Mitigation Measure MM 4.3-1 would require diesel exhaust reduction strategies.</p>
<p><b>Measure H:</b> Discretionary projects may use one or more of the following to reduce air quality effects:</p> <ul style="list-style-type: none"> <li>a. Pave dirt roads within the development.</li> <li>b. Pave outside storage areas.</li> <li>c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.</li> <li>d. Use of alternative fuel fleet vehicles or hybrid vehicles.</li> <li>e. Use of emission control devices on diesel equipment.</li> <li>f. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.</li> <li>g. Provide bicycle lockers and shower facilities on site.</li> </ul>	<p>Consistent with implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2.</p>	<p>Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i>, of this EIR. Consistent with this measure, implementation of Mitigation Measures MM 4.3-1 through MM 4.3-2 would further reduce adverse air quality effects.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p>h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).</p> <p>i. The use and development of park and ride facilities in outlying areas.</p> <p>j. Other strategies that may be recommended by the local Air Pollution Control Districts.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2.</p>	<p>Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i>, of this EIR. As discussed in that section, implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2 would further reduce PM<sub>10</sub> and PM<sub>2.5</sub> emissions during construction and operation.</p>
<p><b>1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation</b></p>		
<p><b>Policy 25:</b> The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.5-1, MM 4.5-2, MM 4.5-3, MM 4.5-4, and MM 4.5-5.</p>	<p>Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i>, of this EIR. This EIR serves to comply with this policy and includes Mitigation Measures MM 4.5-1 through MM 4.5-5 to promote the preservation of cultural and historic resources where necessary.</p>
<p><b>Measure K:</b> Coordinate with the California State University, Bakersfield’s Archaeology Inventory Center.</p>	<p>Consistent Mitigation Measures MM 4.5-3.</p>	<p>Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i>, of this EIR. A record search for the project was conducted by staff at the southern San Joaquin Valley Information Center at California State University, Bakersfield. Consistent with this measure, copies of reports will be provided to the Kern County Planning and Natural Resources Department and to the Southern San Joaquin Valley Information Center at California State University, Bakersfield, per Mitigation Measure MM 4.5-3.</p>
<p><b>Measure L:</b> The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5.</p>	<p>Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i>, of this EIR. Consistent with this measure, impacts to archaeological and historical resources are evaluated in accordance with CEQA. This EIR serves to comply with this policy.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure M:</b> In areas of known paleontological resources, the County should address the preservation of these resources where feasible.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.7-1 through MM 4.7-4.</p>	<p>Paleontological resource impacts are evaluated in Section 4.7, <i>Geology and Soils</i>, of this EIR. Mitigation Measures MM 4.7-1 through MM 4.7-4 which would reduce potential impacts to known paleontological resources through hiring a qualified paleontologist shall be retained to monitor all ground-disturbing activity, document, and implement measures as needed.</p>
<p><b>Measure N:</b> The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.</p>	<p>Consistent.</p>	<p>Tribal Cultural resource impacts are evaluated in Section 4.15, <i>Tribal Cultural Resources</i>, of this EIR. Consistent with this measure, notification regarding the proposed project would be accomplished in accordance with the established procedures for discretionary projects and CEQA documents.</p>
<p><b>Measure O:</b> On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.5-1 through MM 4.5-5.</p>	<p>Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i>, of this EIR. This EIR serves to comply with this measure and includes Mitigation Measures MM 4.5-1 through MM 4.5-5, which would require consultation with the Native American monitor(s) to conduct a Cultural Resources Sensitivity Training for all personnel working on the proposed project.</p>
<p><b>1.10.5 Threatened and Endangered Species</b></p>		
<p><b>Policy 27:</b> Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-20.</p>	<p>Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. This EIR serves to comply with this policy and reduce potential impacts with mitigation. Additionally, the project would be developed and operated in accordance with all local, state and federal laws pertaining to the preservation of sensitive species.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 28:</b> County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-20.</p>	<p>Biological Resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. This EIR serves to comply with this policy and reduce potential impacts with mitigation. As part of the biological resources evaluation and habitat assessment conducted for the project, relevant state and federal agencies were contacted to ensure that appropriate information about the project site were being gathered. Specifically, an NOP of this EIR was sent to state and federal agencies requesting their input on the biological resource evaluation. Similarly, this EIR will also be circulated to these agencies, and staff will have the opportunity to comment on the biological resources evaluation. Therefore, the County is complying with this policy for the project.</p>
<p><b>Policy 29:</b> The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-14.</p>	<p>Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. The project site is located within the Willow Springs Specific Plan Area. Consistency with the applicable policies of the Willow Springs Specific Plan Area are discussed below. Additionally, implementation of Mitigation Measures MM 4.4-1 through MM 4.4-14 would further increase cooperative efforts with local, State, and federal agencies to support threatened and endangered plant and wildlife.</p>
<p><b>Policy 31:</b> Under the provisions of the California Environmental Quality Act, the County, as lead agency, will solicit comments from the California Department of Fish and Game and the U.S. Fish and Wildlife Service when an environmental document is prepared.</p>	<p>Consistent.</p>	<p>See 1.10.5, <i>Threatened and Endangered Species</i>, Policy 28, above.</p>
<p><b>Policy 32:</b> Riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.4-15 and MM 4.4-16.</p>	<p>Biological resource impacts and impacts to riparian areas, are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. Consistent with this policy, Mitigation Measures MM 4.4-15 and MM 4.4-16 would require consultation with the California Department of Fish and Wildlife. The County will respond to</p>



**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
		all comments from reviewing agencies during the CEQA process.
<b>Measure Q:</b> Discretionary projects shall consider effects to biological resources as required by CEQA.	Consistent.	Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i> , of this EIR. Consistent with this measure, the evaluation of impacts to biological resources was performed in accordance with CEQA.
<b>Measure R:</b> Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.	Consistent with implementation of Mitigation Measure MM 4.4-1 through MM 4.4-20.	Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i> , of this EIR. Consistent with this measure, the project would implement mitigation measures that require consultation with the California Department of Fish and Wildlife. The County has and will respond to all comments from reviewing agencies during the CEQA process.
<b>1.10.6 Surface Water and Groundwater</b>		
<b>Policy 34:</b> Ensure that water quality standards are met for existing users and future development.	Consistent with implementation of Mitigation measures MM 4.10-1.	Water quality impacts are evaluated in Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR. Consistent with this policy, the proposed project would implement best management practices during construction to avoid impacts to water quality. The project would also implement a Hazardous Materials Business Plan to reduce mixing of pollutants with stormwater onsite, thereby maintaining the integrity of the watershed.
<b>Policy 41:</b> Review development proposals to ensure adequate water is available to accommodate projected growth.	Consistent.	See 1.4, <i>Public Facilities and Services</i> , Goal 5, above.
<b>Policy 43:</b> Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2.	See 1.9, <i>Resources</i> , Policy 11, above.
<b>Policy 44:</b> Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the	Consistent with implementation of Mitigation Measures	Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR, discusses impacts and mitigation for potential impacts to the watershed during construction from pollutants, alteration of flow patterns, and changes in impervious surfaces. Consistent

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.	MM 4.10-1 and MM 4.10-2.	with this policy, construction-related impacts related to alteration of flow patterns and impervious surfaces would be less than significant.
<b>Measure Y:</b> Promote efficient water use by utilizing measures such as: (i) Requiring water-conserving design and equipment in new construction; (ii) Encouraging water-conserving landscaping and irrigation methods; and (iii) Encouraging the retrofitting of existing development with water conserving devices.	Consistent.	See 1.4, <i>Public Facilities and Services</i> , Goal 5, above.
<b>1.10.7 Light and Glare</b>		
<b>Policy 47:</b> Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.	Consistent with implementation of Mitigation Measures MM 4.1-4 through MM 4.1-6.	Aesthetic impacts are evaluated in Section 4.1, <i>Aesthetics</i> , of this EIR. This EIR serves to comply with this policy and reduce potential impacts through implementation of mitigation measures.
<b>Policy 48:</b> Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.	Consistent with implementation of Mitigation Measures MM 4.1-5 through MM 4.1-6.	See 1.10.7, <i>Light and Glare</i> , Policy 47, above.
<b>Measure AA:</b> The County shall utilize <i>CEQA Guidelines</i> and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.	Consistent with implementation of Mitigation Measures MM 4.1-5 through MM 4.1-6.	See 1.10.7, <i>Light and Glare</i> , Policy 47, above.

**CHAPTER 2 CIRCULATION ELEMENT**

**2.1 Introduction**

<b>Goal 4:</b> Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.	Consistent.	See 1.3, <i>Physical and Environmental Constraints</i> , Goal 1, of the Kern County General Plan, above.
<b>Goal 5:</b> Maintain a minimum [level of service] LOS D for all roads throughout the County.	Consistent.	Traffic impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR. Consistent with this goal, the proposed project

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>2.3.3 Highways Plan</b>		
<b>Goal 5:</b> Maintain a minimum Level of Service (LOS) D.	Consistent.	would maintain a minimum LOS C or better for all roads throughout the County.
<b>Policy 1:</b> Development of roads within the County shall be in accordance with the Circulation Diagram Map. The charted roads are usually on section and mid-section lines. This is because the road center line can be determined by an existing survey.	Consistent.	Section 4.14, <i>Transportation</i> , of this EIR provides a discussion of County circulation consistency. The project would include internal service roads. Consistent with this policy, all road improvements would be completed per County code and regulations. If access roads need to be built along lines other than those on the circulation diagram map, the Project Proponent would negotiate necessary easements to allow this, in according with the County.
<b>Policy 3:</b> This plan’s road-width standards are listed below. These standards do not include state highway widths that would require additional right-of-way for rail transit, bike lanes, and other modes of transportation. Kern County shall consider these modifications on a case-by-case basis. <ul style="list-style-type: none"> <li>• Expressway [Four Travel Lanes] Minimum 110-foot right-of-way;</li> <li>• Arterial [Major Highway] Minimum 110-foot right-of-way;</li> <li>• Collector [Secondary Highway] Minimum 90-foot right-of-way;</li> <li>• Commercial-Industrial Street Minimum 60-foot right-of-way; and</li> <li>• Local Street [Select Local Road] Minimum 60-foot right-of-way.</li> </ul>	Consistent.	Traffic impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR. Consistent with this measure, the proposed project would be in compliance with the road network policies and would implement the Kern County Development Standards as they relate to road standards and planning requirements.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure A:</b> The Planning Department shall carry out the road network Policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which implements the Kern County Development Standards that includes road standards related to urban and rural planning requirements. These ordinances also regulate access points. Planning Department can help developers and property owners in identifying where planned circulation is to occur.</p>	Consistent.	See 2.3.3, <i>Highway Plan</i> , Policy 3, of the Kern County General Plan, above.
<b>2.3.4 Future Growth</b>		
<p><b>Goal 1:</b> To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.</p>	Consistent.	See 2.3.3, <i>Highway Plan</i> , Policy 3, of the Kern County General Plan, above.
<p><b>Policy 2:</b> The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below Level of Service (LOS) D. Utilization of the CEQA process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.</p>	Consistent with implementation of Mitigation Measure MM 4.14-1	Traffic impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR. Consistent with this policy, the proposed project construction would maintain a minimum LOS C or better for intersections utilized to access the project. Additionally, implementation of Mitigation Measure MM 4.14-1 would require the preparation of a Construction Traffic Control Plan to be reviewed and approved by Kern County and Caltrans, which would further reduce impacts to traffic and transportation.
<p><b>Policy 4:</b> As a condition of private development approval, developers shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along State routes are necessary then roads shall be built to Caltrans standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.</p>	Consistent.	See 2.3.3, <i>Highway Plan</i> , Policy 1, above.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Policy 5:</b> When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.	Consistent.	Consistent with this policy, the Project Proponent would fund improvements to project-related driveways that provide access to County, city, or State roads.
<b>Policy 6:</b> The County may accept a developer’s road into the county’s maintained road system. This is at Kern County’s discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.	Consistent.	The proposed project would not develop a public road. However, consistent with this policy, the Project Proponent would be required to obtain approval from the County via an encroachment permit where any proposed private access driveways for the project would intersect public right-of-way.
<b>Measure C:</b> Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards. 2.3.6 Vacation of Existing or Recorded Future Streets, Highways, or Public Easements.	Consistent.	Traffic impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR. Consistent with this policy, the proposed project would comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.
<b>2.3.6 Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</b>		
<b>Goal 1:</b> Provide a means for guiding decisions on vacating public roads.	Consistent.	As discussed in Chapter 3, <i>Project Description</i> , of this EIR, the project has requested approval of Specific Plan Amendments to the Circulation Element of the Willow Springs Specific Plan, to eliminate Future Road Reservations, and has requested vacations of public access easements; those requests are subject to approval by the Kern County Board of Supervisors. With the approval of the aforementioned requests for Specific Plan Amendments and non-summary vacation of public access easement, the proposed project would be consistent with this goal.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 1:</b> A road vacation influencing the construction or operation of expressway, an arterials or collector highway may occur with, or after, amending this Element. Kern County will not vacate any public expressway, arterial or collector highway right-of-way without amendment to this Element. The County will need to amend the right-of way status to local or commercial-industrial streets.</p>	Consistent.	<p>See 2.3,6, <i>Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</i>, Goal 1, above.</p>
<p><b>Policy 2:</b> A study, prepared at the applicant's expense, shall accompany the road vacation application. The study should provide information that will aid in finding the importance of the entire length of the right-of-way. The study would include a review of existing and proposed land uses and localized traffic modeling. This will help Kern County decide what corresponding changes are needed to the Land Use, Open Space and Conservation Element, or affected specific plan. This also will help Kern County decide if additional public road services or other traffic management are required elsewhere.</p>	Consistent.	<p>See 2.3,6, <i>Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</i>, Goal 1, above.</p>
<p><b>Policy 3:</b> If the road vacation applicant is a private entity, all costs for the public hearing shall be borne by the applicant. Also, costs associated with providing any necessary additional public road services or other traffic management caused by the road vacation shall be paid by the applicant.</p>	Consistent.	<p>See 2.3,6, <i>Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</i>, Goal 1, above.</p>
<p><b>Policy 4:</b> The vacation of a road shall not take away legal access to adjacent properties or "land-lock" any legal lot or parcel of record. Legal access shall be determined through a report submitted with the application for road vacation.</p>	Consistent.	<p>See 2.3,6, <i>Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</i>, Goal 1, above.</p>
<p><b>Policy 5:</b> If Kern County determines that the right-of-way is not needed for circulation in the general area, a road vacation may be authorized. An acceptable project shall be determined through a report submitted with the road vacation application and in keeping with traffic modeling parameters of this Plan.</p>	Consistent.	<p>See 2.3,6, <i>Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</i>, Goal 1, above.</p>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Policy 6:</b> A road vacation may be authorized if physical conditions such as natural, or manmade topography prevent rational extension of the facility. Physical conditions affecting roadways shall be determined through a report submitted with the road vacation application.	Consistent.	<i>See 2.3,6, Vacation of Existing or Recorded Future Streets, Highways, or Public Easements, Goal 1, above.</i>
<b>Policy 7:</b> A road vacation shall only affect public, recorded rights-of-way or public service easements. The potential effects of a road vacation upon rights-of-way and easements are to be determined by a report submitted with the road vacation application. A vacation of private access or private service easement is not under County jurisdiction. Kern County considers these matters "civil" actions. These civil actions should be acted upon accordingly.	Consistent.	<i>See 2.3,6, Vacation of Existing or Recorded Future Streets, Highways, or Public Easements, Goal 1, above.</i>
<b>Policy 8:</b> A road vacation may be authorized if the right-of-way is not improved or used for its original purpose. Existing improvements and facility use shall be determined by a report submitted with the road vacation application.	Consistent.	<i>See 2.3,6, Vacation of Existing or Recorded Future Streets, Highways, or Public Easements, Goal 1, above.</i>
<b>Policy 9:</b> A road vacation may be authorized to remove excess right-of-way caused by relocation, or at the beginning of a general plan amendment proceeding. Excess right-of-way shall be determined through a report submitted with the road vacation application.	Consistent.	<i>See 2.3,6, Vacation of Existing or Recorded Future Streets, Highways, or Public Easements, Goal 1, above.</i>
<b>Policy 10:</b> A road vacation may be approved if there is an agreement to close a public street. A road vacation may be approved with acknowledgment of an impassable street. A road vacation may be approved with a land division map over the area of vacation if the project has comparable methods of vehicular access.	Consistent.	<i>See 2.3,6, Vacation of Existing or Recorded Future Streets, Highways, or Public Easements, Goal 1, above.</i>
<b>Policy 11:</b> A road vacation procedure may be used for considering public service easement or utility service easement abandonments. The procedure is the same as any public right-of-way vacation.	Consistent.	<i>See 2.3,6, Vacation of Existing or Recorded Future Streets, Highways, or Public Easements, Goal 1, above.</i>

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 12:</b> A vacation of improved road right-of-way, or public service easement, should not occur until the lead agency makes findings. One important finding is the land is no longer needed for public use. A vacation of improved road right-of-way, or public service easement, should not occur until the right-of-way is superseded by relocation, and improved to acceptable Kern County Development standards. The Board of Supervisors shall have accepted the replacement facility into the maintained road system.</p>	Consistent.	See 2.3,6, <i>Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</i> , Goal 1, above.
<p><b>Policy 13:</b> A general vacation proceeding (consistent with State of California Streets and Highway Code) will require a public hearing when the vacation affects existing in place facilities or is a project caused by relocating right-of-way.</p>	Consistent.	See 2.3,6, <i>Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</i> , Goal 1, above.
<p><b>Policy 14:</b> A summary vacation shall be consistent with State of California Streets and Highway Code. A summary vacation may be used when the right-of-way does not exist, is unused, or moved. A summary vacation may be used where right-of-way is impassable, unnecessary for present or prospective public use, or is excess or public service easement land.</p>	Consistent.	See 2.3,6, <i>Vacation of Existing or Recorded Future Streets, Highways, or Public Easements</i> , Goal 1, above.
<b>2.3.10 Congestion Management Programs</b>		
<p><b>Goal 1:</b> To satisfy the trip reduction and travel demand requirements of the Kern Council of Government's Congestion Management Program.</p>	Consistent with Mitigation Measure MM 4.14-1.	Traffic impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR. Consistent with this goal, the proposed project would implement Mitigation Measure 4.14-1, and comply with the requirements of the Kern Council of Government's Congestion Management Program.
<b>2.5.1 Trucks and Highways</b>		
<p><b>Goal 1:</b> Provide for Kern County's heavy truck transportation in the safest way possible.</p>	Consistent with Mitigation Measure MM 4.14-1.	Traffic impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR. Consistent with this policy, the proposed project would implement Mitigation Measure MM 4.14-1, which would comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards, which would ensure the provision of heavy truck transportation resulting from project implementation in the safest way possible.



**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Goal 2:</b> Reduce potential overweight trucks.	Consistent with Mitigation Measure MM 4.14-1.	See 2.5.1, <i>Trucks and Highways</i> , Goal 1, above.
<b>Goal 3:</b> Use State Highway System improvements to prevent truck traffic in neighborhoods.	Consistent with Mitigation Measure MM 4.14-1.	See 2.5.1, <i>Trucks and Highways</i> , Goal 1, above.
<b>Policy 1:</b> Caltrans should be made aware of the heavy truck activity on Kern County's roads.	Consistent with Mitigation Measure MM 4.14-1.	As discussed in Section 4.14, <i>Transportation</i> of this EIR, coordination and consultation with Caltrans will occur as necessary, consistent with this policy.
<b>2.5.4 Transportation of Hazardous Materials</b>		
<b>Goal 1:</b> Reduce risk to public health from transportation of hazardous materials.	Consistent with implementation of Mitigation Measure MM 4.9-1.	Section 4.9, <i>Hazards and Hazardous Materials</i> , of this EIR provides a discussion of Hazardous Materials Transportation and existing regulatory requirements of the California Vehicle Code that pertain to transport of hazardous materials and wastes. Consistent with this policy, the project would not pose a significant risk to public health from transportation of hazardous materials with implementation of Mitigation Measure MM 4.9-1, which requires the preparation of a Hazardous Materials Business Plan that would describe proper handling, storage, transport, and disposal techniques and methods to be used to avoid spills and minimize impacts in the event of a spill, would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to minimize exposure to maintenance workers and/or the public.
<b>Policy 1:</b> The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.	Consistent with implementation of Mitigation Measure MM 4.9-1.	See 2.5.4, <i>Transportation of Hazardous Materials</i> , Goal 1, above.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>KERN COUNTY GENERAL PLAN CHAPTER 3, NOISE ELEMENT</b>		
<b>3.3 Sensitive Noise Areas</b>		
<b>Goal 1:</b> Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.	Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.	Noise impacts, sensitive receptors and County noise thresholds are evaluated in Section 4.12, <i>Noise</i> , of this EIR. As discussed in that section, with implementation of Mitigation Measures MM 4.12-1 through MM 4.12-6, the proposed project would not cause significant impacts to sensitive receptors. Thus, the project would be consistent with this goal.
<b>Goal 2:</b> Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.	Consistent	This section of the EIR discusses the land uses proposed by the project. As discussed in this section, the proposed project would be consistent with existing land use designations of the project site.
<b>Policy 1:</b> Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.	Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1, above.
<b>Policy 3:</b> Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.	Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1, above. Consistent with this policy the project would be encouraged to provide vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.
<b>Policy 4:</b> Utilize good land use planning principles to reduce conflicts related to noise emissions.	Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.	See 3.3, <i>Sensitive Noise Areas</i> , Goal 2, above. Noise-sensitive land uses are evaluated in Section 4.12, <i>Noise</i> , of this EIR.
<b>Policy 7:</b> Employ the best available methods of noise control.	Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1, above.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Measure A:</b> Utilize zoning regulations to assist in achieving noise-compatible land use patterns.	Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.	Upon approval of the proposed Specific Plan Amendments for land use designations and Zone Changes, the proposed project would be consistent with the land use and zoning designations of the project site.
<b>Measure C:</b> Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.	Consistent.	Consistent with this measure, the proposed project will be reviewed for conformance with the policies outlined in this element.
<b>Measure F:</b> Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB L <sub>dn</sub> and interior noise levels in excess of 45 dB L <sub>dn</sub> .	Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1 and Measure A, of the Kern County General Plan.
<b>Measure G:</b> At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall: a) Be the responsibility of the applicant. b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics. c) Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.	Consistent.	Consistent with this measure, the proposed project has prepared an acoustical analysis in accordance with the requirements of Chapter 3, <i>Noise Element</i> , Measure G, of the Kern County General Plan.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure I:</b> Noise analyses shall include recommended mitigation, if required, and shall:</p> <ul style="list-style-type: none"> <li>a) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.</li> <li>b) Include estimated noise levels, in terms of CNEL, for existing and projected future (10–20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.</li> <li>c) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.</li> <li>d) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.</li> </ul>	<p>Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.</p>	<p>Consistent with this measure, a noise assessment was conducted for the proposed project and is referenced in Section 4.12, <i>Noise</i>, of this EIR. In accordance with this measure, the noise assessment includes representative noise measurements, recommended best management practices, estimated noise levels, in terms of CNEL, and estimates of noise exposure.</p>
<p><b>Measure J:</b> Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.12-1 through MM 4.12-6.</p>	<p>Consistent with this measure, the recommendations and requirements imposed pursuant to the findings of the acoustical analysis would be included with project implementation.</p>

**KERN COUNTY GENERAL PLAN CHAPTER 4, SAFETY ELEMENT**

**4.1 Introduction**

<p><b>Goal 1:</b> Minimize injuries and loss of life and reduce property damage.</p>	<p>Consistent.</p>	<p>Consistent with this goal, the project would be required to comply with adopted safety regulations, such as the Fire Code, and related policies in the General Plan.</p>
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**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint</b>		
<b>Measure A:</b> All hazards (geologic, fire, and flood) should be considered whenever a Planning Commission or Board of Supervisor’s action could involve the establishment of a land use activity susceptible to such hazards.	Consistent.	Section 4.7, <i>Geology and Soils</i> , of this EIR, discusses potential geologic hazards, Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR, discusses potential flood hazards, and Section 4.17, <i>Wildfire</i> , of this EIR discusses potential fire hazards as a result of project implementation. Consistent with this measure, all hazards have been considered as part of this analysis.
<b>Measure F:</b> The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.	Consistent.	Consistent with this policy, the proposed project would not include development for human occupancy and would not be located near an active earthquake fault.
<b>4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure</b>		
<b>Policy 1:</b> The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.	Consistent.	Consistent with this policy, the proposed project would not include development for human occupancy and would not be located near an active earthquake fault.
<b>Measure B:</b> Require geological and soils engineering investigations in identified significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.	Consistent.	See 1.3, <i>Physical and Environmental Constraints</i> , Measure D, of the Kern County General Plan, above.
<b>Measure C:</b> The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible in accordance with State and County regulations.	Consistent.	See 1.3, <i>Physical and Environmental Constraints</i> , Goal 1, of the Kern County General Plan, above.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>4.5 Landslides, Subsidence, Seiche, and Liquefaction</b>		
<b>Policy 3:</b> Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.	Consistent.	As discussed in Section 4.7, <i>Geology and Soils</i> , of this EIR, conditions for landslides are also not present at the site which is characterized by relatively gradual inclines across the site. Grading would be subject to compliance with the NPDES General Construction Permit requirements and the implementation of required BMPs would have the ability to minimize the potential for erosion or loss of topsoil. Adherence to the requirements of the Kern County Building Code and the California Building Code (CBC) would ensure that effects from seismic-related ground failure including liquefaction would be minimized. The site is not within an earthquake zone of required investigation for liquefaction. See Section 4.7, <i>Geology and Soils</i> , of this EIR.
<b>4.6 Wildland and Urban Fire</b>		
<b>Policy 1:</b> Require discretionary projects to assess impacts on emergency services and facilities.	Consistent with implementation of Mitigation Measure MM 4.13-1 and Mitigation Measure MM 4.13-2.	Consistent with this policy, impacts on emergency services and facilities are discussed and evaluated in Section 4.13, <i>Public Services</i> , of this EIR. The project would implement Mitigation Measure MM 4.13-2 to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities.
<b>Policy 3:</b> The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.	Consistent with implementation of Mitigation Measure MM 4.13-1.	The project would not interfere or prohibit the County’s ability to meet this policy. Mitigation Measure MM 4.13-1 requires the proponent to develop a fire safety plan for use during construction and operational activities. All onsite employees would be trained on fire safety and how to respond to onsite fires, should they occur. See Sections 4.9, <i>Hazards and Hazardous Materials</i> , 4.13, <i>Public Services</i> , and 4.17, <i>Wildfire</i> , of this EIR.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Policy 4:</b> Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.	Consistent with implementation of Mitigation Measure MM 4.14-1.	Section 4.14, <i>Transportation</i> , of this EIR includes Mitigation Measure MM 4.14-1 would require the approval of a Construction Traffic Control Plan, encroachments and or other necessary permits by Caltrans and/or the Kern County Roads Dept. The Project Proponent would develop and implement a fire safety plan for use during construction and operation.
<b>Policy 6:</b> All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.	Consistent with implementation of Mitigation Measure MM 4.13-1.	Consistent with this policy, the project would be required to comply with the adopted Fire Code and the requirements of the Kern County Fire Department.
<b>Measure A:</b> Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.	Consistent with implementation of Mitigation Measure MM 4.13-1 and MM 4.13-2.	Consistent with this measure, the proposed project would implement Mitigation Measure MM 4.13-1, which would require preparation and implementation of a fire safety plan to ensure the provision of appropriate access. The project would implement Mitigation Measure MM 4.13-2 to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities.
<b>4.9 Hazardous Materials</b>		
<b>Measure A:</b> Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.	Consistent with implementation of Mitigation Measure MM 4.13-1.	See 4.6, <i>Wildland and Urban Fire</i> , Policy 6, above.
<b>KERN COUNTY GENERAL PLAN CHAPTER 5, ENERGY ELEMENT</b>		
<b>5.2 Importance of Energy to Kern County</b>		
<b>Policy 8:</b> The County should work closely with local, state, and federal agencies to assure that energy projects (both discretionary and ministerial) avoid or minimize direct impacts to fish, wildlife, and botanical resources, wherever practical.	Consistent.	See 1.10.5, <i>Threatened and Endangered Species</i> , Policy 28, above.

**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 10:</b> The County should require acoustical analysis for energy project proposals that might impact sensitive and highly-sensitive uses in accordance with the Noise Element of the General Plan.</p>	Consistent.	See 3.3, <i>Sensitive Noise Areas</i> , Goal 1, above.
<p><b>5.4.5 Solar Energy Development</b></p>		
<p><b>Goal 1:</b> Encourage safe and orderly commercial solar development.</p>	Consistent.	<p>Consistent with this goal, the proposed project requires consideration and approval of a Conditional Use Permit as well as other discretionary actions that ensure compliance with all policies and would develop a solar PV facility that would generate 270 MW of solar energy, and would offset an equivalent amount of fossil fuel-generated electrical power. The site is on vacant land and is located at a distance from established communities. The location of the site would ensure a safe and orderly development of the solar facilities.</p>
<p><b>Policy 1:</b> The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.</p>	Consistent.	<p>Consistent with this policy, the proposed project requires consideration and approval of a Conditional Use Permit as well as other discretionary actions that ensure compliance with all policies would develop a solar PV facility capable of generating 270 MW of solar energy. Operation of the proposed project would improve air quality within the County and assist the County in meeting attainment goals. See Section 4.3, <i>Air Quality</i>, of this EIR.</p>
<p><b>Policy 3:</b> 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.</p>	Consistent.	<p>Consistent with this policy, the project proposes the development of PV power generation and storage facilities in the desert region of Kern County. Final review of the proposed project by the Kern County Planning and Natural Resources Department, requires consideration and approval of a Conditional Use Permit as well as other discretionary actions that ensure compliance with all policies as well as adherence to all applicable local, state and federal regulations, would ensure that the proposed project would not pose significant environmental or public health and safety hazards.</p>



**TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 4:</b> The County shall encourage solar development in the desert and valley regions previously disturbed, and discourage the development of energy projects on undisturbed land supporting state or federally protected plant and wildlife species.</p>	Consistent.	<p>Consistent with this policy, the project proposes the development of PV power generation and storage facilities in the desert region of Kern County. Final review of the proposed project by the Kern County Planning and Natural Resources Department, requires consideration and approval of a Conditional Use Permit as well as other discretionary actions that ensure compliance with all policies as well as adherence to all applicable local, state and federal regulations.</p>
<p><b>5.4.7 Transmission Lines</b></p>		
<p><b>Goal 1:</b> To encourage the safe and orderly development of transmission lines to access Kern County's electrical resources along routes, which minimize potential adverse environmental effects.</p>	Consistent.	<p>Final review of the proposed project by the Kern County Planning and Natural Resources Department, as well as adherence to all applicable local, state and federal regulations, would ensure that the proposed project's transmission lines would not pose significant environmental or public health and safety hazards.</p>
<p><b>Policy 5:</b> The County should discourage the siting of above-ground transmission lines in visually sensitive areas.</p>	Consistent.	<p>See 5.4.7, <i>Transmission Lines</i>, Goal 1, above. Further, visual impacts are evaluated in Section 4.1, <i>Aesthetics</i>, of this EIR. The proposed project would not place above-ground transmission lines in visually sensitive areas. The transmission line poles would be visually similar to existing utility poles common in the study area and would blend with existing utility lines associated with nearby solar facilities within 3 miles of the project site.</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>WILLOW SPRINGS SPECIFIC PLAN</b>		
<b>Land Use Element</b>		
<p><b>Policy 2:</b> Encourage only those industries that do not significantly increase air pollution levels.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-3.</p>	<p>Consistent with this policy, the proposed project would implement Mitigation Measures MM 4.3-1 through MM 4.3-3 of Section 4.3, <i>Air Quality</i>, of this EIR, which would reduce impacts to air quality to the extent feasible. The project would comply with all applicable Eastern Kern County Air Pollution Control District, rules and regulations. Additionally, the project would be designed and constructed in accordance with energy conservation practices, such as those found in the Building Energy Efficiency Standards, and all State and local laws. See Sections 4.3, <i>Air Quality</i>, 4.6, <i>Energy</i>, and 4.8, <i>Greenhouse Gas Emissions</i>, of this EIR. The project cannot reduce impacts to less than significant even with required mitigation. Appropriate findings under CEQA would be required to be made by the decision makers in order to approve the project despite the significant and unavoidable cumulative impacts on air quality.</p>
<p><b>Policy 5:</b> Encourage the maintenance of visual aesthetics in all new construction.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.1-1 through MM 4.1-3.</p>	<p>Visual impacts are evaluated in Section 4.1, <i>Aesthetics</i>, of this EIR. Consistent with this policy, the project would prepare a Maintenance, Trash Abatement, and Pest Management Program that will be submitted to the Kern County Planning and Natural Resources Department. Additionally, the Project Proponent/operator shall implement color treatment to blend in with the colors found in the natural landscape as well as maintain natural vegetation within the project boundary. The project cannot reduce impacts to less than significant even with required mitigation. Appropriate findings under CEQA would be required to be made by the decision makers in order to approve the project despite the significant and unavoidable cumulative impacts on aesthetics.</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 6:</b> Require developers to clean up any identified hazardous waste sites prior to submittal of any land division or development project.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.9-1.</p>	<p>Section 4.9, <i>Hazards and Hazardous Materials</i>, of this EIR provides a discussion of hazardous materials. Consistent with this policy, the project would implement Mitigation Measure MM 4.9-1, which requires the preparation of a Hazardous Materials Business Plan that would describe proper handling, storage, transport, and disposal techniques and methods to be used to avoid spills and minimize impacts in the event of a spill, would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to minimize exposure to maintenance workers and/or the public.</p>
<p><b>Policy 8:</b> New and/or existing developments shall comply with the Kern County Zoning Ordinance and this Specific Plan. Where conflicts appear, the more restrictive requirements shall prevail.</p>	<p>Consistent with implementation of Mitigation MM 4.3-1 and MM 4.3-2.</p>	<p>Consistent with this policy, the proposed project would comply with the requirements of the Kern County Zoning Ordinance as evaluated in various sections of this EIR including, Section 4.3, <i>Air Quality</i> and Section 4.15, <i>Transportation</i>. Additionally, this section of the EIR discusses the land uses proposed by the project. As discussed in this section, the proposed project would be consistent with the Kern County Zoning Ordinance and the Willow Springs Specific Plan.</p>
<p><b>Policy 10:</b> Require that construction sites be provided with a soil retardant measure approved by the County of Kern (Department of Planning and Development Services and the Environmental Health Services Department) to reduce fugitive dust or blowing sand.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-3.</p>	<p>Air quality and GHG impacts are evaluated in Sections 4.3, <i>Air Quality</i>, and 4.8, <i>Greenhouse Gas Emissions</i>, of this EIR. Consistent with this policy, the proposed project would implement Mitigation Measures MM 4.3-1 through MM 4.3-3, which would further reduce fugitive dust emissions during construction and operation in compliance with the County of Kern. Air quality mitigation measures include diesel emission-reduction measures during construction, fugitive dust control measures, and Valley Fever exposure minimization measures.</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 11:</b> Retain vegetation until actual construction begins.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-20.</p>	<p>Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. This EIR serves to comply with this policy and reduce potential impacts to vegetation with mitigation. Additionally, the project would be developed and operated in accordance with all local, state and federal laws pertaining to the preservation of sensitive species.</p>
<p><b>Resource</b></p>		
<p><b>Goal 3:</b> Encourage retention of productive agricultural and dormant mineral resources by imposing a restriction on allowing urban type land uses on nearby adjacent lands.</p>	<p>Consistent.</p>	<p>Upon approval of the proposed zone changes, the project site would be located on land that is zoned as A (Exclusive Agriculture) and A-1 (Limited Agriculture), and implementation of the proposed project would prevent livestock grazing on the site. Other uses besides agriculture, including solar energy generation and storage, are permitted within the A District with the approval of a CUP. The project would not involve additional change in the existing environment besides those described in this EIR. Direct disturbance related to the project would be approximately 1,343 acres. Additionally, as discussed in the NOP/IS, the project site is not located within the bounds of a mineral resource area. The project site is not located in areas of agricultural use or in areas containing petroleum, or mineral resources. Therefore, the proposed project would be consistent with this goal.</p>
<p><b>Policy 1:</b> Provide a method encouraging the preservation of agricultural land</p>	<p>Consistent.</p>	<p>As discussed in Section 4.2, <i>Agriculture and Forestry Resources</i>, the project would convert 401 acres of Farmland of Statewide Importance and Unique Farmland, it would only result in loss of a small portion (less than 1 percent) of the harvested agricultural land within Kern County and as mentioned above, the project site has not been used for irrigated agriculture for the past five years. Project impacts related to converting Unique Farmland, or Farmland of Statewide Importance to nonagricultural use would be less than significant. Therefore, the proposed project would be consistent with this goal.</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 2:</b> Initial development within the Update area shall, when possible, be directed towards previously impacted areas (i.e., agricultural fields).</p>	<p>Consistent.</p>	<p>Consistent with this policy, the project proposes the development of a solar PV power generation and storage facility in the desert region of Kern County. Final review of the proposed project by the Kern County Planning and Natural Resources Department requires consideration and approval of a Conditional Use Permit as well as other discretionary actions that ensure compliance with all policies as well as adherence to all applicable local, state and federal regulations.</p>
<p><b>Policy 3:</b> To ensure compliance with applicable State and federal laws and to protect the biological resources present in the Specific Plan area.</p>	<p>Consistent.</p>	<p>Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. This EIR serves to comply with this policy and reduce potential impacts with mitigation. Additionally, the project would be developed and operated in accordance with all local, state and federal laws pertaining to the preservation of sensitive species.</p>
<p><b>Measure 15:</b> Where possible, project development within the Specific Plan Update area shall be designed to avoid displacement or destruction of Joshua tree habitat, to the satisfaction of the Kern County Agricultural Commissioner’s Office. Areas adjacent to the woodland shall have a 50-foot setback from the Joshua tree plants. Within that setback, a native plant cover should be restored to natural habitat values to serve as a bugger, if such plant cover is not present.</p>	<p>Consistent with implementation of special-status plant avoidance and minimization measures described in Mitigation Measure MM 4.4-1 through MM 4.4-14.</p>	<p>Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. This EIR serves to comply with this measure and reduce potential impacts with mitigation. As discussed in Section 4.4, significant impacts could occur to plant species including Joshua trees, silver cholla, and beavertail cactus on the project site. However, these impacts would be mitigated to a level of less than significant through the implementation of Mitigation Measures MM 4.4-1 through MM 4.4-14.</p>
<p><b>Measure 16:</b> A Joshua Tree Preservation and Transportation Plan shall be developed by the applicants for each parcel where Joshua trees are located on site. The plan shall be submitted to the Kern County Agricultural Commissioner’s office for review and approval to grading permit issuance.</p>	<p>Consistent with implementation of special-status plant avoidance and minimization measures described in Mitigation Measure MM 4.4-1 through MM 4.4-14.</p>	<p>See <i>Resources</i>, Measure 15, above. Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR.</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure 23:</b> A Joshua Tree Preservation and/or Transplantation Plan shall be developed by applicants of discretionary projects for each parcel where Joshua trees are located on site. The plan shall be submitted to the Kern County Agricultural Commissioner for review and approval prior to grading permit issuance.</p>	<p>Consistent with implementation of special-status plant avoidance and minimization measures described in Mitigation Measure MM 4.4-1 through MM 4.4-14.</p>	<p>See <i>Resources</i>, Measure 15, above. Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR.</p>
<p><b>Measure 24:</b> Prior to issuance of any grading permits for individual projects, individual project applicants shall consult with the Regional Water Quality Control Board, State Department of Fish and Game and/or U.S. Fish and Wildlife Service, and the Army Corps of Engineers to identify potentially required permits. Compliance with this measure will be confirmed through the submittal of a letter (in conjunction with submittal of grading permit applications) to the County demonstrating compliance with the above-mentioned agencies.</p>	<p>Consistent.</p>	<p>Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR, discusses required compliance with Kern County’s NPDES Applicability legislation, which requires projects to comply with the State Water Resources Control Board’s Construction General Permit. Additionally, Biological Resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. This EIR serves to comply with this policy and reduce potential impacts with mitigation. As part of the biological resources evaluation and habitat assessment conducted for the project, relevant state and federal agencies were contacted to ensure that appropriate information about the project site were being gathered.</p>
<p><b>Measure 25:</b> Prior to issuance of grading permits, individual project applicants shall obtain appropriate permits as determined necessary by the Regional Water Quality Control Board, U.S. Fish and Wildlife Service, State Department of Fish and Game, and Army Corps of Engineers.</p>	<p>Consistent.</p>	<p>See <i>Resources</i>, Measure 24, above. Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR and compliance with the State Water Resources Control Board is discussed in Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR.</p>
<p><b>Air Quality</b></p>		
<p><b>Goal 1:</b> Imposition of appropriate mitigation measures to reduce where practical to do so, the effect short-term and long-term projects have on the area which involve grading activities, erosion controls, revegetation of disturbed sites, and provisions to introduce into the plan area a competitive job market to reduce travel times.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-3.</p>	<p>Air quality and GHG impacts are evaluated in Sections 4.3, <i>Air Quality</i>, and 4.8, <i>Greenhouse Gas Emissions</i>, of this EIR. Consistent with this policy, the proposed project would implement Mitigation Measures MM 4.3-1 through MM 4.3-3, which would reduce impacts to air quality to the extent feasible. Air quality mitigation measures include diesel emission-reduction measures during</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Policy 1:</b> Compliance with the Mitigation/Implementation Measures and enactment of an approved Air Quality Attainment Plan.	Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-3.	construction, fugitive dust control measures, and Valley Fever exposure minimization measures.  Air quality impacts are evaluated in Section 4.3, <i>Air Quality</i> , of this EIR. Consistent with this policy, the proposed project would implement Mitigation Measures MM 4.3-1 through MM 4.3-3, which would reduce impacts to air quality to the extent feasible. The project would be in compliance with all applicable Eastern Kern County Air Pollution Control District, rules and regulations.
<b>Measure 1:</b> To mitigate potential dust generation impacts, the Willow Springs Specific Plan Update project shall comply with applicable County regulations (to the satisfaction of the Kern County Air Pollution Control District), which require specific dust control measures.	Consistent with implementation of Mitigation Measure MM 4.3-2.	The project would implement Mitigation Measures MM 4.3-2 which would require the implementation of a Fugitive Dust Control Plan prior to the issuance of grading or building permits in order to control fugitive PM emissions during construction. See Section 4.3, <i>Air Quality</i> , of this EIR.
<b>Measure 2:</b> During construction, all grading activities shall be ceased during periods of high winds (i.e., greater than 30 miles per hour [mph]). To assure compliance with this measure, grading activities are subject to periodic inspections by County staff.	Consistent.	The project would adhere to Chapter 17.28 of the Kern County Code, which regulates grading within the County. Specifically, the project would adhere to Section 17.28.180 (Grading Inspection), which requires that grading operations must be inspected by the building official.
<b>Measure 3:</b> Construction equipment shall be fitted with the most modern emission control devices and be kept in proper tune. Motors out of proper tune can result in emissions that vastly exceed recommended standards.	Consistent with implementation of Mitigation Measure MM 4.3-1.	The project would implement Mitigation Measure MM 4.3-1, which is intended to limit diesel emission reductions during construction. Mitigation Measure MM 4.3-1 would require that off-road equipment engines over 25 horsepower be equipped with EPA Tier 3 or higher engines if locally available. Mitigation Measure MM 4.3-1 also outlines other specific measures to ensure that all equipment is used efficiently, such as reducing idling time and maintain all equipment in accordance with the manufacturer’s specifications. See Section 4.3, <i>Air Quality</i> , of this EIR.

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure 4:</b> The project applicants shall, to the extent feasible, implement applicable control measures contained in the Attainment Plan in effect at the time of adoption of this Specific Plan, by the Air Pollution Control District in 1991. (See Environmental Impact Report Air Quality for additional recommended mitigation measures, page 162.).</p>	<p>Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-3.</p>	<p>See <i>Air Quality</i>, Policy 1, above. Further, air quality impacts are evaluated in Section 4.3, <i>Air Quality</i>, of this EIR.</p>
<p><b>Measure 7:</b> All phases of the Willow Springs Specific Plan Update project shall comply with applicable rules and regulations of the Kern County Air Pollution Control District.</p>	<p>Consistent.</p>	<p>The project would implement Mitigation Measures MM 4.3-2 which would require the implementation of a Fugitive Dust Control Plan prior to the issuance of grading or building permits in order to control fugitive PM emissions during construction. See Section 4.3, <i>Air Quality</i>, of this EIR.</p>
<p><b>Biological Resources</b></p>		
<p><b>Policy 1:</b> Where possible, development shall be designated to avoid displacement of sensitive species.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-14.</p>	<p>Biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i>, of this EIR. This EIR serves to comply with this policy and reduce potential impacts with mitigation. Additionally, the project would be developed and operated in accordance with all local, state and federal laws pertaining to the preservation of sensitive species.</p>
<p><b>Policy 2:</b> Focused surveys shall be conducted by a County-approved biologist to establish the presence or absence of sensitive species.</p>	<p>Consistent.</p>	<p>As discussed in Section 4.4, <i>Biological Resources</i>, of this EIR, focused surveys were conducted at the project site for multiple species.</p>
<p><b>Policy 3:</b> Initial development within the area covered under the Willow Springs Specific Plan, when possible, will be directed towards previously impacted areas.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.4-5.</p>	<p>As discussed in Section 4.4, <i>Biological Resources</i>, of this EIR, during construction, operations and maintenance, and decommissioning, the Project Proponent/operator and/or contractor(s) shall implement the general avoidance and protective measures, which includes containing vehicle traffic within the planned impact area or in previously disturbed areas.</p>
<p><b>Cultural Resources</b></p>		
<p><b>Goal 1:</b> To preserve cultural resources contained on sensitive sites located within the Willow Springs Specific Plan area.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.5-1,</p>	<p>Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i>, of this EIR. This EIR serves to comply with this goal and includes Mitigation Measures</p>



**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
	MM 4.5-2, MM 4.5-3, and MM 4.5-4.	MM 4.5-1 through MM 4.5-4 to promote the preservation of cultural and historic resources where necessary.
<p><b>Policy 1:</b> Archaeological investigations shall be required of specific properties proposed for development. These sites are identified in the Environmental Impact Report under Cultural Resources – Literature and Records Search, page 77, and are listed as: CA-KER-2819, 2820, 2821; CA-KER-522, 1969, 2592, 2593, 2599, 2595 and 2714; CA-KER-129, 273, 298, 302, 303. (Record on file Southern San Joaquin Valley Information Center in Bakersfield – California State University of Bakersfield.</p>	Consistent with implementation of Mitigation Measures Mitigation Measures MM 4.5-2 and MM 4.5-3.	Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i> , of this EIR. Consistent with this policy, impacts to archaeological resources are evaluated in accordance with CEQA. This EIR serves to comply with this policy.
<p><b>Policy 2:</b> Recorded archaeological sites shall be subjected to individual studies prior to development.</p>	Consistent with implementation of Mitigation Measures Mitigation Measures MM 4.5-1 and MM 4.5-2.	See <i>Cultural Resources</i> , Policy 1, above. Further, impacts to cultural resources are evaluated in Section 4.5, <i>Cultural Resources</i> , of this EIR. This EIR serves to comply with this policy.
<p><b>Policy 15:</b> Require cultural resources report for those areas with high probability for prehistoric activity prior to issuance of any grading permits.</p>	Consistent.	Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i> , of this EIR. Consistent with this policy, cultural resources reports were prepared for the proposed project.
<b>Seismic Safety and Safety Element</b>		
<p><b>Goal 7:</b> Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone, and sewer lines, streets, and bridges located in areas of special flood hazard.</p>	Consistent with implementation of Mitigation Measure MM 4.10-2.	As described in Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR, the project site is located within the 100-year floodplain and is classified as having a 1 percent annual chance of flooding. Further, the project would be developed in accordance with the General Plan, Floodplain Management Ordinance and Mitigation Measure MM 4.10-2. Therefore, the proposed project would be consistent with this goal.
<p><b>Goal 9:</b> Comply with the requirements of the National Flood Insurance Program Regulations, Parts 59 and 60 of Title 44 of the Code of Federal Regulations.</p>	Consistent with implementation of Mitigation Measure MM 4.10-2.	See Seismic Safety and Safety Element, Goal 7, of the Willow Springs Specific Plan, above.

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Goal 15:</b> To protect community residents from undue hazards and costs associated with road maintenance, slope instability, improper drainage, and inadequate sewage treatment.	Consistent with implementation of Mitigation Measure MM 4.10-2.	See 1.9, <i>Resources</i> , Policy 11, of the Kern County General Plan, above.
<b>Policy 1:</b> New development within the 100-year floodplain shall be regulated in accordance with the Floodplain Management Section of the Department of Planning and Development Services according to the Flood Damage Prevention Ordinance, the Kern Land Division Ordinance, and the Kern County Zoning Ordinance as may be amended from time to time.	Consistent with implementation of Mitigation Measure MM 4.10-2.	As described in Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR, the project site is located within the 100-year floodplain and is classified as having a 1 percent annual chance of flooding. Further, the project would be developed in accordance with the General Plan, Floodplain Management Ordinance and Mitigation Measure MM 4.10-2. Therefore, the proposed project would be consistent with this measure.
<b>Policy 7:</b> Compliance with site-specific issues, goals, policies, and implementation measures contained in the Seismic/Safety Element of the Kern County General Plan.	Consistent.	See Chapter 4, Safety Element, of the Kern County General Plan, above.
<b>Policy 9:</b> All new construction in the plan area shall comply with Chapter 23 of the Uniform Building Code (UBC), which includes building pad and foundation design standards for structures in UBC Seismic Zone IV.	Consistent.	Construction of the proposed project would be subject to all applicable ordinances of the Kern County Building Code (Chapter 17.08) and Chapter 23 of the International Building Code (which replaced the UBC). Compliance with this policy would be ensured upon final review by the Kern County Public Works Department.
<b>Measure 3:</b> Areas within the 100-year floodplain shall be zoned with the appropriate FPP, FP, or FPS designation.	Consistent with implementation of Mitigation Measure MM 4.10-2.	See Seismic Safety and Safety Element, Goal 7, of the Willow Springs Specific Plan, above.
<b>Measure 4:</b> New development within the 100-year floodplain shall be regulated in accordance with the Flood Damage Prevention Ordinance and the Kern County Zoning Ordinance as they may be amended from time to time.	Consistent with implementation of Mitigation Measures MM 4.9-1 and MM 4.10-1.	Water quality impacts are evaluated in Section 4.10, <i>Hydrology and Water Quality</i> , of this EIR. Consistent with this policy, the proposed project would implement best management practices during construction to avoid impacts to water quality. In addition, the project would also implement a Hazardous Materials Business Plan to reduce mixing of pollutants with stormwater onsite, thereby maintaining the integrity of the watershed.

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure 24:</b> In order to combat the stormwater pollution created by the various land uses the following source control mitigation measures are required:</p> <ul style="list-style-type: none"> <li>a) Periodic cleaning (i.e., street sweeping) of paved areas to remove small particle size sediments with absorbed pollutants caused by uses of the area.</li> <li>b) Utilize established Best Management Practices (BMPs) for small on-site control of urban runoff water quality. These measures include infiltration trenches, infiltration basins, water quality inlets, vegetative biofilter, grass swales, and porous pavement.</li> </ul>	<p>Consistent with implementation of Mitigation Measure MM 4.10-2.</p>	<p>See Seismic Safety and Safety Element, Goal 7, of the Willow Springs Specific Plan, above.</p>
<p><b>Public Facilities Element</b></p>		
<p><b>Goal 3:</b> To restrict, if possible, any further and/or unnecessary drawdown of the water table within the plan area.</p>	<p>Consistent.</p>	<p>Public utility impacts are evaluated in Section 4.16, <i>Utilities and Service Systems</i>, of this EIR. As described therein, the project site is located within the Antelope Valley Groundwater Basin which has undergone adjudication, which restricts unnecessary drawdown of the basin water table. The adjudication process for the Antelope Valley Groundwater Basin was completed in 2015 which established a safe yield of 110,000 AFY. Because the amount of the water required for the project would be minimal and would be obtained from an existing source with existing water rights, impacts related to water supply would be less than significant. Thus, the project would be consistent with this goal.</p>
<p><b>Policy 2:</b> In evaluating a development application, Kern County will consider both its physical and fiscal impact on the local school district and other public facilities. If it is found that the district or facilities involved will, as a result, require additional facilities or incur costs requiring additional local revenues, the development project will be required as a condition of approval to contribute funds to the district for the costs directly attributable to the project.</p>	<p>Consistent.</p>	<p>See <i>Public Facilities Element</i>, Goal 3, above. Further, public service impacts are evaluated in Section 4.13, <i>Public Services</i>, of this EIR.</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 4:</b> New development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.13-2.</p>	<p>Impacts to public services are evaluated in Section 4.13, <i>Public Services</i>, of this EIR. Consistent with this policy, the project would implement Mitigation Measure MM 4.13-2 which would require the project to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services.</p>
<p><b>Policy 5:</b> Operation of any solid waste facility shall comply with standards provided by the Kern County Solid Waste Management Plan.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.16-1.</p>	<p>Consistent with this policy, the proposed project would develop a solar PV power generating facility that would not operate a solid waste facility. As discussed in Section 4.16, <i>Utilities and Service Systems</i>, of this EIR, the proposed project would be served by Kern County Waste Management and would comply with construction waste diversion requirements implemented by the County. Additionally, implementation of Mitigation Measure MM 4.16-1 would ensure compliance with waste diversion and recycling requirements by requiring recycling during construction, operation, and decommissioning of the project.</p>
<p><b>Measure 6:</b> The siting and establishment of solid waste transfer stations, landfills, recycling center, and cleanup programs shall be in accordance with Kern County's Solid Waste Management Plan.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.16-1.</p>	<p>See <i>Public Facilities Element</i>, Policy 5, above. Further, utility and service systems impacts are evaluated in Section 4.16, <i>Utilities and Service Systems</i>, of this EIR.</p>
<p><b>Measure 10:</b> New development shall contribute its pro rata share for circulation improvements, school impact fees, park land dedications/fees, and possible biota impact fees. As additional impact fees are adopted, they shall be incorporated into the Specific Plan text.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.13-2.</p>	<p>Consistent with this policy, the Project Proponent would fund improvements to on-site driveways that provide access to County, city, or State roads. The project would implement Mitigation Measure MM 4.13-2 which would require the project to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities. The project would also implement</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
		Mitigation Measures MM 4.13-3 and MM 4.13-4, if the project is sold to a city, county, or utility company with assessed taxes that total less than \$3,000 per megawatt per year, then that entity shall pay the taxes plus the amount necessary to equal the equivalent of \$3,000 per megawatt. The amount shall be paid for all years of operation.
<b>Measure 11:</b> The school district, along with the developer, shall provide Kern County with an alternative funding method, should an alternative be submitted with an impending development.	Consistent.	See <i>Public Facilities Element</i> , Goal 3, above. Further, public service impacts are evaluated in Section 4.13, <i>Public Services</i> , of this EIR.
<b>Measure 21:</b> The projects shall comply with all applicable Kern County code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.	Consistent with implementation of Mitigation Measure MM 4.13-1.	Consistent with this policy, the project would be required to comply with the County adopted Fire Code and the requirements of the Kern County Fire Department applicable for construction, access, water mains, fire flows, and fire hydrant.
<p><b>Measure 24:</b> Consideration shall be given to implementation of the following measure to reduce the impacts associated with solid waste generation:</p> <ul style="list-style-type: none"> <li>a) Compacting refuse would substantially reduce the number of refuse hauling trips and allow for more effective and sanitary disposal.</li> <li>b) Each project applicant shall comply with guidelines set forth by Kern County in accordance with AB 939 which mandates recycling programs for each jurisdiction in California and shall agree to be subject to universal collection for one- to four-unit residential projects and commercial.</li> <li>c) Where feasible, a community recycling center should be implemented to provide convenient recycling opportunities.</li> <li>d) Studies shall be conducted by Kern County prior to issuance of building permits, to determine a feasible location for an alternate landfill upon reaching capacity at Mojave-Rosamond concurrent with development approvals. County should initiate studies to site alternative landfill.</li> <li>e) Each project applicant shall comply with guidelines set forth by Kern County in accordance with AB 939 which mandates</li> </ul>	Consistent with implementation of Mitigation Measure MM 4.16-1.	Public utility impacts are evaluated in Section 4.16, <i>Utilities and Service Systems</i> , of this EIR. As described therein, the proposed project would be required to comply with all federal, State, and local statutes and regulations related to the handling and disposal of solid waste. Additionally, the proposed project would not generate a significant amount of waste that would exceed the capacity of local landfill. With the implementation of Mitigation Measure MM 4.16-1, a recycling coordinator would ensure the separation and proper disposal of recyclable materials and solid waste during construction and operation, resulting in less than significant impact to solid waste providers.

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

<b>Goals and Policies</b>	<b>Consistency Determination</b>	<b>Project Consistency</b>
recycling programs for each jurisdiction in California and shall agree to be subject to universal collection for one- to four-unit residential projects and commercial.		
<b>Measure 25:</b> The applicants are subject to school assessment fees pursuant to AB 2926.	Consistent.	See <i>Public Facilities Element</i> , Goal 3, above. Further, public service impacts are evaluated in Section 4.13, <i>Public Services</i> , of this EIR.
<b>Residential</b>		
<b>Policy 4:</b> Encourage the maintenance of natural vegetation until actual construction begins.	Consistent with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-20.	See <i>Land Use Element</i> , Policy 11, above. Further, biological resource impacts are evaluated in Section 4.4, <i>Biological Resources</i> , of this EIR. This EIR serves to comply with this policy and reduce potential impacts to vegetation with mitigation. Additionally, the project would be developed and operated in accordance with all local, state and federal laws pertaining to the preservation of sensitive species.
<b>Policy 8:</b> Require cultural resources report for those areas with a high probability for prehistoric activity.	Consistent with implementation of Mitigation Measures MM 4.5-2 and MM 4.5-3.	See <i>Cultural Resources</i> , Policy 15, above. Cultural resource impacts are evaluated in Section 4.5, <i>Cultural Resources</i> , of this EIR.
<b>Noise Element</b>		
<b>Goal 2:</b> To minimize disruption to the quality of life resulting from excessive noise.	Consistent.	Noise impacts, sensitive receptors and County noise thresholds are evaluated in Section 4.12, <i>Noise</i> , of this EIR. As discussed in that section, the proposed project would minimize disruption and noise impacts to sensitive receptors. Thus, the project would be consistent with this goal.
<b>Goal 3:</b> To maintain reasonable noise level standards, consistent with the Kern County Noise Element.	Consistent.	This section of the EIR discusses the land uses proposed by the project. As discussed in this section, the proposed project would be consistent with the Kern County Noise Element.
<b>Policy 1:</b> Noise emissions from new development will be controlled and off-site levels limited to the standards of the Kern County General Plan Noise Element.	Consistent.	See <i>Noise Element</i> , Goal 2 and Goal 3, above. The proposed project would be consistent with the Kern County General Plan Noise Element.

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Policy 3:</b> Land uses will be categorized in the following manner, and the noise level standards adopted in accordance with the Kern County Noise Element:</p> <ul style="list-style-type: none"> <li>• <b>Sensitive Land Uses.</b> Noise level does not affect the successful operation of these particular activities. A wide variety of uses can be included in this category, including public utilities, transportation systems, and other noise-related uses.</li> <li>• <b>Moderately Sensitive Land Uses.</b> Some degree of noise control must be present if these activities are to be successfully carried out. Included here are general business and recreational uses.</li> <li>• <b>Sensitive Uses.</b> Lack of noise control will severely impact these uses, reducing the quality of life. This category primarily contains residential uses.</li> <li>• <b>Highly Sensitive Uses.</b> A high degree of noise control is necessary for the successful operation of these activities. Examples include hospitals and churches.</li> </ul>	<p>Consistent.</p>	<p>See <i>Noise Element</i>, Goal 2 and Goal 3, above. The proposed project would be consistent with the Kern County General Plan Noise Element. Consistent with this policy, the proposed project will prepare an acoustical analysis in accordance with the requirements of Chapter 3, Noise Element, Measure G, of the Kern County General Plan.</p>
<p><b>Measure 2:</b> The implementation measures of the Kern County Noise Element are hereby adopted by reference.</p>	<p>Consistent.</p>	<p>This section of the EIR discusses the land uses proposed by the project. As discussed in this section, the proposed project would be consistent with existing land use and zoning designations of the project site. The proposed project would be consistent with implementation measures of the Kern County Noise Element.</p>
<p><b>Circulation Element</b></p>		
<p><b>Goal 5:</b> To maintain public safety within the plan area by providing a more direct and efficient circulation system for law enforcement and fire protection vehicles.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.14-1.</p>	<p>Section 4.15, <i>Transportation</i>, of this EIR, provides a discussion of circulation and preparation of a Traffic Control Plan. The project would include internal service roads. Consistent with this goal, all road improvements would be completed per Caltrans and/or County code and regulations. Additionally, Mitigation Measure MM 4.14-1, states that the Traffic Control Plan would ensure access for emergency vehicles to the project site.</p>

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

<b>Goals and Policies</b>	<b>Consistency Determination</b>	<b>Project Consistency</b>
<b>Goal 7:</b> To provide an adequate circulation system which will support the proposed land uses.	Consistent with implementation of Mitigation Measure MM 4.14-1.	See <i>Circulation Element</i> , Goal 5, above. Further, transportation and circulation impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR.
<b>Policy 7:</b> Require the widening of impacted roadways to handle increased traffic generated by new development.	Consistent with implementation of Mitigation Measure MM 4.14-1.	Traffic impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR. The increased project-related traffic would not cause a significant increase in congestion and/or significantly worsen the existing service levels at intersections on area roads, therefore not necessitating the widening of roadways. Additionally, implementation of Mitigation Measure MM 4.14-1 would require the preparation of a Construction Traffic Control Plan to be reviewed and approved by Kern County and Caltrans, which would further reduce impacts to traffic and transportation.
<b>Policy 8:</b> Encourage resourceful air quality improvement and reduction methods.	Consistent with implementation of Mitigation Measure MM 4.3-1.	See Section 4.3, <i>Air Quality</i> , of this EIR. The project would implement Mitigation Measure MM 4.3-1, which encourages resourceful air quality improvement and reduction methods. Mitigation Measure MM 4.3-1 would require that off-road equipment engines over 25 horsepower be equipped with EPA Tier 3 or higher engines if locally available. Mitigation Measure MM 4.3-1 also outlines other specific measures to ensure that all equipment is used efficiently, such as reducing idling time and maintain all equipment in accordance with the manufacturer’s specifications.
<b>Measure 9:</b> A traffic study in accordance with the requirements of Kern County and CalTrans, as appropriate, shall be submitted for all discretionary projects. Study shall demonstrate consistency with the Willow Springs Specific Plan.	Consistent with implementation of Mitigation Measure MM 4.14-1	Traffic impacts are evaluated in Section 4.14, <i>Transportation</i> , of this EIR. Consistent with this measure, implementation of Mitigation Measure MM 4.14-1 would require the preparation of a Construction Traffic Control Plan to be reviewed and approved by Kern County and Caltrans, which would further reduce impacts to traffic and transportation.
<b>Measure 13:</b> The Traffic Impact Fee Program implements Mitigation Measure 10 of the Willow Springs Final Environmental Impact Report (EIR).	Consistent.	Consistent with this measure, the Project Proponent would fund improvements to on-site driveways that provide access to County, city, or State roads.



**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<b>Water Quality and Availability</b>		
<b>Goal 1:</b> To ensure that new developments are provided with an adequate water supply and wastewater disposal/treatment facilities.	Consistent.	Water and wastewater impacts are evaluated in Section 4.16, <i>Utilities and Service Systems</i> , of this EIR. During the operations phase, the solar PV facility would require minimal water use, limited to occasional panel washing to increase average optical transmittance, as-needed dust control, and emergency fire suppression. Water supply for the project during operation would be supplied either from existing onsite wells accessing Antelope Valley Groundwater Basin (AVGWB) water, or the purchase of water from Rosamond Community Services District (RCSD). The operation of the proposed project would not require or result in the relocation or construction of new or expanded water facilities. In addition, The proposed project would not generate wastewater during the construction phase and would not require or result in the relocation or construction of new or expanded municipal wastewater facilities, and no connection to a public wastewater system is required or proposed. Wastewater generated during the construction phase would be accommodated in the adjacent previously approved BigBeau Solar O&M facility.
<b>Policy 1:</b> Water supply method and wastewater disposal/treatment facility shall be as required by Kern County.	Consistent.	See <i>Water Quality and Availability</i> , Goal 1, of the Willow Springs Specific Plan, above.
<b>Policy 2:</b> Separate environmental documentation shall be required for the methods of water supply and wastewater disposal/treatment selected.	Consistent.	See <i>Water Quality and Availability</i> , Goal 1, of the Willow Springs Specific Plan, above.

**TABLE 4.11-4: CONSISTENCY ANALYSIS WITH WILLOW SPRINGS SPECIFIC PLAN FOR LAND USE**

Goals and Policies	Consistency Determination	Project Consistency
<p><b>Measure 4:</b> The individual project applicants shall adhere to the following guidelines as established by the Department of Water Resources for flood damage prevention: -The slope and foundation designs for all structures shall be based on detailed soils and engineering studies.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.10-1.</p>	<p>As discussed in Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR, the project would be required to adhere to the Kern County Development Standards and Kern County Code of Building Regulations which require site drainage plans that include development standards designed to protect water quality. Specifically, the Project Proponent would be required to prepare and submit a drainage plan to the Kern County Public Works Department, for approval of post-construction structural and nonstructural BMPs that could include LID features such as drainage swales for collection of runoff prior to offsite discharge. Routine structural BMPs are intended to address water quality impacts related to drainage that are inherent in development. As discussed in Section 4.10, <i>Hydrology and Water Quality</i>, of this EIR, the proposed project would likely require one or more retention basins to meet County drainage requirement. Consistent with this policy, the proposed project would require the submission of a drainage plan to the County for review and would implement Mitigation Measure MM 4.10-1, which requires a final hydrologic study and drainage plan designed to evaluate and minimize potential increases in runoff from the project site.</p>
<p><b>General Provision</b></p>		
<p><b>Goal 9:</b> Fire flow provisions and on-site fire protection standards (i.e., sprinklers/water storage) shall be in compliance with minimum standards provided by the Kern County Fire Department.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2.</p>	<p>Consistent with this measure, the proposed project would implement Mitigation Measure MM 4.13-1, which would require preparation and implementation of a fire safety plan to ensure the provision of appropriate access. Additionally, the project would implement Mitigation Measure MM 4.13-2, which would require the project to provide a Cumulative Impact Charge (CIC) to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities.</p>

### 4.12.1 Introduction

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting for the proposed project and provides an analysis of potential impacts related to noise and groundborne vibration from project implementation. Additionally, mitigation measures that would be required to reduce potential noise and vibration impacts are identified, where necessary. The information and analysis in this section is largely based on the *Acoustical Assessment for the Bullhead Solar Project* prepared by ICF. This report is incorporated by reference and provided in **Appendix N** of this EIR.

### Noise Fundamentals

An understanding of the physical characteristics of sound is useful for evaluating environmental noise. The methods and metrics used to quantify noise exposure, human response, and relative judgment of loudness are also discussed, and noise levels of common noise environments are presented.

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and interferes with or disrupts normal activities. The effects of noise on people can be grouped into four general categories:

- Subjective effects (dissatisfaction, annoyance);
- Interference effects (communication and sleep interference, learning);
- Physiological effects (startle response); and
- Physical effects (hearing loss).

Although exposure to high noise levels has been demonstrated to cause physical (i.e., to the body itself) and physiological (i.e., to body functions) effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. The subjective responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, its appropriateness to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

Interference effects of environmental noise refer to effects that interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, and telephone conversations, and interference with sleep. Sleep interference effects can include both awakening from sleep and arousal to a lesser depth of sleep.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by several variables, including frequency and amplitude. Frequency describes the sound's pitch (tone) and is measured in cycles per second (Hertz [Hz]), while amplitude describes the sound's pressure (loudness). Because the range of sound pressures that occurs in the environment is extremely large, it is convenient to express these pressures on a logarithmic scale that compresses the wide range of pressures into a more useful range of numbers. The standard unit

of sound measurement is the decibel (dB). Hz is a measure of how many times each second the crest of a sound pressure wave passes a fixed point. For example, when a drummer beats a drum, the skin of the drum vibrates a given number of times per second. If the drum vibrates 100 times per second, it generates a sound pressure wave that is oscillating at 100 Hz, and this pressure oscillation is perceived by the ear/brain as a tonal pitch of 100 Hz. Sound frequencies between 20 and 20,000 Hz are within the range of sensitivity of the healthy human ear.

Sound levels are expressed by reference to a specified national/international standard. The sound pressure level is used to describe sound pressure (loudness) and is specified at a given distance or specific receptor location. In expressing sound pressure level on a logarithmic scale, sound pressure (dB) is referenced to a value of 20 micropascals ( $\mu\text{Pa}$ ). Sound pressure level depends not only on the power of the source but also on the distance from the source to the receiver and the acoustical characteristics of the sound propagation path (absorption, reflection, etc.).

Outdoor sound levels decrease logarithmically as the distance from the source increases. This decrease is due to wave divergence, atmospheric absorption, and ground attenuation. Sound radiating from a source in a homogeneous and undisturbed manner travels in spherical waves. As the sound waves travel away from the source, the sound energy is dispersed over a greater area, decreasing the sound pressure of the wave. Spherical spreading of the sound wave from a point source reduces the noise level at a rate of 6 dB per doubling of distance.

Atmospheric absorption also influences the sound levels received by an observer. The greater the distance traveled, the greater the influence of the atmosphere and the resultant fluctuations. Atmospheric absorption becomes important at distances greater than 1,000 feet. The degree of absorption varies depending on the frequency of the sound as well as the humidity and temperature of the air. For example, atmospheric absorption is lowest (i.e., sound carries farther) at high humidity and high temperatures, and lower frequencies are less readily absorbed (i.e., sound carries farther) than higher frequencies. Over long distances, lower frequencies become dominant as the higher frequencies are more rapidly attenuated. Turbulence, gradients of wind, and other atmospheric phenomena also play a significant role in determining the degree of attenuation. For example, certain conditions, such as temperature inversions, can channel or focus the sound waves, resulting in higher noise levels than would result from simple spherical spreading.

Sound from a tuning fork contains a single frequency (a pure tone), but most sounds in the environment do not consist of a single frequency. Instead, they are a broad band of many frequencies differing in sound level. Because of the broad range of audible frequencies, methods have been developed to quantify these values into a single number representative of human hearing. The most common method used to quantify environmental sounds consists of evaluating all frequencies of a sound according to a weighting system that is reflective of human hearing characteristics. Human hearing is less sensitive at low frequencies and extremely high frequencies than at the mid-range frequencies. This process is termed “A weighting,” and the resulting dB level is termed the “A-weighted” decibel (dBA).

Because A-weighting is designed to emulate the frequency response characteristics of the human ear and reflect the way people perceive sounds, it is widely used in local noise ordinances and State and federal guidelines, including those of the State of California and Kern County. Unless specifically noted, the use of A-weighting is always assumed with respect to environmental sound and community noise, even if the notation does not include the ‘A’.

In terms of human perception, a sound level of 0 dBA is the threshold of human hearing and is barely audible by a healthy ear under extremely quiet listening conditions. This threshold is the reference level

against which the amplitude of other sounds is compared. Normal speech has a sound level of 60 dBA. Sound levels above about 120 dBA begin to be felt inside the human ear as discomfort, progressing to pain at still higher levels. Humans are much better at discerning relative sound levels than absolute sound levels. The minimum change in the sound level of individual events that an average human ear can detect is about 1 to 3 dBA. A 3 to 5 dBA change is readily perceived. An increase (or decrease) in sound level of about 10 dBA is usually perceived by the average person as a doubling (or halving) of the sound's loudness.

Because of the logarithmic nature of the decibel, sound levels cannot be added or subtracted directly. However, some simple rules are useful in dealing with sound levels. First, if a sound's acoustical energy is doubled, the sound level increases by 3 dBA, regardless of the initial sound level (e.g., 60 dBA + 60 dB = 63 dBA; 80 dBA + 80 dBA = 83 dBA). An increase of 10 dBA is required to double the perceived loudness of a sound, but a doubling or halving of the acoustical energy (a 3 dBA difference) is at the lower limit of readily perceived change.

Although dBA may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most ambient environmental noise includes a mixture of noise from nearby and distant sources that creates an ebb and flow of sound, including some identifiable sources plus a relatively steady background noise in which no particular source is identifiable. A single descriptor, termed the equivalent sound level ( $L_{eq}$ ), is used to describe sound that is constant or changing in level.  $L_{eq}$  is the energy-mean dBA during a measured time interval. It is the "equivalent" sound level produced by a given constant source equal to the acoustic energy contained in the fluctuating sound level measured during the interval. In addition to the energy-average level, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the maximum instantaneous ( $L_{max}$ ) and minimum instantaneous ( $L_{min}$ ) noise level indicators that represent the root-mean-square maximum and minimum noise levels measured during the monitoring interval. The  $L_{min}$  value obtained for a particular monitoring location is often called the acoustic floor for that location.

To describe the time-varying character of environmental noise, the statistical or percentile noise descriptors  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$  may be used, which represent the noise levels equaled or exceeded during 10 percent, 50 percent, and 90 percent of the measured time interval, respectively. Sound levels associated with  $L_{10}$  typically describe transient or short-term events,  $L_{50}$  represents the median sound level during the measurement interval, and  $L_{90}$  levels are typically used to describe background noise conditions.

The Day-Night Average Sound Level ( $L_{dn}$  or DNL) represents the average sound level for a 24-hour day and is calculated by adding a 10 dBA penalty to sound levels during the night period (10:00 p.m. to 7:00 a.m.). The  $L_{dn}$  is the descriptor of choice and used by nearly all federal, State, and local agencies throughout the United States to define acceptable land use compatibility with respect to noise. Within California, the Community Noise Equivalent Level (CNEL) is sometimes used. CNEL is very similar to  $L_{dn}$ , except that an additional 5 dBA penalty is applied to the evening hours (7:00 p.m. to 10:00 p.m.). Because of the time-of-day penalties associated with the  $L_{dn}$  and CNEL descriptors, the  $L_{dn}$  or CNEL dBA value for a continuously operating sound source during a 24-hour period will be numerically greater than the dBA value of the 24-hour  $L_{eq}$ . Thus, for a continuously operating noise source producing a constant noise level operating for periods of 24 hours or more, the  $L_{dn}$  will be 6 dBA higher than the 24-hour  $L_{eq}$  value. For convenience, a summary of common noise metrics is provided in **Table 4.12-1, Common Noise Metrics**. To provide a frame of reference, common sound levels are presented in **Figure 4.12-1, Common Sound Levels**.

**TABLE 4.12-1: COMMON NOISE METRICS**

Unit of Measure		Description
dB	Decibel	Decibels, which are units for measuring the volume of sound, are measured on a logarithmic scale, representing points on a sharply rising curve. For example, 10 dB sounds are 10 times more intense than 1 dB sounds, and 20 dB sounds are 100 times more intense. A 10 dB increase in sound level is perceived by the human ear as a doubling of the loudness of the sound.
dBA	A-Weighted Decibel	A sound pressure level that has been weighted to quantitatively reduce the effect of high- and low-frequency noise. It was designed to approximate the response of the human ear to sound.
CNEL	Community Noise Equivalent Level	A metric representing the 24-hour average sound level that includes a 5 dBA penalty during relaxation hours (7:00 p.m. to 10:00 p.m.) and a 10 dBA penalty for sleeping hours (10:00 p.m. to 7:00 a.m.).
L <sub>dn</sub>	Day-Night Average Noise	The 24-hour average sound level, expressed in a single decibel rating, for the period from midnight to midnight obtained after the addition of a 10 dBA penalty to sound levels for the periods between 10:00 p.m. and 7:00 a.m.
L <sub>eq</sub>	Equivalent Noise Level	The average acoustic energy content of noise for a stated period of time. The L <sub>eq</sub> of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The L <sub>eq</sub> may also be referred to as the average sound level.
L <sub>max</sub>	Maximum Noise Level	L <sub>max</sub> represents the maximum instantaneous noise level experienced during a given period of time. It reflects peak operating conditions and addresses the annoying aspects of intermittent noise.
L <sub>min</sub>	Minimum Noise Level	L <sub>min</sub> represents the minimum instantaneous noise level experienced during a given period of time. It reflects baseline operating conditions and is commonly referenced as the noise floor.
L <sub>1</sub> , L <sub>10</sub> , L <sub>50</sub> , L <sub>90</sub>	Percentile Noise Exceedance Levels	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period.

## Vibration Fundamentals

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (FTA, 2018), groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground. The effects of groundborne vibrations are typically limited to causing nuisance or annoyance to people, but at extreme vibration levels damage to buildings may also occur.

In contrast to airborne noise, groundborne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operation of heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV), measured in inches per second (in/sec), is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe structural vibration impacts to buildings. The root mean square (RMS) amplitude, measured in decibel notation (VdB), is defined as the average of the squared amplitude of the signal, which is most frequently used to describe human annoyance impacts.

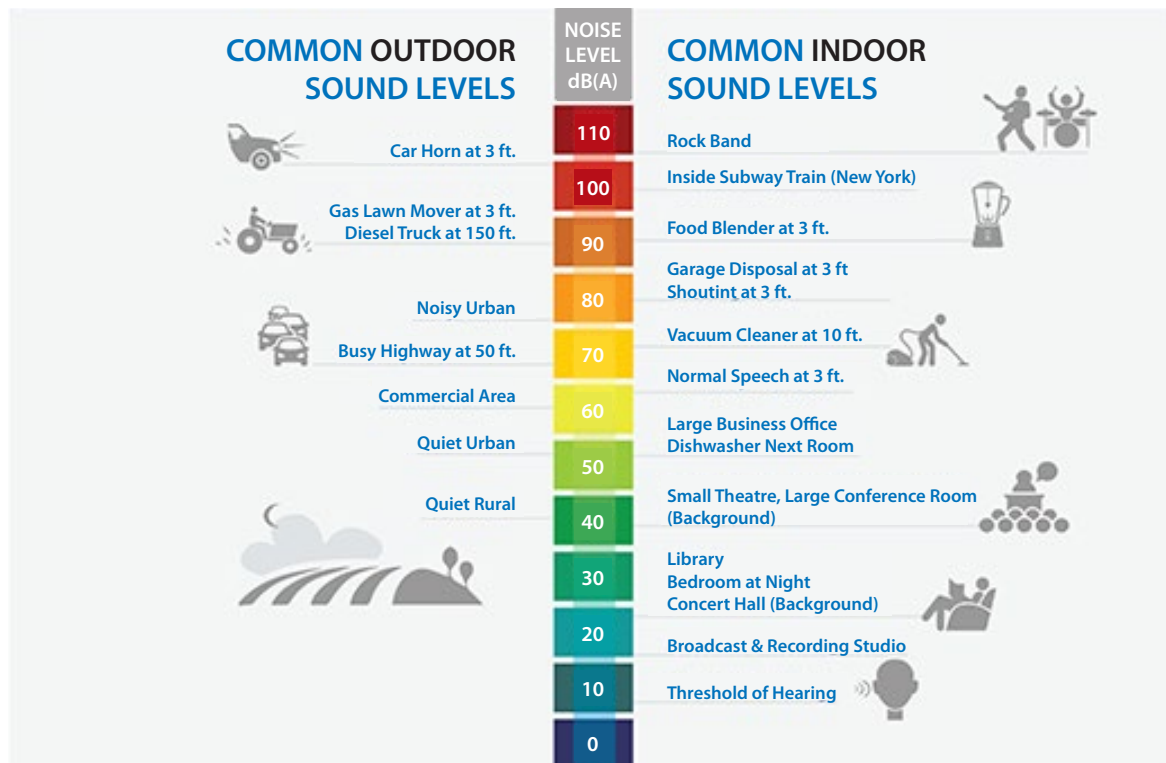


Figure 4.12-1: COMMON SOUND LEVELS

VdB is commonly used to measure RMS. The relationship of PPV to RMS velocity is expressed in terms of the “crest factor,” defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity; therefore, the decibel notation acts to compress the range of numbers required to describe vibration (FTA, 2018). Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The effects of groundborne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Human annoyance from vibration often occurs when the vibration levels exceed the threshold of perception by only a small margin. However, a vibration level that causes annoyance will be well below the damage thresholds for normal buildings. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV, while the standard for even the most sensitive and fragile structures is 0.12 in/sec PPV (FTA, 2018).

In residential areas, the background vibration velocity level is usually around 50 VdB (approximately 0.0013 in/sec PPV). This level is well below the vibration velocity level threshold for humans, which is approximately 65 VdB. A vibration velocity level of 75 VdB is considered the approximate dividing line between barely perceptible and distinctly perceptible for many people (FTA, 2018).

## 4.12.2 Environmental Setting

### Project Location

The project site is located in southern Kern County, in a sparsely populated area that is mostly traversed by a network of dirt roads. Land uses surrounding the project site currently include sparsely distributed residential dwellings as well as large areas of vacant and agricultural lands. There are also existing solar facilities at various distances to the north, east, and west as well as farther south, beyond Rosamond Boulevard. To the immediate west of the project site is the BigBeau Solar Project; beyond that, the Valentine Solar Project is farther west of the BigBeau Solar Project, and Catalina Renewable Energy project is to the north.

### Noise Sensitive Receptors

Noise sensitive receptors are generally defined as land uses where people reside or where the presence of unwanted sound may adversely affect the existing land use. The Noise Element of the Kern County General Plan considers the following noise sensitive areas: residences, hospitals, places of worship, and schools, as well as nature and wildlife preserves, recreational areas, and parks. There are no residences or other noise-sensitive receptors on the project site. Residential dwellings are scattered around the perimeter of the project site at various distances from the project boundary— from 0.02 mile (85 feet) to the southeast and southwest of the project site to beyond 0.5 mile (see **Figure 4.12-2, Analyzed Sensitive Receptor Locations**). Not all the structures in the project site vicinity are habitable or occupied by residents. Four structures within a half-mile of the project site boundary were observed to be either permanently vacant or abandoned. Additionally, there are three structures within the project site. They are all vacant and would be demolished during project construction.



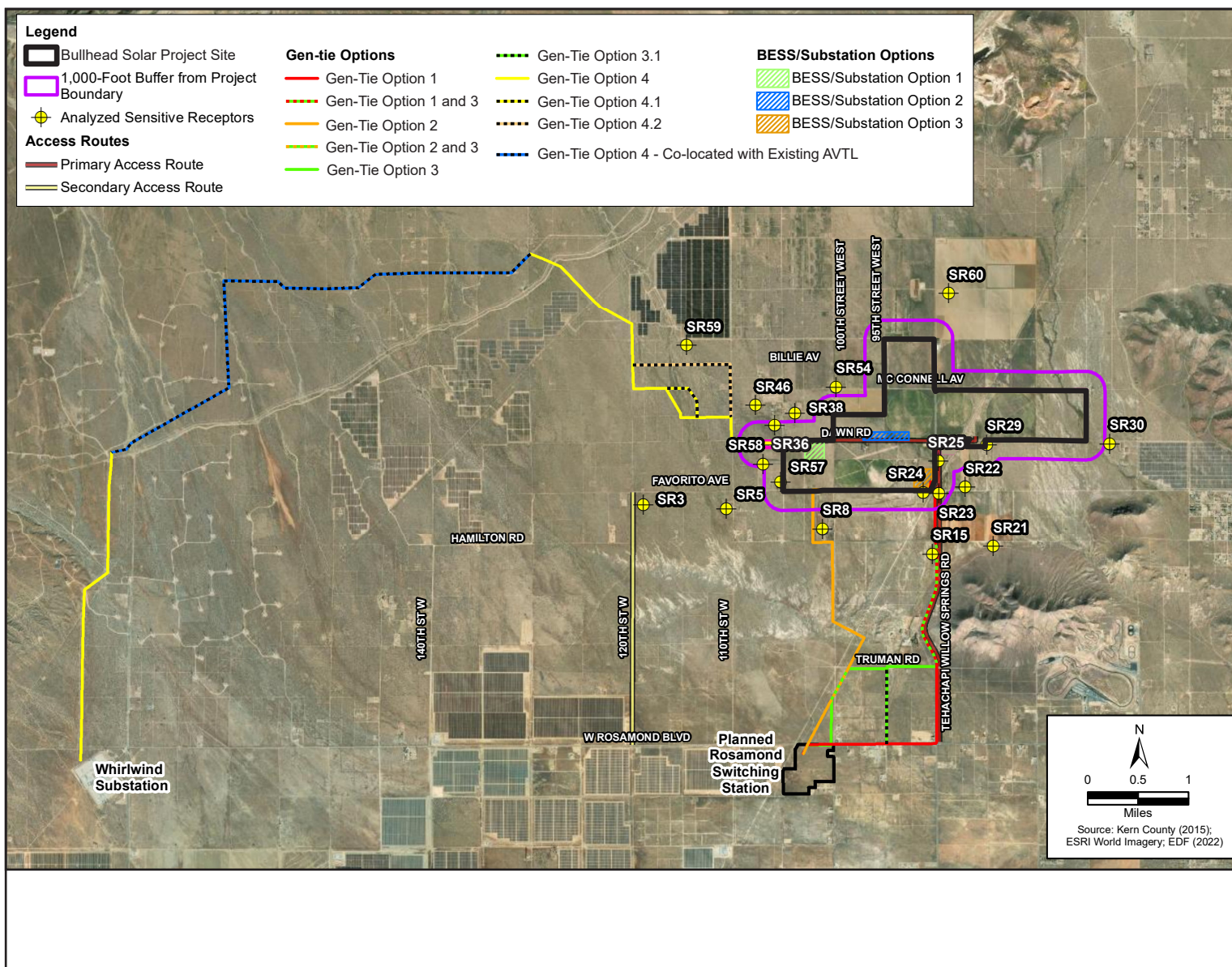


Figure 4.12-2: Analyzed Sensitive Receptor Locations

## Existing Noise Environment

The project site is undeveloped and there are no uses onsite that generate noise. The existing noise environment in the project vicinity is generally quiet because there are no nearby major noise sources such as freeways, railroads, or industrial activities. The closest freeways are State Route (SR-) 14, which is more than five miles east of the project site, and SR-138, which is more than eight miles south of the project site. The closest railroads are Union Pacific railroads, which are more than five miles to the east and six miles to the north. The nearest active airport is the Rosamond Skypark Airport, which is approximately four miles southeast of the project site. For sensitive receptors in the vicinity of Tehachapi Willow Springs Road, the existing noise environment is dominated by intermittent vehicular traffic on the roadway. Additional noise sources currently affecting the project area include intermittent aircraft overflights (including jets from Edwards Air Force Base), distant vehicular traffic on area roadways, distant operation of wind turbines, electrical infrastructure associated with existing solar facilities, agricultural-generated noise (e.g., irrigation systems and farming equipment), residential-generated noise (e.g., vehicle operation, dogs barking), and natural background noise (e.g., wind and birds). Therefore, the existing noise environment in the proposed project area is defined primarily by vehicular traffic on area roadways, residential land uses, intermittent small aircraft overflights, and bird vocalizations. Daytime ambient noise levels are generally characteristic of rural areas.

To characterize ambient (existing) noise levels in the vicinity of the project site, 12 noise measurements were conducted by ICF in July 2021. Previous measurements were conducted near the project site in November 2018 in support of the noise analysis for the neighboring BigBeau Solar Project (ICF 2023g). The previous measurements for the BigBeau Solar Project were used to characterize the existing ambient noise levels in the vicinity of the project site due to their proximity to the project site. Both the new measurements (2021) as well as the old measurements (2018) included both short-term (ST) measurements conducted over a period of at least 15 minutes and long-term (LT) noise measurements conducted over a period of at least 24 hours. The measurement locations were distributed throughout the project site area with an emphasis on locations that are representative of one or more noise-sensitive receptors (i.e., residential dwellings) near the project site and gen-tie routes.

**Table 4.12-2, *Existing Noise Levels***, provides the locations, time of day, and measured equivalent noise level (dBA  $L_{eq}$ ,  $L_{50}$ , and CNEL) at the measurement locations. As shown in the table, noise measurements indicate that the daytime ambient noise levels generally ranged between 28 and 59 dBA  $L_{eq}$  in the project area. The LT noise measurements indicate that the average daily noise level ranged from 37 to 64 dBA CNEL in the project area, which is typical for a rural area.

For reference, noise monitoring location LT1 was located away from developed areas and was the quietest long-term measurement obtained. Additionally, LT3 is an ideal long-term representation for sensitive receptors (SR) SR23, SR24, and SR25 (as shown in **Figure 4.12-2**) because they are all close to Tehachapi Willow Springs Road near where LT3 was located.

**TABLE 4.12-2: EXISTING NOISE LEVELS**

Location Number and Description	Date	Time <sup>1</sup>	Noise Levels (dBA)		
			L <sub>eq</sub>	L <sub>50</sub>	CNEL <sup>6</sup>
LT1: Northwest of the project site, south of McConnell Avenue between 125 <sup>th</sup> Street West and 126 <sup>th</sup> Street West	11/19/2018 to 11/20/2018	Daytime	36.5 <sup>2</sup>	29.8 <sup>3</sup>	37.0
		Nighttime	27.5 <sup>4</sup>	19.3 <sup>5</sup>	
LT2: On the southwestern portion of the project site, north of Favorito Avenue between 120 <sup>th</sup> Street West and 117 <sup>th</sup> Street	07/12/2021 to 07/13/2021	Daytime	43.6 <sup>2</sup>	42.3 <sup>3</sup>	42.3
		Nighttime	28.9 <sup>4</sup>	28.1 <sup>5</sup>	
LT3: On the southeastern portion of the project site, west of Tehachapi Willow Springs Road between Dawn Road and Favorito Avenue	07/12/2021 to 07/13/2021	Daytime	46.1 <sup>2</sup>	43.6 <sup>3</sup>	55.1
		Nighttime	49.0 <sup>4</sup>	46.2 <sup>5</sup>	
LT4: Near the southeastern portion of the project site, on the north side of Favorito Avenue east of Tehachapi Willow Springs Road	07/12/2021 to 07/13/2021	Daytime	59.2 <sup>2</sup>	55.6 <sup>3</sup>	64.6
		Nighttime	58.0 <sup>4</sup>	55.8 <sup>5</sup>	
ST1: North of the project site, on the south side of Champagne Avenue east of 115 <sup>th</sup> Street West	11/20/2018	12:24 p.m. to 12:39 p.m.	30.1	26.0	NM
ST2: North of the project site, on the west side of Tehachapi Willow Springs Road south of Highgate	07/13/2021	10:11 a.m. to 10:31 a.m.	54.2	40.5	NM
ST3: East of the project site boundary along 110 <sup>th</sup> Street West between Budlong Avenue and Dawn Road	07/13/2021	11:01 a.m. to 11:21 a.m.	30.6	24.0	NM
ST4: East of the project site, west of 71 <sup>st</sup> Street and north of Dawn Road	07/12/2021	1:50 p.m. to 2:10 p.m.	42.3	37.9	NM
ST5: Immediately west of the project site boundary along the unpaved roadway north of Favorito Avenue between 105 <sup>th</sup> Street West and 110 <sup>th</sup> Street West	11/20/2018	11:38 a.m. to 11:53 a.m.	32.1	27.1	NM
ST6: South of the project site, east of 105 <sup>th</sup> Street West between Favorito	07/13/2021	8:12 a.m. to 8:32 a.m.	30.6	26.8	NM

**TABLE 4.12-2: EXISTING NOISE LEVELS**

Location Number and Description	Date	Time <sup>1</sup>	Noise Levels (dBA)		
			L <sub>eq</sub>	L <sub>50</sub>	CNEL <sup>6</sup>
Avenue and Hamilton Road					
ST7: South of the project site, on the north side of Hamilton Road west of 97 <sup>th</sup> Street	11/20/2018	10:58 a.m. to 11:13 a.m.	28.2	24.7	NM
ST8: South of the project site, on the east side on Manly Road south of Hamilton Road	07/13/2021	9:35 a.m. to 9:55 a.m.	31.5	29.1	NM

SOURCE: ICF 2023g (Appendix N).

NM = Not Measured.

LT= Long Term (24 hour) Noise Measurement.

ST= Short Term (15 minutes) Noise Measurement.

<sup>1</sup> Daytime represents noise measurements taken between 7 a.m. to 10 p.m.; Nighttime represents noise measurements taken between 10 p.m. to 7 a.m.

<sup>2</sup> The value represents the average L<sub>eq</sub> noise level across the daytime period (i.e., 7 a.m. to 10 p.m.).

<sup>3</sup> The value represents the average L<sub>50</sub> noise level across the daytime period (i.e., 7 a.m. to 10 p.m.).

<sup>4</sup> The value represents the average L<sub>eq</sub> noise level across the nighttime period (i.e., 10 p.m. to 7 a.m.).

<sup>5</sup> The value represents the average L<sub>50</sub> noise level across the nighttime period (i.e., 10 p.m. to 7 a.m.).

<sup>6</sup> ST typically do not have CNEL calculations as there is not enough data collected from short terms to provide a CNEL value which evaluates data over 24 hours.

The sound level meter used to obtain the ST noise measurements consisted of a Type 1 Larson Davis (Model 831) integrating sound level meter (SLM). The sound level meter used to obtain the LT noise measurements consisted of two Type 2 Rion (Model NL-21 and Model NL-22) SLMs and a Type 2 Piccolo II SLM. All SLMs were field-calibrated prior to each measurement to ensure accuracy using a Larson Davis CAL200 acoustical calibrator; the calibration was also rechecked at the conclusion of each measurement. The instruments are maintained to manufacturer specifications to ensure accuracy, in accordance with American National Standards Institute standard S1.4. The SLM microphone was mounted at a height of five feet above the ground for all measurements except LT4. LT4 was adjacent to the public right-of-way so a mounting height of approximately eight feet above the ground was selected for additional security. All measurement locations are indicated on **Figure 4.12-3, Noise Measurement Locations**.

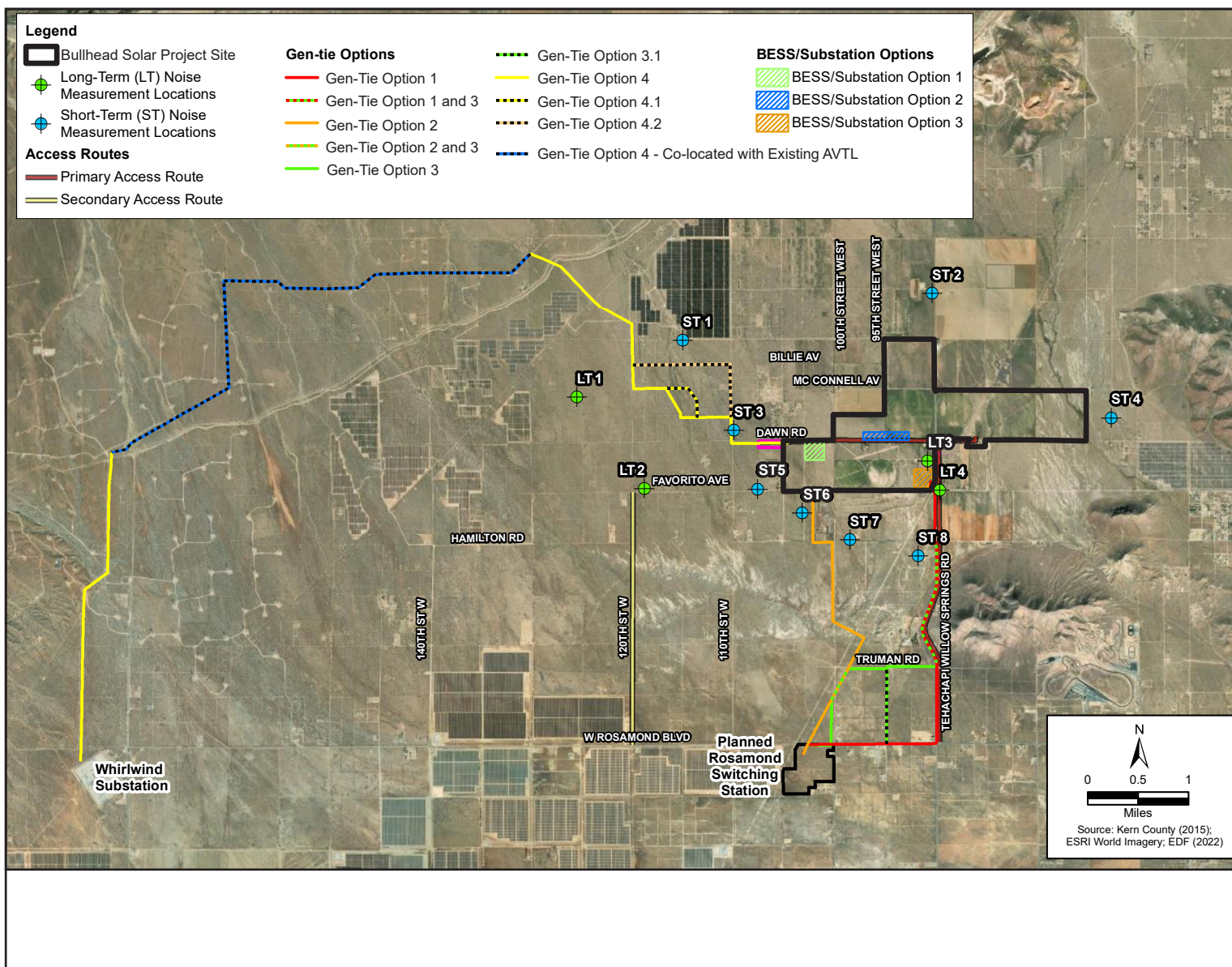


Figure 4.12-3: Noise Measurement Locations

## 4.12.3 Regulatory Setting

### Federal

#### Noise Control Act of 1972

The Noise Control Act of 1972 (42 USC 4910) establishes a national policy to promote an environment for all Americans to be free from noise that jeopardizes their health and welfare. The Act establishes a means for the coordination of federal research and activities in noise control, authorizes the establishment of federal noise emissions standards for products distributed in commerce, and provides the noise-emission and noise-reduction characteristics of such products to the public.

#### United States Environmental Protection Agency, Environmental Noise Levels

The United States Environmental Protection Agency (USEPA) provided guidance on environmental noise levels in Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety (EPA 1974), commonly referenced as the “Levels Document,” that establishes an  $L_{dn}$  of 55 dBA as the requisite level, with an adequate margin of safety, for areas of outdoor uses, including residences and recreation areas. The Levels Document does not constitute USEPA regulations or standards, but identifies safe levels of environmental noise exposure without consideration of technical or economic feasibility for achieving these levels or other potentially relevant considerations.

#### Federal Energy Regulatory Commission, Noise Guidelines

The Federal Energy Regulatory Commission’s *Noise Guidelines on Noise Emissions from Compressor Stations, Substations, and Transmission Lines* (18 CFR 157.206(d)5), requires that the noise attributable to any new compressor stations; compression added to an existing station; or any modification, upgrade, or update of an existing station must not exceed a  $L_{dn}$  of 55 dBA at any pre-existing noise-sensitive area (such as schools, hospitals, or residences). This policy was adopted based on the USEPA-identified level of significance of 55 dBA  $L_{dn}$ .

#### Federal Highway Administration Noise Abatement Procedures (23 CFR Part 772)

The purpose of 23 CFR Part 772 is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, supply noise abatement criteria, and establish requirements for information to be given to local officials for use in the planning and design of highways. It establishes five categories of noise-sensitive receptors and prescribes the use of the hourly  $L_{eq}$  as the metric for evaluating traffic noise impacts.

## Department of Housing and Urban Development, Environmental Standards

The Department of Housing and Urban Development (HUD) regulations (24 CFR Part 51) set forth the following exterior noise standards for new home construction assisted or supported by HUD:

- 65  $L_{dn}$  or less: Acceptable
- > 65  $L_{dn}$  and < 75  $L_{dn}$ : Normally unacceptable, appropriate sound attenuation measures must be provided
- > 75  $L_{dn}$ : Unacceptable

HUD's regulations do not contain standards for interior noise levels. Rather, a goal of 45 dBA  $L_{dn}$  is set forth, and attenuation requirements are geared to achieve that goal.

## Occupational Safety and Health Administration, Occupational Noise Exposure

Occupational Safety and Health Administration, *Occupational Noise Exposure; Hearing Conservation Amendment* (Federal Register 48 [46], 9738–9785, 1983), stipulates that protection against the effects of noise exposure shall be provided for employees when sound levels exceed 90 dBA over an 8-hour exposure period. Protection shall consist of feasible administrative or engineering controls. If such controls fail to reduce sound levels to within acceptable levels, personal protective equipment shall be provided and used to reduce exposure of the employee. Additionally, a Hearing Conservation Program must be instituted by the employers whenever employee noise exposure equals or exceeds the action level of an 8-hour time-weighted average sound level of 85 dBA  $L_{eq(8)}$ . The Hearing Conservation Program requirements consist of periodic area and personal noise monitoring, performance and evaluation of audiograms, provision of hearing protection, annual employee training, and record keeping.

## State

The State requires all municipalities to prepare and adopt a comprehensive long-range general plan. General plans must contain a noise element (California Government Code Section 65302(f) and Section 46050.1 of the Health Safety Code). The requirements for the noise element of the general plan include describing the noise environment quantitatively using a cumulative noise metric such as CNEL or DNL, establishing noise/land use compatibility criteria, and establishing programs for achieving and/or maintaining land use compatibility. Noise elements should address all major noise sources in the community, including mobile and stationary noise sources. In California, most cities and counties have also adopted noise ordinances which serve as enforcement mechanisms for controlling noise.

The California Department of Health Services has studied the correlation of noise levels and their effects on various land uses and established guidelines for evaluating the compatibility of various land uses, for the noise elements of local general plans, as a function of community noise exposure. The guidelines are the basis for most noise element land use compatibility guidelines in California.

The land use compatibility for community noise environment chart identifies the normally acceptable range for several different land uses, as shown in **Figure 4.12-4**, *Land Use Compatibility for Community Noise Environment*. Persons in low-density residential settings are most sensitive to noise intrusion, and noise levels of 60 dBA CNEL and below are considered “acceptable.” For land uses such as schools, libraries, churches, hospitals, and parks, acceptable noise levels are up to 70 dBA CNEL.

**FIGURE 4.12-4: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENT**

Land Use Category	Community Noise Exposure – L <sub>dn</sub> or CNEL (dBA)							
	50	55	60	65	70	75	80	
Residential – Low Density Single Family, Duplex, Mobile Home	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Multi-Family	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging – Motel/Hotel	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Auditorium, Concert Hall, Amphitheaters	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Sports Arena, Outdoor Spectator Sports	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable
Office Buildings, Business, Commercial and Professional	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Normally Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable

Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.
Clearly Unacceptable	New construction or development generally should not be undertaken.

SOURCE: State of California, Governor’s Office of Planning and Research, 2003.



*CEQA Guidelines* (PRC Section 21000 et seq.) requires the identification of “significant” environmental impacts and their feasible mitigation. Section XI of *CEQA Guidelines* Appendix G (CCR Title 14, Appendix G) lists some indicators of potentially significant impacts, which are included below under the heading “Thresholds of Significance.”

The State also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dBA at 15 meters. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dBA at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by State and local law enforcement officials.

## Local

### Kern County General Plan

The Noise Element of the Kern County General Plan provides goals, policies, and implementation measures applicable to noise, which, as related to the proposed project, are provided below. The major purpose of the County’s Noise Element is to establish reasonable standards for maximum noise levels desired in Kern County and to develop an implementation program that could effectively mitigate potential noise problems and not subject residential or other sensitive noise land uses to exterior noise levels in excess of 65 dBA  $L_{dn}$  and interior noise levels in excess of 45 dBA  $L_{dn}$ .

In accordance with the General Plan Energy Element, Policy 10, the County may also require the preparation of an acoustical analysis for energy project proposals that might impact sensitive and highly sensitive uses. Applicable goals, policies, and implementation measures from the County’s General Plan that are relevant to the proposed project are summarized below.

#### **Chapter 3. Noise Element**

##### **3.3 Sensitive Noise Areas**

###### **Goals**

- Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.
- Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.

###### **Policies**

- Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses,
- Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise,

- Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.
- Policy 6: Ensure that new development in the vicinity of airports will be compatible with existing and projected airport noise levels as set forth in the [Airport Land Use Compatibility Plan].
- Policy 7: Employ the best available methods of noise control.

**Implementation Measures**

- Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.
- Measure C: Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.
- Measure E: Review discretionary development plans to ensure compatibility with adopted Airport Land Use Compatibility Plans.
- Measure F: Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise-sensitive land uses to exterior noise levels in excess of 65 dB  $L_{dn}$  and interior noise levels in excess of 45 dB  $L_{dn}$ .
- Measure G: At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:
- a) Be the responsibility of the applicant.
  - b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
  - c) Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.
- Measure I: Noise analyses shall include recommended mitigation, if required, and shall:
- a) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
  - b) Include estimated noise levels, in terms of CNEL, for existing and projected future (10–20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
  - c) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
  - d) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.

Measure J: Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.

## **Chapter 5. Energy Element**

### **Policies**

Policy 10: The County should require acoustical analysis for energy project proposals that might impact sensitive and highly-sensitive uses in accordance with the Noise Element of the General Plan.

## **Willow Springs Specific Plan**

The project site is subject to the provisions of the Willow Springs Specific Plan (WSSP) of 2008, which contains goals, policies, and standards that are compatible with the Kern County General Plan but unique to the specific needs of the Willow Springs Area. The noise-related policies and measures in the WSSP that are applicable to the proposed project are outlined below (Kern County Department of Planning and Development Services, 2008). The WSSP limits operational nighttime and daytime noise levels to 45 dBA  $L_{50}$  and 55 dBA  $L_{50}$ , respectively, for sensitive land uses, which includes residential uses. Additionally, the average-daily noise levels for sensitive land uses are limited to 65 dBA  $L_{dn}/CNEL$ . Construction activities would be conducted consistent with Kern County Ordinance Section 8.36.020 regarding hours of construction or as approved by Kern County.

### **Noise Element**

#### **Goals**

Goal 2: To minimize disruption to the quality of life resulting from excessive noise.

Goal 3: To maintain reasonable noise level standards, consistent with the Kern County Noise Element.

#### **Policies**

Policy 1: Noise emissions from new development will be controlled and off-site levels limited to the standards of the Kern County General Plan Noise Element.

Policy 3: Land uses will be categorized in the following manner, and the noise level standards adopted in accordance with the Kern County Noise Element:

- **Insensitive Land Uses.** Noise level does not affect the successful operation of these particular activities. A wide variety of uses can be included in this category, including public utilities, transportation systems, and other noise-related uses.
- **Moderately Sensitive Land Uses.** Some degree of noise control must be present if these activities are to be successfully carried out. Included here are general business and recreational uses.
- **Sensitive Uses.** Lack of noise control will severely impact these uses, reducing the quality of life. This category primarily contains residential uses.

- **Highly Sensitive Uses.** A high degree of noise control is necessary for the successful operation of these activities. Examples include hospitals and churches.

### ***Mitigation/Implementation Measures***

Measure 2: The implementation measures of the Kern County Noise Element are hereby adopted by reference.

## **Kern County Code of Ordinances**

The Kern County Code of Ordinances, Chapter 8.36 (Noise Control), includes acceptable hours of construction, and limitations on construction related noise impacts on adjacent sensitive receptors.

Chapter 8.36 of the Kern County Code of Ordinances also addresses noise issues, including acceptable hours of construction, and limitations on construction-related noise impacts on adjacent sensitive receptors. Noise-producing construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling, are prohibited between the hours of 9:00 p.m. to 6:00 a.m. on weekdays and 9:00 p.m. to 8:00 a.m. on weekends. However, the following exceptions are permitted:

1. The resource management director or a designated representative may for good cause exempt some construction work for a limited time.
2. Emergency work is exempt from this section.

## **Groundborne Vibration**

There are currently no federal, State, or local regulatory standards for groundborne vibration. However, the California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance. While the proposed project would not be subject to Caltrans oversight, guidance by the agency nonetheless provides groundborne vibration criteria that are useful in establishing thresholds of impact. Caltrans threshold criteria pertaining to building damage and human annoyance for continuous and transient events are summarized in **Table 4.12-3**, *Vibration Criteria for Structural Damage*, and **Table 4.12-4**, *Vibration Criteria for Human Annoyance*.

As indicated in **Table 4.12-3**, *Vibration Criteria for Structural Damage*, the structural damage threshold at which there is a risk to normal structures from continuous or frequent vibration sources, is 0.3 in/sec PPV for older residential structures and 0.5 in/sec PPV for newer building construction. The 0.5 in/sec PPV threshold also represents the structural damage threshold applied to older structures for transient vibration sources. With regard to human perception (refer to **Table 4.12-4**), vibration levels would begin to become distinctly perceptible at levels of 0.04 in/sec PPV for continuous or frequent vibration sources and 0.25 in/sec PPV for transient vibration sources. Continuous vibration levels are considered annoying for people in buildings at levels of 0.2 in/sec PPV.

**TABLE 4.12-3: VIBRATION CRITERIA FOR STRUCTURAL DAMAGE**

Structure and Condition	Vibration Level (in/sec PPV)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
Newer residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

SOURCE: Caltrans, 2020.  
NOTES:  
Transient sources create a single isolated vibration event, such as blasting or ball drops. Traffic, train, and most construction vibrations are considered continuous.  
in/sec PPV = inches per second peak particle velocity

**TABLE 4.12-4: VIBRATION CRITERIA FOR HUMAN ANNOYANCE**

Human Response	Vibration Level (in/sec PPV)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Annoying to people in buildings	—	0.2
Severe	2.0	0.4

SOURCE: Caltrans, 2020.  
NOTES:  
Transient sources create a single isolated vibration event, such as blasting or ball drops. Traffic, train, and most construction vibrations are considered continuous.  
in/sec PPV = inches per second peak particle velocity  
— = not available.

## 4.12.4 Impacts and Mitigation Measures

### Methodology

Noise impacts associated with the proposed project were assessed in this section based primarily on the *Acoustic Assessment for the Bullhead Solar Project (Appendix N)*. Potential significant impacts associated with the proposed project were evaluated on a quantitative and qualitative basis through a review of a combination of existing literature and baseline noise level measurements, and application of accepted noise

and vibration prediction and propagation algorithms were used for the prediction of short-term construction and long-term operational noise levels as well as for the evaluation of groundborne vibration impacts. The evaluation of potential noise and vibration impacts associated with proposed project construction was based on the construction schedule, phasing, and equipment assumptions developed as part of the air quality analysis for the project.

The evaluation of proposed project impacts is based on significance criteria established by Appendix G of the *CEQA Guidelines*, which the Lead Agency has determined to be appropriate criteria for this EIR.

## Analyzed Receptor Locations

Sensitive receptors in the project site area consist of sparsely distributed residential dwellings that are on all sides of the project site. Given the size of the project site and the large range of distances to the surrounding receptors—from 0.02 mile (85 feet) to the southeast and southwest of the project site boundary to beyond 0.5 mile from the project site boundary—proposed project noise and vibration levels are not calculated for every individual dwelling. Rather, the impacts are analyzed at a representative subset of the surrounding dwelling units. A subset of 19 sensitive receptor locations in the project site vicinity were selected for analysis based on their proximity and geographical location relative to the proposed solar arrays and their location relative to the nearest proposed gen-tie routes. These sensitive receptors are identified with numerical identifiers (SR#). The analyzed sensitive receptor locations are illustrated on **Figure 4.12-2, Analyzed Sensitive Receptor Locations**, above. Nine of the nineteen analyzed sensitive receptors are within 1,000 feet of the project boundary. Aside from being chosen for the purpose of depicting the potential worst-case noise and vibration levels that would be experienced by the receptors closest to the project site, these analyzed receptor locations were also chosen to illustrate the overall range of noise and vibration levels that would be experienced by receptors throughout the project site vicinity.

## Construction Noise

Construction-related noise was analyzed using data and modeling methodologies from the U.S. Department of Transportation, Federal Highway Administration's Roadway Construction Noise Model (FHWA, 2006), which predicts average noise levels at nearby receptors by analyzing the type of equipment, the distance from source to receptor, usage factor (the fraction of time the equipment is operating in its noisiest mode while in use), and the presence or absence of intervening shielding between source and receptor. This methodology calculates the composite average noise levels for multiple equipment items scheduled during each construction phase, which includes seven separate construction phases. Construction noise levels were predicted assuming an average noise attenuation rate of 7.5 dB per doubling of distance from the source, given the soft-site nature of the project site area (i.e., project site area is dominated by undeveloped land consisting of absorptive ground surfaces such as soft dirt and scattered, low-lying vegetation). The average hourly construction noise level (hourly  $L_{eq}$ ) generated during each phase of construction was calculated at a reference distance of 50 feet. The reference noise levels were then adjusted for each analyzed receptor based on their distance to the construction phase activity.

The source-to-receptor distances used to estimate the proposed project's construction noise levels at each analyzed receptor considered either the closest distance to the residential dwelling or, to reflect the assumed distribution of equipment across the active construction area, the acoustical average distance between the construction area and the dwelling. Given that the gen-tie construction work and access road improvements that may occur on 120<sup>th</sup> Street West would occur on a daily basis in a relatively small construction area as

the work progresses in a linear fashion along the public rights-of-way, the closest distance to the residential dwelling was used in the analysis. For all other construction phases, an acoustical average distance was used as described below.

Seven phases of construction would occur: mobilization or “move on”; site preparation and grading; access road improvements; internal road construction; solar array structural, underground panel, and battery installation; electrical substation and microwave tower construction; and gen-tie line construction. Depending on phase and activity, they typically would occur over the entire 1,343-acre project site, but not at one time, and would instead occur over portions of the project site on a daily basis over the course of construction. To provide a quantitative estimate of construction noise levels at each analyzed receptor due to these phases, construction activities were assumed to occur within the project site across a four-acre area nearest to each receptor. Therefore, the analysis includes a four-acre daily construction area as a reasonable estimate to allow for a quantitative assessment and is not intended as a restriction on the actual daily acreage where construction activities could occur at the project site.

Given the nature of construction activities, the size of the active construction area would fluctuate on a daily basis, depending on the types of activities and equipment that are involved. The actual construction area may be greater or less than four acres. However, while multiple construction phases at different locations within the project site may occur concurrently on a given construction day, the localized nature of noise is such that noise levels generated over a construction area nearest to a given receptor would dominate the noise environment over noise levels generated from a more distant location. Consequently, noise levels estimated at a given receptor from the nearest four-acre construction area, especially when applied to the loudest construction phases for the proposed project, would be representative of the noise exposure at that receptor during project construction. The closest distance from each receptor to the four-acre daily construction area for the “move on” and “site preparation and grading” phases was measured from the receptor to the closest project boundary (i.e., it was assumed that these activities could occur anywhere throughout the entire project site). The closest distance from each receptor to the four-acre daily construction area for the “solar array structure, underground and panel, and battery installation” and “internal roads construction” phases was measured from the receptor to the nearest edge of the fence line surrounding the solar arrays.

For the “electrical substation and microwave tower construction” phase, the acoustical average distance was determined using the nearest and farthest substation boundary line of the potential substation location that is closest to each analyzed sensitive receptor (i.e., the closest of the three potential substation/Battery Energy Storage System (BESS) locations under consideration).

During project construction, noise levels would also be generated from construction-related traffic associated with worker trips and haul truck trips on local roadways. The analysis of roadway noise levels from the proposed project’s construction traffic was conducted using a proprietary traffic noise model, with calculations based on data from the FHWA Traffic Noise Model, Version 2.5, Look-Up Tables (FHWA, 2004). This model allows for the calculation of noise levels at specific distances from the center of the roadway based on traffic volumes, average posted speed limits, and site environmental conditions. Using this model, the roadway traffic noise levels resulting from the proposed project’s construction-related traffic volumes along the local roadways used during project construction to access the project site were estimated and assessed. The construction-related traffic data for various roadway segments were obtained from the traffic analysis prepared for the proposed project, (Ruettgers & Schuler Civil Engineers, 2022; **Appendix M**).

## Long-Term Operational Stationary-Source Noise

The primary operational noise sources associated with the proposed project would be noise generated by operation of the BESS, the substation, and the power conversion stations (PCS) distributed throughout the solar arrays. To evaluate the noise levels that would be generated by these noise sources, acoustical data (i.e., source noise levels) for these items were derived from various sources, including manufacturers' specifications sheets, data from previous noise assessments prepared for similar projects, and equipment information. **Table 4.12-5, Bullhead Equipment Noise Levels**, summarizes the equipment considered in the operational noise analysis as well as the associated sound power.

**TABLE 4.12-5: BULLHEAD SOLAR EQUIPMENT NOISE LEVELS**

Equipment Area	Equipment Item	Stated Noise Level	Stated/ Calculated Sound Power per Unit (SWL) <sup>1</sup>	Total Number of Items
BESS <sup>2</sup>	BESS Container HVAC Unit (Model: Marvair AVPA72AC)	55 dBA @ 50 feet	86.6 dBA	632
	Inverter (Model: SMA SCS 3950 UP)	67 dBA @ 33 feet <sup>3</sup>	95 dBA	92
Substation	Major Power Transformer (Model: Ilijn 92 MVA ONAF1)	N/A (SWL provided by specification sheet)	78 dBA	2
	Control House HVAC Unit (Model: Marvair AVPA72AC)	55 dBA @ 50 feet	86.6 dBA	2
Power Conversion Stations <sup>4</sup>	Composite noise level under nighttime (non-load) conditions. See notes for equipment description.	55 dBA @ 10 feet	92.3 dBA	112
	Composite noise level under daytime (full-load) conditions. See notes for equipment description.	70 dBA @ 10 feet	77.3 dBA	112

SOURCE: ICF, 2023 (Appendix N).

NOTES: HVAC = heating, ventilating, and air conditioning; MVA = megavolt-ampere; N/A = not applicable; SWL = sound power level.

<sup>1</sup> Sound power, also known as acoustic power, is the total acoustic power radiated by a source in all directions per unit time. Sound power is a physical characteristic of the noise source and is not related to distance.

<sup>2</sup> BESS noise sources (HVAC and inverters) are assumed to operate 100 percent of the time during daytime hours and 75 percent of the time during the nighttime hours.

<sup>3</sup> Original data were provided for a distance of 10 meters, which is equal to 32.8 feet.

<sup>4</sup> Power Conversion Station noise data obtained from the "Noise & Groundborne Vibration Impact Assessment for the Proposed Valentine Solar Project" (Ambient Air Quality & Noise Consulting 2015). Representative daytime and nighttime noise levels include noise generated by two inverters within an enclosed structure, one transformer mounted at the exterior of the structure, an exterior-mounted HVAC system, and an exhaust fan. Sound power calculation assumes this equipment is distributed across a 30-foot-long equipment pad.

To analyze noise from on-site operations, a three-dimensional computer noise model was developed using SoundPLAN software. The model considers many important variables, including the sound power of each noise source, the heights of the noise sources and receivers, the distance to noise-sensitive receivers, site



topography, barrier effects of structures (e.g., buildings, walls) and terrain (e.g., slopes, hills), and local ground cover conditions. The geometry and terrain for the model were based on the project site boundaries and publicly available mapping, aerial photography, and topographical data (i.e., U.S. Geological Survey, OpenStreetMap, Google Earth). Because the precise site layout is currently unknown, it was reasonably assumed that the PCSs would be distributed across the entire project site and that the BESS and substation equipment would be distributed across each identified BESS/substation area. The battery container structures were modeled to account for the acoustical shielding they would provide. It was assumed that no onsite stationary noise sources would be within 150 feet of the project site boundary.

Ground cover conditions were modeled as acoustically “soft” to account for the unpaved and low vegetated nature of the ground between the BESS and the nearest residences, as well as the noise attenuation that would be provided by the rows of PV panels between the noise sources and the receivers. It was assumed that the substation equipment would run 100 percent of the time. It was assumed that the BESS equipment (heating, ventilating, and air conditioning units and inverters) would run 100 percent of the time during the daytime hours of 7:00 a.m. to 7:00 p.m. and 75 percent of the time during the nighttime hours of 10:00 p.m. to 7:00 a.m. It was assumed that the PCSs distributed throughout the solar arrays would emit full-load noise levels during the daytime hours and nonload noise levels during the nighttime hours.

The proposed project would use tracker technology and intermittent noise would be generated from the operation of electrical motors used to power the trackers to tilt the PV panels to follow the course of the sun and optimize the incident angle of sunlight on their surface. The contribution to overall hourly and daily noise levels would be negligible because noise levels would be very low and would occur only periodically for brief durations throughout the daytime hours at the project site.

Corona discharge noise emanating from the gen-tie lines may be audible at close range and is analyzed based on data from prior noise studies for nearby solar projects. Corona discharge is an electrical discharge that ionizes the surrounding air. The noise associated with corona discharge is typically described as a crackling or humming sound. Occasional noise would also be generated by periodic maintenance activities, such as panel washing.

A diesel generator would be located at the selected substation site to provide emergency power in the event of a power outage. Because this noise source would only run for periodic testing and in the event of an emergency, its noise impacts are evaluated separately, and this item is not included in the noise modeling for typical project operations.

## Long-Term Operational Traffic Noise

The analysis for operation traffic noise was conducted using a proprietary traffic noise model, with calculations based on data from the FHWA Traffic Noise Model, Version 2.5, Look-Up Tables (FHWA 2004) This model allows for the calculation of noise levels at specific distances from the center of the roadway based on traffic volumes, average speeds, and site environmental conditions. To quantify the effects of the proposed project, the roadway noise level that would be generated by the proposed project’s operational traffic volumes along a local roadway used to access the project site were estimated and assessed against Kern County’s average-daily noise level standard. Primary long-term traffic noise from the proposed project is from worker trucks that would be used during panel washing and would produce approximately 16 truck trips.

## Construction Groundborne Vibration

Groundborne vibration impacts related to structural damage and human annoyance were evaluated considering the distance from construction activities to nearby sensitive receptors and typically applied criteria for structural damage and human annoyance (refer to **Table 4.12-3** and **Table 4.12-4**).

Construction-related vibration resulting from the proposed project was analyzed using data and modeling methodologies provided by Caltrans's *Transportation and Construction Vibration Guidance Manual* (Caltrans, 2020). This guidance manual provides typical vibration source levels for various types of construction equipment as well as methods for estimating the propagation of groundborne vibration over distance. **Table 4.12-6**, *Construction Equipment Vibration Levels*, provides the PPV levels of construction equipment expected to be used for the proposed project; the levels are provided for a reference distance of 25 feet. All of the analyzed equipment is classified as continuous/frequent intermittent vibration sources. Additionally, the solar panels at the project site are assumed to be installed using track-mounted post drivers. The PPV level for this equipment was calculated using methods provided in Caltrans's *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020) and presented in **Table 4.12-6**, *Construction Equipment Vibration Levels*.

**TABLE 4.12-6: CONSTRUCTION EQUIPMENT VIBRATION LEVELS**

Equipment Item	Reference PPV at 25 feet, in/s <sup>1</sup>
Vibratory roller	0.210
Post driver <sup>2</sup>	0.161
Large bulldozer <sup>3</sup>	0.089
Loaded trucks (on rough terrain)	0.076
Small bulldozer <sup>4</sup>	0.003

SOURCE: ICF 2023g (Appendix N).

<sup>1</sup> Obtained from Caltrans 2020.

<sup>2</sup> Calculated based on a reference level of 0.65 in/s PPV for a 36,000-foot-pound pile driver and a maximum energy level of 2,200 foot-pounds for post drivers.

<sup>3</sup> Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

<sup>4</sup> Considered representative of smaller equipment such as small skid steers and mini excavators.

The following equation from the guidance manual was used to estimate the change in PPV levels over distance:

$$PPV_{rec} = PPV_{ref} \times (25/D)^n$$

where  $PPV_{rec}$  is the PPV at a receptor;  $PPV_{ref}$  is the reference PPV at 25 feet from the equipment; D is the distance from the equipment to the receiver, in feet; and n is a value related to the vibration attenuation rate through ground (the default recommended value for n is 1.1). This equation was used to estimate the PPV at each of the closest vibration-sensitive receivers based on the worst-case (closest) distance between each source and receiver.

## 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 noise-related adverse effect.

A project could have a significant noise-related adverse effect if it would result in:

- a. Generation of a substantial temporary or permanent increase in the ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies;
- b. Generation of excessive groundborne vibration or groundborne noise levels;
- c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- d. For a project located within the Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels.

Kern County determined in the Notice of Preparation/Initial Study (NOP/IS) that the following environmental issue area would result in no impact or a less-than significant impact and therefore, it is scoped out of this EIR. Please refer to Appendix A of this EIR for a copy of the NOP/IS and additional information regarding this issue area:

- d. For a project located within the Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels.

As discussed in the NOP/IS, the proposed project is not located within the boundaries of an Airport Influence Area, as identified in the Kern County ALUCP (Kern County 2012). The nearest public airport to the project site is the Rosamond Skypark located approximately 7 miles southeast of the project site. The project site is not located within any safety or noise zones for the Rosamond Skypark. Noise from occasional aircraft flyovers would not have a significant effect on the small workforce on-site who would normally be working indoors except when outdoor maintenance or repair activities are required. The proposed project would not generate any impacts that could worsen the levels of aircraft noise. There would be no impacts and no further analysis of this issue is warranted in the EIR.

## Substantial Temporary or Permanent Ambient Noise Increase in Excess of Standards

Kern County regulates noise levels in Chapter 8.36 (Noise Control) of the Kern County Code of Ordinances, which establishes hours of construction and limitations on construction-related noise impacts on adjacent sensitive receptors. Specifically, construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling, are prohibited between the hours of 9:00 p.m. and 6:00 a.m. on weekdays and 9:00 p.m. and 8:00 a.m. on weekends. However, as previously stipulated, the following exceptions are permitted: (1) The resource management director or a designated representative may for good cause exempt some construction work for a limited time, and (2) Emergency work is exempt from this section. Given that a 5 dBA change in the community noise environment is considered to be readily perceptible by the human ear, construction activities occurring outside of the acceptable construction hours established by the County

that increases the ambient noise levels at a noise-sensitive land use by 5 dBA or more is considered a violation of the County's construction noise regulations.

For operational noise, the Kern County General Plan Noise Element requires that proposed commercial and industrial uses or operations be designed or arranged so that they will not subject residential or other noise-sensitive land uses to exterior noise levels in excess of 65 dB  $L_{dn}$  and interior noise levels in excess of 45 dB  $L_{dn}$ . Additionally, the WSSP further identifies both daytime and nighttime noise standards for land uses in the WSSP area. For sensitive land uses, which include residential uses, the WSSP has established operational noise limitations of 55 dBA  $L_{50}$  during the daytime hours and 45 dBA  $L_{50}$  during the nighttime hours. The WSSP also identifies an average daily (24-hour) noise level limit of 65 dBA  $L_{dn}/CNEL$  for residential uses, which is consistent with the Kern County General Plan Noise Element. Therefore, in assessing the potential noise impacts resulting from the proposed project's use of stationary operational equipment, the nearby noise-sensitive land uses that are within the WSSP area are evaluated based on the daytime and nighttime noise level limitations established by the WSSP, while the nearby noise-sensitive land uses that are outside of the WSSP area are evaluated based on the County's average daily noise level limit of 65 dBA  $L_{dn}$ . Therefore, operational noise impacts from stationary equipment are assessed by determining if the proposed project would result in a substantial increase in ambient noise levels that would exceed the applicable County and WSSP noise standards at the outdoor activity area of the nearest noise-sensitive land use.

## Generation of Excessive Groundborne Vibration

For the purposes of assessing potential groundborne vibration impacts associated with the proposed project, Caltrans's vibration criteria for potential structural damage risks and human annoyance were used in this analysis. Accordingly, groundborne vibration levels would be considered significant if predicted short-term construction or long-term operational groundborne vibration levels attributable to the proposed project would exceed the recommended criteria for structural damage or human annoyance (i.e., 0.25 and 0.1 in/sec PPV, respectively) at the nearest off-site existing structure (refer to **Table 4.12-3** and **Table 4.12-4**). These thresholds represent a conservative level at which construction-related activities would result in either structural damage or human annoyance. The proposed project would not result in the use of equipment or processes that would result in long-term or permanent increases in groundborne vibration.

## Project Impacts

**Impact 4.12-1: The project would result in generation of a substantial temporary or permanent increase in the 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.**

### ***Construction Activities***

Construction activities associated with the proposed project are anticipated to last approximately 18 months. During this time, temporary increases in noise levels in the project area would occur due to the operation of various construction equipment within the proposed project site, including areas where access roads need to be improved and where gen-tie lines would be installed. For any individual off-site receptor, noise levels

experienced over the proposed project construction period would fluctuate depending on the type of construction activity and the location of that activity occurring within the project site. **Table 4.12-7, Construction Activities and Equipment Noise Levels**, lists typical noise levels for equipment anticipated for use during project construction.

**TABLE 4.12-7: CONSTRUCTION ACTIVITIES AND EQUIPMENT NOISE LEVELS**

Construction Phase	Equipment	Quantity <sup>1</sup>	Individual Equipment Noise Levels (dBA) at 50 Feet	
			L <sub>eq</sub>	L <sub>max</sub>
Move On/Mobilization	Forklifts	6	68	75
	Generator sets	6	78	81
	Grader	6	81	85
	Off-highway trucks	7	73	77
	Carts/all-terrain vehicles	6	71	75
	Rollers	3	73	80
	Rubber-tired dozers	3	78	82
	Scrapers	3	80	84
Site Preparation and Grading	Tractors/loaders/backhoes	6	74	78
	Trenchers	3	77	80
	Graders	6	81	85
	Off-highway trucks	7	73	77
	Other Construction equipment	4	82	85
	Carts/all-terrain vehicles	6	71	75
	Rollers	6	73	80
	Rubber-tired dozers	6	78	82
Access Road Improvements	Scrapers	4	80	84
	Tractors/loaders/backhoes	6	74	78
	Graders	6	81	85
	Off-highway trucks	7	73	77
	Other construction equipment	3	82	85
	Carts/all-terrain vehicles	2	71	75
	Rollers	6	73	80
Internal Roads Construction	Rubber-tired dozers	4	78	82
	Scrapers	4	80	84
	Graders	3	81	85
	Off-highway trucks	5	73	77
	Carts/all-terrain vehicles	2	71	75
	Rollers	3	73	80
	Tractors/loaders/backhoes	3	74	78
	Forklifts	8	68	75
	Generator sets	15	78	81
	Off-highway trucks	5	73	77
	Carts/all-terrain vehicles	9	71	75

**TABLE 4.12-7: CONSTRUCTION ACTIVITIES AND EQUIPMENT NOISE LEVELS**

Construction Phase	Equipment	Quantity <sup>1</sup>	Individual Equipment Noise Levels (dBA) at 50 Feet	
			L <sub>eq</sub>	L <sub>max</sub>
Solar Array Structural, Underground, Panel, and Battery Installation	Rollers	3	73	80
	Skid steers	12	74	78
	Post drivers	15	81	88
	Tractors/loaders/backhoes	3	74	78
	Trenchers	7	77	80
Electrical Substation and Microwave Tower Construction	Aerial lifts	4	68	75
	Cranes	3	73	81
	Forklifts	3	68	75
	Off-highway trucks	2	73	77
	Carts/all-terrain vehicles	2	71	75
	Tractors/loaders/backhoes	7	74	78
Gen-Tie Line Construction	Trenchers	7	77	80
	Aerial lifts	4	68	75
	Cranes	4	73	81
	Crawler tractors	3	80	84
	Forklifts	3	68	75
	Generator sets	3	78	81
	Off-highway trucks	3	73	77
	Carts/all-terrain vehicles	2	71	75
Tractors/loaders/backhoes	4	74	78	

SOURCE: ICF, 2023g (Appendix N).

<sup>1</sup> The quantity of each type of equipment anticipated to operate at the project site during each construction phase.

For the purposes of this analysis, the composite hourly average noise levels for all equipment items associated with each construction activity shown in **Table 4.12-7, Construction Activities and Equipment Noise Levels**, were calculated at a reference distance of 50 feet for use in estimating the noise levels at sensitive off-site receptors. The composite hourly average noise levels for each construction activity are shown in **Table 4.12-8, Composite Noise Levels for Each Construction Activity**.

**TABLE 4.12-8: COMPOSITE NOISE LEVELS FOR EACH CONSTRUCTION ACTIVITY**

<b>Construction Phase</b>	<b>Average Composite Hourly Noise Level (<math>L_{eq}</math>) at 50 feet, dBA</b>
Move on/Mobilization	93
Site preparation and grading	94
Access road improvements	93
Internal roads construction	89
Solar array structural, underground and panel, and battery installation	96
Electrical substation and microwave tower construction	88
Gen-tie line construction	89

SOURCE: ICF 2023g (Appendix N).

As shown in **Table 4.12-8**, *Composite Noise Levels for Each Construction Activity*, the average hourly noise levels for the proposed project's construction activities would range from 88 to 96 dBA  $L_{eq}$  at the reference distance of 50 feet. The highest noise levels would be associated with installation of the solar array system, primarily due to the use of numerous post drivers to install the solar panels.

As discussed previously, construction-related noise impacts, including the estimated noise increases relative to ambient conditions, were assessed at 19 representative sensitive receptors nearest to and surrounding the project site as well as the proposed gen-tie routes and access road improvements, as shown on **Figure 4.12-2**, *Analyzed Sensitive Receptor Locations*. The estimated worst-case construction noise levels at each sensitive receptor are summarized in **Table 4.12-9**, *Estimated Construction Noise Levels at Nearby Sensitive Receptors*. The Kern County Noise Control Ordinance construction hour limitations, identified above, would apply to the proposed project, and compliance with these hourly restrictions would substantially decrease levels of annoyance and potential sleep disruption to occupants of the nearest residential dwellings. Nonetheless, estimated worst-case noise increases due to construction are summarized in **Table 4.12-10**, *Estimated Construction Noise Increases at Nearby Sensitive Receptors* for informational purposes.

**TABLE 4.12-9: ESTIMATED CONSTRUCTION NOISE LEVELS AT NEARBY SENSITIVE RECEPTORS**

<b>Receptor Description/Location</b>	<b>Distance to Project Site<sup>1</sup></b>	<b>Located within WSSP Area?</b>	<b>Highest Estimated Average Hourly Noise Level (dBA L<sub>eq</sub>)</b>	<b>Applicable Threshold</b>
<b>SR3:</b> Residential dwelling southeast of the Favorito Avenue and 120 <sup>th</sup> Street West intersection, approximately 4,915 feet south of the closest proposed gen-tie route (Whirlwind Gen-tie Option 1)	Approximately 7,345 feet west of nearest project site boundary	Yes	68	N/A <sup>2</sup>
<b>SR5:</b> Residential dwelling south of Favorito Avenue and west of 110 <sup>th</sup> Street West, approximately 3,440 feet south of the closest proposed gen-tie route (Whirlwind Gen-tie Option 1)	Approximately 3,090 feet southwest of nearest project site boundary	Yes	50	N/A <sup>2</sup>
<b>SR8:</b> Residential dwelling on 90 <sup>th</sup> Street, north of Hamilton Road, approximately 535 feet from the closest proposed gen-tie route (Rosamond Gen-tie Option 2)	Approximately 2,000 feet south of nearest project site boundary	Yes	63	N/A <sup>2</sup>
<b>SR15:</b> Residential dwelling on Sweetser Road, east of Tehachapi Willow Springs Road, approximately 205 feet from the closest proposed gen-tie route (Rosamond Gen-tie Option 1)	Approximately 3,300 feet south of nearest project site boundary	Yes	73	N/A <sup>2</sup>
<b>SR21:</b> Residential dwelling on Tehachapi Willow Springs Road, south of Hamilton Road, approximately 2,970 feet from the closest proposed gen-tie route (Rosamond Gen-tie Option 1)	Approximately 4,245 feet southeast of nearest project site boundary	Yes	47	N/A <sup>2</sup>
<b>SR22:</b> Residential dwelling on Favorito Avenue, east of Tehachapi Willow Springs Road, approximately 1,620 feet from the closest proposed gen-tie route, Rosamond Gen-tie Option 1, and 1,860 feet from Rosamond Gen-tie Option 2	Approximately 1,600 feet east of nearest project site boundary	Yes	57	N/A <sup>2</sup>
<b>SR23:</b> Residential dwelling southeast of the Favorito Avenue and Tehachapi Willow Springs Road intersection, approximately 150 feet from the closest proposed gen-tie route, Rosamond Gen-tie Option 1, and 405 feet from Rosamond Gen-tie Option 2	Approximately 360 feet southeast of nearest project site boundary	Yes	77	N/A <sup>2</sup>



**TABLE 4.12-9: ESTIMATED CONSTRUCTION NOISE LEVELS AT NEARBY SENSITIVE RECEPTORS**

<b>Receptor Description/Location</b>	<b>Distance to Project Site<sup>1</sup></b>	<b>Located within WSSP Area?</b>	<b>Highest Estimated Average Hourly Noise Level (dBA L<sub>eq</sub>)</b>	<b>Applicable Threshold</b>
<b>SR24:</b> Residential dwelling southwest of the Favorito Avenue and Tehachapi Willow Springs Road intersection, approximately 120 feet from the closest proposed gen-tie route, Rosamond Gen-tie Option 2, and 430 feet from Rosamond Gen-tie Option 1	Approximately 85 feet south of nearest project site boundary	Yes	80	N/A <sup>2</sup>
<b>SR25:</b> Residential dwelling east of Tehachapi Willow Springs Road and south of Dawn Road, approximately 1,180 feet from the closest proposed gen-tie routes, Rosamond Gen-tie Option 1 and Rosamond Gen-tie Option 2	Approximately 220 feet east of nearest project site boundary	Yes	74	N/A <sup>2</sup>
<b>SR29:</b> Residential dwelling at the Dawn Road and 85 <sup>th</sup> Street intersection, approximately 3,540 feet from the closest proposed gen-tie routes, Rosamond Gen-tie Option 1 and Rosamond Gen-tie Option 2	Approximately 100 feet east of nearest project site boundary	Yes	79	N/A <sup>2</sup>
<b>SR30:</b> Residential dwelling south of the intersection of Dawn Road and 71 <sup>st</sup> Street, approximately 9,575 feet from the closest proposed gen-tie route, Rosamond Gen-tie Option 1, and 9,680 feet from Rosamond Gen-tie Option 2	Approximately 1,280 feet east of nearest project site boundary	Yes	59	N/A <sup>2</sup>
<b>SR36:</b> Residential dwelling on 105 <sup>th</sup> Street, north of Dawn Road, approximately 1,100 feet from the closest proposed gen-tie route, Whirlwind Gen-tie Option 1, and 2,195 feet from Whirlwind Gen-tie Option 1.2	Approximately 1,100 feet north of nearest project site boundary	No	60	N/A <sup>2</sup>
<b>SR38:</b> Residential dwelling east of 105 <sup>th</sup> Street, north of Dawn Road, approximately 1,650 feet from the closest proposed gen-tie route, Whirlwind Gen-tie Option 1, and 3,180 feet from Whirlwind Gen-tie Option 1.2	Approximately 1,505 feet north of nearest project site boundary	No	57	N/A <sup>2</sup>
<b>SR46:</b> Residential dwelling between 105 <sup>th</sup> Street and 110 <sup>th</sup> Street, north of Dawn Road, approximately 1,255 feet from the closest proposed gen-tie route, Whirlwind Gen-tie Option 1.2, and 1,410 feet from Whirlwind Gen-tie Option 1	Approximately 2,375 feet northeast of nearest project site boundary	No	54	N/A <sup>2</sup>

**TABLE 4.12-9: ESTIMATED CONSTRUCTION NOISE LEVELS AT NEARBY SENSITIVE RECEPTORS**

<b>Receptor Description/Location</b>	<b>Distance to Project Site<sup>1</sup></b>	<b>Located within WSSP Area?</b>	<b>Highest Estimated Average Hourly Noise Level (dBA L<sub>eq</sub>)</b>	<b>Applicable Threshold</b>
<b>SR54:</b> Residential dwelling at the west end of McConnell Avenue, approximately 3,840 feet from the closest proposed gen-tie route, Whirlwind Gen-tie Option 1, and 5,470 feet from Whirlwind Gen-tie Option 1.2	Approximately 1,435 feet north of nearest project site boundary	No	58	N/A <sup>2</sup>
<b>SR57:</b> Residential dwelling on 105 <sup>th</sup> Street, north of Favorito Avenue, approximately 1,705 feet from the closest proposed gen-tie route, Rosamond Gen-tie Option 2, and 2,000 feet from Whirlwind Gen-tie Option 1	Approximately 135 feet west of nearest project site boundary	Yes	77	N/A <sup>2</sup>
<b>SR58:</b> Residential dwelling on 105 <sup>th</sup> Street, south of Dawn Road, approximately 985 feet from the closest proposed gen-tie route (Whirlwind Gen-tie Option 1)	Approximately 1,005 feet east of nearest project site boundary	Yes	61	N/A <sup>2</sup>
<b>SR59:</b> Residential dwelling on Champagne Avenue, east of 115 <sup>th</sup> Street, approximately 1,025 feet from the closest proposed gen-tie route, Whirlwind Gen-tie Option 1.2, 2,305 feet from Whirlwind Gen-tie Option 1.1, and 2,535 feet from Whirlwind Gen-tie Option 1	Approximately 7,200 feet north of nearest project site boundary	No	56	N/A <sup>2</sup>
<b>SR60:</b> Residential dwelling along Highgate, east of Tehachapi Willow Springs Road, approximately 10,005 feet from the closest proposed gen-tie routes, Rosamond Gen-tie Option 1 and Rosamond Gen-tie Option 2, and 10,715 feet from Whirlwind Gen-tie Option 1	Approximately 2,585 feet north of nearest project site boundary	No	52	N/A <sup>2</sup>

SOURCE: ICF, 2023g (Appendix N).

NOTES: N/A = not applicable

<sup>1</sup> The distances are measured from façade of the residential dwelling locations.

<sup>2</sup> Neither the Kern County General Plan nor the WSSP have identified noise limits pertaining to construction noise. Instead, construction noise is currently regulated in Chapter 8.36 (Noise Control) of the Kern County Code of Ordinances through the establishment of acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive uses. Implementation of Mitigation Measures MM 4.12-1 through MM 4.12-3 requires that construction activities associated with the project would comply with these hourly limitations. As construction activities would not operate outside of Kern County's permitted construction hours, no noise standard or threshold pertaining to construction noise levels applies to the proposed project.

**TABLE 4.12-10: ESTIMATED CONSTRUCTION NOISE INCREASES AT NEARBY SENSITIVE RECEPTORS**

Receptor	Highest Estimated Construction Noise Level (dBA Leq)	Estimated Average Hourly Ambient Noise Level (dBA Leq)	Noise Measurement Used to Estimate Ambient Noise Level <sup>1</sup>	Estimated Combined Hourly Noise Level (dBA Leq)	Estimated Noise Level Increase (dBA Leq)
SR3	68	37	LT1	68	31
SR5	50	37	LT1	51	14
SR8	63	37	LT1	63	27
SR15	73	37	LT1	73	37
SR21	47	37	LT1	47	11
SR22	57	37	LT1	57	20
SR23	77	46	LT3	77	31
SR24	80	46	LT3	80	34
SR25	74	46	LT3	74	28
SR29	79	37	LT1	79	43
SR30	59	37	LT1	59	23
SR36	60	37	LT1	61	24
SR38	57	37	LT1	58	21
SR46	54	37	LT1	54	17
SR54	58	37	LT1	58	21
SR57	77	37	LT1	77	41
SR58	61	37	LT1	61	25
SR59	56	30	ST1	56	26
SR60	52	37	LT1	52	16

SOURCE: ICF, 2023g (Appendix N).

NOTES:

<sup>1</sup> Average ambient noise levels are primarily estimated using long-term measurements because these provide a long-term average that is less influenced by short-term noise fluctuations than short-term measurements. LT1 is conservatively selected for most receptor locations because it was located away from developed areas and was the quietest long-term measurement obtained. LT3 is selected for receptors SR23, SR24, and SR25 because they are all close to Tehachapi Willow Springs Road near where LT3 was located. ST1 is selected for SR59 because this was a particularly remote location where the short-term measurement indicated particularly low ambient noise levels.

As shown in **Table 4.12-10**, *Estimated Construction Noise Increases at Nearby Sensitive Receptors*, the highest estimated construction-related noise levels that could result at nearby sensitive receptors over the course of the proposed project's construction period would range from 47 dBA Leq at SR21 to 80 dBA Leq at SR24. Because these noise levels are associated with the highest noise-generating construction activity that could occur nearest to each analyzed sensitive receptor location, these noise levels would only occur

over the duration of that activity and would not occur over the entirety of the proposed project's approximately 18-month construction period. During quieter phases of construction or when construction activity moves farther away from the receptor, the noise levels would decrease. As such, the highest construction noise levels experienced at each analyzed sensitive receptor would only occur over a temporary period within the proposed project's overall construction schedule.

Referring to **Table 4.12-10**, *Estimated Construction Noise Increases at Nearby Sensitive Receptors*, the highest estimated construction-related noise levels would increase ambient noise levels by 11 to 43 dBA. Therefore, project construction activities would, at times, be clearly audible above existing ambient noise levels at each of these analyzed sensitive receptors. As noted above, worst-case noise levels would not occur over the entirety of the proposed project's construction period. During quieter phases of construction, or when construction activity moves farther away from the receptor, the resulting noise increases would be reduced. Currently, neither the Kern County General Plan nor the WSSP have identified noise limits pertaining to construction noise. Instead, construction noise is currently regulated in Chapter 8.36 (Noise Control) of the Kern County Code of Ordinances through the establishment of acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive uses. Specifically, construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling, are prohibited from 9:00 p.m. to 6:00 a.m. on weekdays and 9:00 p.m. to 8:00 a.m. on weekends.

Construction noise levels would result in a temporary increase of ambient noise levels at nearby sensitive receptors compared to existing conditions by up to 43 dBA. Therefore, impacts are considered significant. Implementation of noise reduction measures MM 4.12-1 through MM 4.12-3 would ensure adherence to the County's Code of Ordinances, Chapter 8.36, providing construction hourly limitations, minimize noise effects generated by the proposed project by limiting and/or reducing potential construction noise, as well as providing notice to nearby residents of construction activities and a contact number for noise complaints. Because construction of the proposed project would comply with the hourly limitations identified in the County's noise-control ordinance, impacts would be less than significant with mitigation.

### ***Project Decommissioning***

If it is determined that the project site should be decommissioned at the end of the proposed project's operational term, equipment operation and site restoration activities would result in a temporary increase in ambient noise levels in the project area. The construction equipment necessary to construct the project would also be required to decommission the project site, and it is reasonable to assume that decommissioning activities would be similar in nature to the proposed project construction activities. Similar to the construction noise analysis above, decommissioning of proposed project would result in potentially increased noise levels compared to existing conditions. Therefore, noise reduction measures MM 4.12-1 through 4.12-3 would be implemented during decommissioning activities to reduce temporary increases in noise levels at offsite receptors, and decommissioning impacts would be reduced to less than significant.

### ***Construction Traffic***

Construction worker vehicles and haul trucks, which would transport equipment and materials to and from the project site, would incrementally increase noise levels on local roads in the project area. According to the traffic analysis for the proposed project, construction-related vehicles would access the project site via Tehachapi Willow Springs Road and Rosamond Boulevard. Under peak construction conditions, it is

anticipated that a total of 1,254 worker vehicle trips and 334 heavy truck trips (combined inbound and outbound) would occur on a daily basis (Ruettggers & Schuler Civil Engineers, 2022; **Appendix M**). The traffic analysis provides traffic volumes along multiple roadways for existing conditions with and without construction traffic. These volumes were used to model traffic noise levels. The results are summarized in **Table 4.12-11, Offsite Construction Traffic Noise Levels**.

**TABLE 4.12-11: OFFSITE CONSTRUCTION TRAFFIC NOISE LEVELS**

Roadway / Segment	Traffic Noise Levels, dBA CNEL <sup>1</sup>			
	Existing	Construction	Existing + Construction	Increase due to Construction
Tehachapi Willow Springs Rd – Hamilton Rd to Rosamond Blvd	62.8	61.5	65.2	2.4
Rosamond Blvd – 170 <sup>th</sup> St W to 130 <sup>th</sup> St W	63.4	56.1	64.1	0.7
Rosamond Blvd – 130 <sup>th</sup> St W to 90 <sup>th</sup> St W	62.6	60.3	64.6	2.0
Rosamond Blvd – 90 <sup>th</sup> St W to SR-14	66.5	60.3	67.4	0.9

SOURCE: Ruettggers & Schuler Civil Engineers, 2022.

NOTE:

<sup>1</sup> The noise levels are estimated at a distance of 50 feet from the roadway center.

As shown in **Table 4.12-11, Offsite Construction Traffic Noise Levels**, the proposed project's peak day construction traffic noise would increase traffic noise levels from local access routes by 2.4 dBA CNEL or less. Because all the predicted increases are less than 3 dBA, they would be barely perceptible. As such, the impact would be less than significant.

## Operational Noise

### Onsite Electrical Equipment

As discussed in Section 4.12-4, *Methodology*, the combined onsite operational noise sources (BESS, substation, PCS, and gen-tie lines throughout the solar arrays) were analyzed using SoundPLAN noise modeling software. A separate model run was conducted for each of the three substation/BESS options. The model results were output as noise contour maps showing noise levels graphically across the study area. These maps were calculated for  $L_{dn}$ , daytime  $L_{eq}$ , and nighttime  $L_{eq}$  to address the various noise metrics of interest at the nearest noise-sensitive receptors in Kern County and the WSSP area. The operational noise levels for BESS/Substation Options 1, 2, and 3 are summarized below for each of the same 19 receivers considered in the construction noise analysis.

As shown in **Table 4.12-12, Estimated Stationary Equipment Noise Levels at Analyzed Sensitive Receptors, BESS/Substation Option 1**, with BESS/Substation Option 1, the combined operational stationary equipment noise levels at all analyzed sensitive receptors would range from less than 30 to approximately 50 dBA  $L_{dn}$ . These levels are below the applicable Kern County and WSSP standard of 65 dBA  $L_{dn}$ . For the analyzed sensitive receptors in the WSSP area, the hourly noise levels would range from less than 30 to approximately 50 dBA  $L_{50}$  during the daytime hours, and from less than 30 to approximately 45 dBA  $L_{50}$

(but would not exceed 45 dBA  $L_{50}$ ) during the nighttime hours. These levels comply with the applicable WSSP daytime and nighttime standards of 55 and 45 dB  $L_{50}$ , respectively.

As shown in **Table 4.12-13**, *Estimated Stationary Equipment Noise Levels at Analyzed Sensitive Receptors, BESS/Substation Option 2*, with BESS/Substation Option 2, the combined operational stationary equipment noise levels at all analyzed sensitive receptors would range from less than 30 to approximately 50 dBA  $L_{dn}$ . These levels are below the applicable Kern County and WSSP standard of 65 dBA  $L_{dn}$ . For the analyzed sensitive receptors in the WSSP area, the hourly daytime noise levels would range from less than 30 to approximately 45 dBA  $L_{50}$ . These levels are below the applicable WSSP daytime standard of 55 dBA  $L_{50}$ . For the analyzed sensitive receptors in the WSSP area, the hourly noise levels would range from less than 30 to approximately 45 dBA  $L_{50}$  during the daytime hours, and from less than 30 to approximately 40 dBA  $L_{50}$  during the nighttime hours. These levels are below the applicable WSSP daytime and nighttime standards of 55 and 45 dBA  $L_{50}$ , respectively.

As shown in **Table 4.12-14**, *Estimated Stationary Equipment Noise Levels at Analyzed Sensitive Receptors, BESS/Substation Option 3*, with BESS/Substation Option 3, the combined operational stationary equipment noise levels at all analyzed sensitive receptors would range from less than 30 to approximately 65 dBA  $L_{dn}$  (but would not exceed 65 dBA  $L_{dn}$ ). These levels comply with the applicable Kern County and WSSP standard of 65 dBA  $L_{dn}$ . For the analyzed sensitive receptors in the WSSP area, the hourly noise levels would range from less than 30 to approximately 57 dBA  $L_{50}$  during the daytime hours, and from less than 30 to approximately 56 dBA  $L_{50}$  during the nighttime hours. These noise levels would exceed WSSP noise standards at three of the analyzed receptors. At SR23, the predicted nighttime  $L_{50}$  of 50 dBA would exceed the nighttime standard of 45 dBA  $L_{50}$ . At SR24, the predicted daytime and nighttime  $L_{50}$  of 57 and 56 dBA, respectively, would exceed the daytime and nighttime standards of 55 and 45 dBA  $L_{50}$ . At SR25, the predicted nighttime  $L_{50}$  of 50 dBA would exceed the nighttime standard of 45 dBA  $L_{50}$ . At all three receptors, the exceedance would be due to the nearby BESS. Impacts would be significant. Implementation of Mitigation Measures MM 4.12-5 through MM4.12-6 would require setbacks, adequate noise shielding design for the proposed transformers and inverters and noise control measures to ensure compliance with applicable noise standards during emergency operation of the backup generator and operation of the BESS/Substation Option 3.

### Gen-Tie-Lines

The proposed project includes four options for gen-tie routes although only one route would be constructed. Overhead electrical lines, where constructed, would emit noise levels associated with corona discharge, which is an electrical discharge that ionizes the surrounding air. The noise associated with corona discharge is typically described as a crackling or humming sound. Based on data from a previous solar project noise study (Ambient Air Quality & Noise Consulting 2015), noise levels from transmission line corona discharge are approximately 25 dBA at a distance of 25 feet (based on a 230-kilovolt line). This noise level is below all of the applicable Kern County and WSSP noise standards, ensuring that high noise levels would not extend beyond the transmission line corridor. As a result, there would be no significant noise impacts at nearby sensitive receptors from proposed gen-tie lines.

**TABLE 4.12-12: ESTIMATED STATIONARY EQUIPMENT NOISE LEVELS AT ANALYZED SENSITIVE RECEPTORS, BESS/SUBSTATION OPTION 1**

Receptor Location <sup>1</sup>	Located within WSSP Area?	dBA L <sub>dn</sub> <sup>2</sup>		Daytime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>		Nighttime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>	
		Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold
SR3	Yes	30–35	65	<30	55	<30	45
SR5	Yes	40–45	65	35–40	55	30–35	45
SR8	Yes	45–50	65	40–45	55	35–40	45
SR15	Yes	30–35	65	30–35	55	<30	45
SR21	Yes	30–35	65	<30	55	<30	45
SR22	Yes	35–40	65	30–35	55	<30	45
SR23	Yes	35–40	65	35–40	55	30–35	45
SR24	Yes	40–45	65	40–45	55	30–35	45
SR25	Yes	40–45	65	40–45	55	30–35	45
SR29	Yes	40–45	65	40–45	55	30–35	45
SR30	Yes	<30	65	30–35	55	<30	45
SR36	No	45–50	65	40–45	N/A	40–45	N/A
SR38	No	45–50	65	40–45	N/A	40–45	N/A
SR46	No	40–45	65	35–40	N/A	35–40	N/A
SR54	No	40–45	65	35–40	N/A	35–40	N/A
SR57	Yes	45–50	65	45–50	55	40–45	45
SR58	Yes	45–50	65	40–45	55	40–45	45
SR59	No	30–35	65	<30	N/A	<30	N/A
SR60	No	30–35	65	<30	N/A	<30	N/A

**TABLE 4.12-12: ESTIMATED STATIONARY EQUIPMENT NOISE LEVELS AT ANALYZED SENSITIVE RECEPTORS, BESS/SUBSTATION OPTION 1**

Receptor Location <sup>1</sup>	Located within WSSP Area?	dBA L <sub>dn</sub> <sup>2</sup>		Daytime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>		Nighttime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>	
		Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold

SOURCE: ICF 2023g (Appendix N).

NOTES: N/A = not applicable

Values in ***bold underlined italics*** indicate an exceedance of the applicable threshold.

<sup>1</sup> Receptor locations are depicted on Figure 4.12-2.

<sup>2</sup> Noise map results (refer to Appendix N) are illustrated in 5-dB bands from less than 30 dB (<30) to greater than 65 dB (>65). The reported noise levels in this table indicate the highest noise level band affecting each sensitive receiver. Predicted noise levels that exceed an applicable threshold are reported to the nearest dB to quantify the impact more accurately.

<sup>3</sup> Daytime = 7 a.m. to 10 p.m.; nighttime = 10 p.m. to 7 a.m.

<sup>4</sup> Assuming predicted noise levels would typically be constant, the predicted L<sub>eq</sub> is assessed against the WSSP L<sub>50</sub> noise standard. This noise limit applies to any noise level occurring for 30 minutes or more per hour.

**TABLE 4.12-13: ESTIMATED STATIONARY EQUIPMENT NOISE LEVELS AT ANALYZED SENSITIVE RECEPTORS, BESS/SUBSTATION OPTION 2**

Receptor Location <sup>1</sup>	Located within WSSP Area?	dBA L <sub>dn</sub> <sup>2</sup>		Daytime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>		Nighttime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>	
		Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold
SR3	Yes	<30	65	<30	55	<30	45
SR5	Yes	30–35	65	<30	55	<30	45
SR8	Yes	35–40	65	35–40	55	30–35	45
SR15	Yes	35–40	65	30–35	55	<30	45
SR21	Yes	30–35	65	<30	55	<30	45
SR22	Yes	35–40	65	35–40	55	30–35	45
SR23	Yes	40–45	65	35–40	55	30–35	45
SR24	Yes	45–50	65	40–45	55	35–40	45
SR25	Yes	45–50	65	40–45	55	35–40	45
SR29	Yes	40–45	65	40–45	55	30–35	45
SR30	Yes	30–35	65	30–35	55	<30	45



**TABLE 4.12-13: ESTIMATED STATIONARY EQUIPMENT NOISE LEVELS AT ANALYZED SENSITIVE RECEPTORS, BESS/SUBSTATION OPTION 2**

Receptor Location <sup>1</sup>	Located within WSSP Area?	dBA L <sub>dn</sub> <sup>2</sup>		Daytime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>		Nighttime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>	
		Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold
SR36	No	35–40	65	35–40	N/A	30–35	N/A
SR38	No	35–40	65	35–40	N/A	30–35	N/A
SR46	No	35–40	65	30–35	N/A	<30	N/A
SR54	No	40–45	65	35–40	N/A	35–40	N/A
SR57	Yes	40–45	65	40–45	55	30–35	45
SR58	Yes	30–35–40	65	30–35	55	<30	45
SR59	No	<30	65	<30	N/A	<30	N/A
SR60	No	30–35	65	<30	N/A	<30	N/A

SOURCE: ICF 2023g (Appendix N)

NOTES: NA= Not Applicable

Values in ***bold underlined italics*** indicate an exceedance of the applicable threshold.

<sup>1</sup> Receptor locations are depicted on Figure 4.12-2.

<sup>2</sup> Noise map results (refer to Appendix N) are illustrated in 5-dB bands from less than 30 dB (<30) to greater than 65 dB (>65). The reported noise levels in this table indicate the highest noise level band affecting each sensitive receiver. Predicted noise levels that exceed an applicable threshold are reported to the nearest dB to quantify the impact more accurately.

<sup>3</sup> Daytime = 7 a.m. to 10 p.m.; nighttime = 10 p.m. to 7 a.m.

<sup>4</sup> Assuming predicted noise levels would typically be constant, the predicted L<sub>eq</sub> is assessed against the WSSP L<sub>50</sub> noise standard. This noise limit applies to any noise level occurring for 30 minutes or more per hour.

**TABLE 4.12-14: ESTIMATED STATIONARY EQUIPMENT NOISE LEVELS AT ANALYZED SENSITIVE RECEPTORS, BESS/SUBSTATION OPTION 3**

Receptor Location <sup>1</sup>	Located within WSSP Area?	dBA L <sub>dn</sub> <sup>2</sup>		Daytime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>		Nighttime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>	
		Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold
SR3	Yes	<30	65	<30	55	<30	45
SR5	Yes	30–35	65	<30	55	<30	45
SR8	Yes	40–45	65	35–40	55	30–35	45

**TABLE 4.12-14: ESTIMATED STATIONARY EQUIPMENT NOISE LEVELS AT ANALYZED SENSITIVE RECEPTORS, BESS/SUBSTATION OPTION 3**

Receptor Location <sup>1</sup>	Located within WSSP Area?	dBA L <sub>dn</sub> <sup>2</sup>		Daytime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>		Nighttime L <sub>eq</sub> /L <sub>50</sub> <sup>2,3,4</sup>	
		Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold	Predicted Level	Applicable Threshold
SR15	Yes	40–45	65	35–40	55	35–40	45
SR21	Yes	40–45	65	35–40	55	30–35	45
SR22	Yes	45–50	65	40–45	55	40–45	45
SR23	Yes	55–60	65	50–55	55	<b><u>50</u></b>	<b><u>45</u></b>
SR24	Yes	60–65	65	<b><u>57</u></b>	<b><u>55</u></b>	<b><u>56</u></b>	<b><u>45</u></b>
SR25	Yes	55–60	65	50–55	55	<b><u>50</u></b>	<b><u>45</u></b>
SR29	Yes	45–50	65	40–45	55	35–40	45
SR30	Yes	30–35	65	30–35	55	<30	45
SR36	No	35–40	65	35–40	N/A	<30	N/A
SR38	No	35–40	65	30–35	N/A	<30	N/A
SR46	No	30–35	65	30–35	N/A	<30	N/A
SR54	No	35–40	65	30–35	N/A	30–35	N/A
SR57	Yes	40–45	65	40–45	55	30–35	45
SR58	Yes	35–40	65	30–35	55	<30	45
SR59	No	<30	65	<30	N/A	<30	N/A
SR60	No	30–35	65	<30	N/A	<30	N/A

SOURCE: ICF 2023g (Appendix N)

NOTES: NA= Not Applicable

Values in ***bold underlined italics*** indicate an exceedance of the applicable threshold.

<sup>1</sup> Receptor locations are depicted on Figure 4.12-2.

<sup>2</sup> Noise map results (refer to Appendix N are illustrated in 5-dB bands from less than 30 dB (<30) to greater than 65 dB (>65). The reported noise levels in this table indicate the highest noise level band affecting each sensitive receiver. Predicted noise levels that exceed an applicable threshold are reported to the nearest dB to quantify the impact more accurately.

<sup>3</sup> Daytime = 7 a.m. to 10 p.m.; nighttime = 10 p.m. to 7 a.m.

<sup>4</sup> Assuming predicted noise levels would typically be constant, the predicted L<sub>eq</sub> is assessed against the WSSP L<sub>50</sub> noise standard. This noise limit applies to any noise level occurring for 30 minutes or more per hour.

## Onsite Maintenance Facilities

The primary maintenance activity that would generate noticeable noise levels at the project site would be washing of the solar panels, which is anticipated to occur up to twice a year. Noise levels from panel washing would primarily be generated from the use of portable power washers, as well as the trucks used to bring the water to the site and move the equipment around the project site. However, panel washing for the proposed project would be transient and short term, performed annually at most and over a period of 60 days; panel washing would only occur during daytime work hours. The washing activity at any one area within the project site would be relatively brief before the activity moves away to another area. As a result, no significant noise impacts are predicted as a result of onsite maintenance activities.

## Operational Traffic

The proposed project would be operated from the existing operations and maintenance facility at the adjacent BigBeau Solar Project site. According to the traffic analysis for the proposed project (Ruettggers & Schuler Civil Engineers, 2022), up to 15 part-time and or full-time staff may be required for operation of the Bullhead Solar Project (for site inspection, security, maintenance, and system monitoring purposes). The proposed project may also require annual washing of the solar panels that would typically be carried out over a period of 60 days. The panel-washing activities are expected to generate approximately 18 truck trips per day (Ruettggers & Schuler Civil Engineers, 2022). As the daily truck trips associated with panel-washing activities would represent the highest generator of traffic during project operations, this scenario was used to model the traffic noise levels generated by the proposed project. The modeling data and results are provided in **Appendix N** of this EIR. The results are summarized in **Table 4.12-15, Operational Traffic Noise Levels**.

**TABLE 4.12-15: OPERATIONAL TRAFFIC NOISE LEVELS**

Roadway / Segment	Traffic Noise Levels, dBA CNEL <sup>1</sup>					
	Existing	Existing + Project	Existing Increase Due to Project	Future (2026)	Future (2026) + Project	Future Increase Due to Project
Tehachapi Willow Springs Rd – Hamilton Rd to Rosamond Blvd	62.8	62.8	0.0	63.1	63.2	0.1
Rosamond Blvd – 170 <sup>th</sup> St W to 130 <sup>th</sup> St W	63.4	63.4	0.0	64.8	64.8	0.0
Rosamond Blvd – 130 <sup>th</sup> St W to 90 <sup>th</sup> St W	62.6	62.7	0.1	63.8	63.8	0.0
Rosamond Blvd – 90 <sup>th</sup> St W to SR-14	66.5	66.5	0.0	67.2	67.2	0.0

SOURCE: Ruettggers & Schuler Civil Engineers 2022

NOTES

<sup>1</sup> The noise levels are estimated at a distance of 50 feet from the roadway center.

As shown in **Table 4.12-15, Operational Traffic Noise Levels**, based on the estimated truck trips for panel-washing activities, combined with typical daily commutes to the site, the proposed project's operational traffic would increase traffic noise levels by 0.1 dBA CNEL or less for both existing and future conditions. This nominal noise increase would not be noticeable. As such, impacts from operational traffic would be less than significant.

### **Mitigation Measures**

**MM 4.12-1:** The following measures are to be implemented to further reduce short-term noise levels associated with project construction and decommissioning:

- a. Construction and decommissioning activities at the project site shall comply with the hourly restrictions for noise-generating construction activities, as specified in the County's Code of Ordinances, Chapter 8.36. Accordingly, construction activities shall be prohibited between the hours of 9:00 p.m. to 6:00 a.m. on weekdays, and between 9:00 p.m. to 8:00 a.m. on weekends. These hourly limitations shall not apply to activities where hourly limitations would result in increased safety risk to workers or the public, such as commissioning and maintenance activities that must occur after dark to ensure photovoltaic arrays are not energized, unanticipated emergencies requiring immediate attention, or security patrols.
- b. Equipment staging and laydown areas shall be located at the furthest practical distance from nearby residential land uses.
- c. Construction equipment shall be fitted with noise-reduction features such as mufflers and engine shrouds that are no less effective than those originally installed by the manufacturer.
- d. Haul trucks shall not be allowed to idle for periods greater than five minutes, except as needed to perform a specified function (e.g., concrete mixing).
- e. Onsite vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency).
- f. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health's safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.

**MM 4.12-2:** Prior to the issuance of grading permits, the construction contractor shall establish a Noise Disturbance Coordinator for the project during construction. The Noise Disturbance Coordinator shall be responsible for responding to any complaints about construction noise. The Noise Disturbance Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint. Contact information for the Noise Disturbance Coordinator shall be submitted to the Kern County Planning and Natural Resources Department prior to commencement of any ground disturbing activities.

- MM 4.12-3** Prior to commencement of any onsite construction activities (i.e., fence construction, mobilization of construction equipment, initial grading, etc.), including decommissioning, the Project Proponent/operator shall provide written notice to the public through mailing a notice, which shall include:
- The mailing notice shall be to all residences within 1,000 feet of the project site, 15 days or less prior to construction activities. The notices shall include the construction schedule and a telephone number and email address where complaints and questions can be registered with the noise disturbance coordinator.
  - A minimum of one sign, legible at a distance of 50 feet, shall be posted at the construction site or adjacent to the nearest public access to the main construction entrance throughout construction activities that shall provide the construction schedule (updated as needed) and a telephone number where noise complaints can be registered with the noise disturbance coordinator.
  - Documentation that the public notice has been sent and the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department.
- MM 4.12-4** The emergency backup generator design shall incorporate noise control to ensure compliance with the applicable noise standards of Kern County and the WSSP during period testing and emergency operation. Such measures may include, but are not limited to:
- The adequacy of the selected noise control technique(s) will be demonstrated in a focused acoustical study performed prior to the issuance of building permits to ensure that the applicable Kern County and WSSP noise standards (daily Ldn, daytime L50, and nighttime L50) would not be exceeded at any of the nearby noise-sensitive receptors. The calculations will be based on the most recent available project plans and backup generator specifications.
  - Locating the emergency backup generator away from noise-sensitive receptors;
  - Selecting a quieter generator model;
  - Equipping the generator with an appropriate muffler to reduce exhaust noise
  - Equipping the generator with an appropriate sound enclosure to reduce radiated noise
  - Placing noise barrier(s) around one or more sides of the emergency generator.
- MM 4.12-5** The final equipment layout within the project site will include a minimum 150-foot setback buffer between all onsite stationary noise sources, including the substation equipment BESS containers, inverters, and power-conversion stations and residentially zoned inhabited parcels.
- MM 4.12-6** For BESS/Substation Option 3, if selected for construction, the BESS design will be revised and/or noise control will be added as part of the final project design. Such revisions and noise control may include, but are not limited to, the following:
- Shifting the BESS to the west or northwest to increase its distance from sensitive receptor (SR)23, SR24, and SR25
- Selecting quieter BESS equipment

- Placing noise barrier(s) around one or more sides of the BESS equipment

### ***Level of Significance after Mitigation***

Impacts would be less than significant.

### **Impact 4.12-2: The project would generate excessive groundborne vibration or groundborne noise levels.**

Heavy construction equipment operating at the project site would generate groundborne vibration that could affect nearby residential structures or residents. For the purposes of assessing structural vibration sensitivity, the nearby residential structures are considered “old buildings,” which have an applicable building damage threshold of 0.25 in/s (refer to **Table 4.12-3**). This is likely to be a conservative assumption but is considered a sensible approach because the construction and condition of the structures have not been inspected or verified. Based on the vibration levels associated with the types of construction equipment that would be used during project construction (refer to **Table 4.12-6**), the range of vibration levels that could occur at the analyzed sensitive receptors near the project site were estimated. A summary of the results is provided in **Table 4.12-16**, *Estimated Groundborne Vibration from Project Construction*. The table also compares the calculated PPV with the human perceptibility criteria (refer to **Table 4.12-4**) to assess the potential for human annoyance.

**TABLE 4.12-16: ESTIMATED GROUNDBORNE VIBRATION FROM PROJECT CONSTRUCTION**

<b>Receptor</b>	<b>Distance(s) to Closest Construction, feet<sup>1</sup></b>	<b>Range of Estimated PPV, in/s</b>	<b>Worst Case Human Response</b>
SR3	535 to 7,345	<0.001–0.007	None (below barely perceptible)
SR5	3,090	<0.001–0.001	None (below barely perceptible)
SR8	535 to 2,000	<0.001–0.003	None (below barely perceptible)
SR15	205 to 3,300	<0.001–0.009	None (below barely perceptible)
SR21	2,970 to 4,245	<0.001–0.001	None (below barely perceptible)
SR22	1,600	<0.001–0.002	None (below barely perceptible)
SR23	150 to 360	<0.001–0.012	Barely perceptible
SR24	85	0.001–0.055	Distinctly perceptible
SR25	220	<0.001–0.019	Barely perceptible
SR29	100	0.001–0.046	Distinctly perceptible
SR30	1,280	<0.001–0.003	None (below barely perceptible)
SR36	1,100	<0.001–0.003	None (below barely perceptible)
SR38	1,505	<0.001–0.002	None (below barely perceptible)
SR46	1,255 to 2,375	<0.001–0.001	None (below barely perceptible)
SR54	1,435	<0.001–0.002	None (below barely perceptible)
SR57	135	<0.001–0.033	Barely perceptible
SR58	985 to 1,005	<0.001–0.004	None (below barely perceptible)
SR59	1,025 to 7,200	<0.001–0.001	None (below barely perceptible)

**TABLE 4.12-16: ESTIMATED GROUNDBORNE VIBRATION FROM PROJECT CONSTRUCTION**

Receptor	Distance(s) to Closest Construction, feet <sup>1</sup>	Range of Estimated PPV, in/s	Worst Case Human Response
SR60	2,585	<0.001–0.001	None (below barely perceptible)

SOURCE: ICF, 2023g (Appendix N).

NOTES:

<sup>1</sup> For receptors where the project site is the closest construction area, the distance used in the analysis is the distance from the receptor to the closest site boundary. For receptors that are closer to access road improvements or a gen-tie line, two distances were used in the analysis; the first reported distance is to the closest access road improvements or a gen-tie line, and the second reported distance is to the closest site boundary.

As shown in **Table 4.12-16**, *Estimated Groundborne Vibration from Project Construction*, the estimated PPV values at all locations are well below the applicable 0.25 in/s threshold for potential building damage. It is predicted that groundborne vibration under the worst-case construction conditions would fall within the *barely perceptible* range or lower at 17 of the analyzed receivers. At the remaining two analyzed receiver locations, SR24 and SR29, groundborne vibration is predicted to be *distinctly perceptible* under worst-case conditions when a vibratory roller operates within 113 feet of the residential buildings. Because SR24 and SR29 are approximately 85 and 100 feet from the boundary of the project area, respectively, this would occur only briefly during the overall construction period. Once the operating piece of equipment is more than 113 feet away, groundborne vibration levels would become *barely perceptible* or lower.

Overall, groundborne vibration levels would be low and would be imperceptible or barely perceptible at most of the nearby sensitive receptors. Distinctly perceptible vibration may occur briefly at the closest receptors but would be limited to short time periods when heavy equipment is operating within 113 feet. All perceptible vibration would be limited to the permitted daytime construction hours due to the implementation of **Mitigation Measure 4.12-1**. In all cases, groundborne vibration would be well below levels that would cause damage to structures. Therefore, project construction would not expose the analyzed sensitive receptors to or generate excessive groundborne vibration or groundborne noise levels. Impacts would be less than significant.

Once the proposed project is operational, there would be no substantial sources of groundborne vibration at the project site. The mechanical equipment installed at the project site would cause some localized vibration that may be perceptible at close range (e.g., on the equipment pad), but there would be no perceptible vibration at other properties. Therefore, there would be no vibration impacts due to proposed project operation.

### ***Mitigation Measures***

No mitigation would be required.

### ***Level of Significance***

Impacts would be less than significant.

### **Impact 4.12-3: The project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**

As discussed under Impact 4.12-1, proposed project noise levels associated with operation of the BESS Option 3 would result in a significant operational noise impact. Average daytime ambient noise levels at studied receptors range from 30 to approximately 65 dBA  $L_{dn}$  (but would not exceed 65 dBA  $L_{dn}$ ). Noise levels associated with BESS operation would reach up to 57 dBA  $L_{eq}$  during the daytime and 56 dBA  $L_{eq}$  during the nighttime hours at nearby sensitive receptors. The increase in ambient noise levels would be above the applicable daytime and nighttime thresholds (45 dBA  $L_{eq}/L_{50}$  nighttime and 55 dBA  $L_{eq}/L_{50}$  daytime within the WSSP and 65 dBA  $L_{dn}$  within the County). The proposed gen-tie line would result in electrical discharge (corona discharge) noise that would not be perceptible above background noise levels at the nearest sensitive receptor. Operational traffic noise levels from operation of the proposed project would be minimal and therefore, the noise level increase would be substantially below the perceptible level of a 3 dBA increase.

Operation of BESS Option 3 would result in a substantial permanent increase in ambient noise levels in the project site vicinity above levels existing without the proposed project. Implementation of Mitigation Measures MM 4.12-6 would be required for construction and operation of BESS/Substation Options. The adequacy of the selected noise control technique(s) will be demonstrated in a focused acoustical study performed prior to the issuance of building permits to ensure that the applicable Kern County and Willow Springs Specific Plan noise standards would not be exceeded at any of the nearby noise-sensitive receptors. The calculations will be based on the most recent available plans for the substation and BESS. Mitigation Measure MM 4.12-5 includes design guidelines such as shifting the location of the emergency backup generator to incorporate noise control while Mitigation Measures MM 4.12-5 and MM 4.12-6 include shifting the BESS location to the northwest to increase the distance from the sensitive receptors, including 150-foot setback requirement from onsite stationary noise sources and project site boundary, selecting quieter BESS equipment, and installing noise barriers around BESS equipment where necessary to reduce noise levels. Therefore, with implementation of Mitigation Measures MM 4.12-5 through MM 4.12-6, impacts would be reduced to less than significant levels.

### ***Mitigation Measures***

Implementation of Mitigation Measures MM 4.12-5 through MM 4.12-6 would be required for operation of BESS/Substation Option 3.

### ***Level of Significance after Mitigation***

Impacts would be less than significant.



## Cumulative Setting, Impacts, and Mitigation Measures

Based on the cumulative projects list provided by the County, six projects are within a six-mile radius of the proposed project: BigBeau Solar Project, California High Speed Rail Bakersfield to Palmdale Section (CHSR B-P), Gem Energy Storage Center (also known as the Willow Rock Energy Storage Center), Investment Concepts (18-unit apartment complex), Rosamond Solar Modification Project, and Raceway Solar. Of these six cumulative projects, three (BigBeau Solar Project, CHSR B-P, and Gem Energy Storage Center) are within a one-mile radius of the project site.

Cumulative noise or vibration impacts can occur when two or more projects are under construction simultaneously or generate operational noise or vibration at the same time. Because noise and vibration are localized effects that decrease with distance from the source, significant cumulative impacts typically do not occur unless two or more projects are located close to a single receiver. The presence of any natural or human-made barriers (e.g., hills, topography, walls, buildings) between a project site and a receiver will increase the rate of noise reduction over distance and will further reduce any cumulative noise levels. Related projects in the vicinity of the noise- and vibration-sensitive receivers considered in this analysis would include construction and/or maintenance activities that could occur simultaneously with construction and/or maintenance of the proposed project, depending on project timing.

For the reasons discussed above, construction noise levels at any single receiver typically are dominated by the closest construction activity. As a result, the chances of construction noise from more-distant related project sites making a substantial contribution to overall noise levels at the same receiver generally is low.

CHSR B-P is the closest related project to the project site because there is a segment where the two overlap. The next closest related projects would be BigBeau Solar Project, immediately to the west, the Gem Energy Storage Center, approximately 0.5 mile to the south, and the Raceway Solar Project, which is more than 2.5 miles to the south. The construction funding and start date for CHSR B-P is yet to be determined, and construction is not projected to commence until after the proposed project is operational. BigBeau Solar Project would be operational before construction begins on the proposed project. Construction for the Gem Energy Storage Center is anticipated to commence in the third or fourth quarter of 2023 and would be operational before the proposed project is constructed. Construction of the Raceway Solar Project will be completed in 2023, before construction would begin on the proposed project. Therefore, construction would not occur simultaneously between the proposed project and any of the nearest cumulative projects. All the other related projects would be more than three miles from the project site and more than one mile from the closest proposed gen-tie line. At these distances, the noise contribution at receivers adjacent to the proposed project would be minimal, even if construction were to occur simultaneously. Finally, as discussed previously, neither the Kern County General Plan nor the WSSP have identified noise limits pertaining to construction noise. Instead, construction noise currently is regulated in Chapter 8.36 (Noise Control) of the Kern County Code of Ordinances through the establishment of acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive uses. Specifically, noise created from construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling, are prohibited from 9:00 p.m. to 6:00 a.m. on weekdays and 9:00 p.m. to 8:00 a.m. on weekends. As part of the proposed project, Mitigation Measure 4.12-1 would be implemented to ensure that the proposed project's construction activities would comply with these hourly limitations.

As a result of all the factors described above, the proposed project would not result in a cumulatively considerable contribution to construction noise impacts in the vicinity of the project.

Like construction noise, groundborne vibration levels at any single receiver due to construction are typically dominated by the closest construction activity. However, because vibration impacts are assessed based on instantaneous peak levels (i.e., PPV), worst-case groundborne-vibration levels from construction generally are determined by whichever individual piece of equipment generates the highest vibration levels. As a result, the vibration from multiple construction sites, even if the sites are near each other, generally does not combine to raise the maximum PPV, and the cumulative effect is no more severe than the effect from the largest individual contribution. The proposed project would not contribute to any cumulatively considerable groundborne-vibration impacts, and the cumulative impact would be less than significant.

With respect to operational noise, the final EIR for CHSR B-P (California High-Speed Rail Authority, 2021) indicates that the proposed project would have severe unmitigated noise impacts at two of the noise-sensitive receivers, SR-22 and SR-25, considered in the proposed project's noise analysis. These impacts would be due to excessive  $L_{dn}$  levels caused by periodic high noise from passing trains. Predicted noise levels from the proposed project at these two receivers would range from approximately 40 to 60 dB  $L_{dn}$ , which is below the applicable threshold of 65 dB  $L_{dn}$ . The worst-case noise levels, which would only occur under BESS/Substation Option 3 (if constructed), would be further reduced by Mitigation Measures MM 4.12-5 through MM 4.12-6. Therefore, the proposed project's contribution to overall noise impacts at receivers affected by CHSR B-P would be minimal, and any increase in noise attributable to the proposed project would be less than cumulatively considerable.

The closest cumulative solar projects in the vicinity of the noise-sensitive receivers considered in this analysis are BigBeau Solar Project and Raceway Solar Project. These solar projects would likely include either the same or similar operational stationary noise sources as the proposed project (e.g., BESS, solar panel axis trackers, substation transformers, PCS). The proposed project would result in a significant increase in noise levels at sensitive receptors less than 900 feet from the proposed BESS/substation Option 3 site. Noise levels from secondary noise contributors (e.g., transformers, PCS, corona discharge) would be relatively low and typically would attenuate to levels below the applicable County noise standards at the project site boundary line. Based on the final site layout for the BigBeau Solar Project, the closest BESS on that site would be more than 2,800 feet from the nearest receivers considered in this analysis. The Raceway Solar Project would be more than 12,000 feet away. These distances are much larger than those at which direct noise impacts were found to occur and, as such, noise levels would not combine to exceed applicable thresholds. The proposed project would not contribute to any cumulatively considerable noise impacts due to onsite operations, and the cumulative impact would be less than significant.

The Gem Energy Storage Center is approximately 0.5 mile south of the Bullhead Solar Project site. According to the noise study for the Gem Energy project, operational noise levels at receivers adjacent to the Bullhead Solar Project site range from 45 to 49 dB  $L_{dn}$ . These levels are substantially below the applicable threshold of 65 dB  $L_{dn}$  and, as such, would not be sufficient to generate a significant cumulative noise impact.

Cumulative future (2026) traffic volumes on the surrounding roadways would range from 2,663 to 6,870 vehicles per day, including the predicted traffic from proposed project operations. This would result in traffic noise levels of approximately 63 to 67 dBA CNEL at 50 feet from the center of the roadway. Although some of these noise levels would exceed Kern County's average-daily noise level standard of 65 dBA CNEL, the direct contribution from proposed project traffic would be between 0.1 and 0.3 dB (based

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on the predicted project traffic noise level of approximately 51 dBA CNEL). This increase in operational traffic would be imperceptible. The proposed project would result in a less than cumulatively considerable contribution.

As noted previously, once operational, the proposed project would not include any substantial sources of groundborne vibration and, therefore, would not generate any perceptible vibration at other properties. The same would be true of the closest related projects because they are similar solar projects. Therefore, operation of the proposed project would not contribute to any cumulatively considerable groundborne vibration impacts, and the cumulative impact would be less than significant.

Overall, when considered with other past, present, and reasonably foreseeable future projects, the proposed project would not result in a cumulatively considerable contribution to noise impacts.

## **Mitigation Measures**

Implement Mitigation Measures MM 4.12-1 through MM 4.12-6 to reduce and minimize cumulative construction and operational noise and vibration levels.

## **Level of Significance after Mitigation**

With implementation of Mitigation Measures MM 4.12-1 through MM 4.12-6, cumulative impacts would be less than significant.

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## **4.13.1 Introduction**

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting pertaining to public services, which include fire and police protection. This section also addresses the potential impacts on public services that would result from implementation of the proposed project and the mitigation measures to reduce these potential impacts. Information for this section was taken from numerous sources, including websites, and service agency plans.

## **4.13.2 Environmental Setting**

### **Fire Protection**

The Kern County Fire Department (KCFD) provides primary fire protection services, fire prevention, emergency medical, and rescue services for 8,141 square miles of Kern County, including more than 500,000 people in 41 unincorporated communities and nine incorporated cities (i.e., the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco). KCFD operates 47 full-time fire stations within 7 battalions and is equipped with 58 fire engines, 6 ladder trucks, 54 patrol vehicles, 30 command vehicles, 6 dozers, 2 helicopters, 3 hazardous material response teams, and other ancillary vehicles and equipment. KCFD is staffed with 621 permanent employees, which includes 521 uniformed firefighters. Additionally, the KCFD has 14 Mutual Aid Agreements with neighboring fire suppression organizations to further strengthen the emergency services available to Kern County (KCFD, 2023).

The proposed project would construct and operate a photovoltaic (PV) solar facility and associated infrastructure to generate up to 270 megawatts (MW) of renewable electrical energy, with a Battery Energy Storage System (BESS) capable of storing approximately 270 MW, or 1,080 megawatt-hours (MWh) of energy on a 1,343-acre project site. The proposed associated infrastructure includes laydown yards, a meteorological station, microwave/ communication tower, and a substation. PV panels, inverters, converters, foundations, and transformers will be installed onsite. The proposed project also includes preferred and optional generation-tie (gen-tie) routes to the Rosamond and Whirlwind Substations, only one of which would be constructed.

The project site is located within Battalion 1, Tehachapi, which includes the southeastern portion of Kern County. It is divided by State Route 58 (SR 58) that runs east/west and by State Route 14 (SR 14) that runs north/south. Battalion 1 consists of eight stations and covers 951,600 acres of which 351,276 acres is State Responsibility Area (SRA) land area, which the California Department of Forestry and Fire Protection (CAL FIRE) has a legal responsibility to provide fire protection for this SRA land area. The California Aqueduct, running north and south, establishes the eastern edge of the SRA in Battalion 1. The western edge of the SRA in Battalion 1 is defined by the toe of the slope along the southeastern edge of the San Joaquin Valley (KCFD 2022). According to the CAL FIRE, California Fire Hazard Severity Zones Viewer, the project site and surrounding area is not within an SRA and the project site is within an unincorporated Local Responsibility Area (LRA) Unzoned and within a LRA Moderate fire hazard severity zone

(CAL FIRE, 2023) (See **Figure 4.13-1**, *Fire Hazard Severity Zones for Local Responsibility Areas* and **Figure 4.13-2**, *Fire Hazard Severity Zones for State Responsibility Areas*).

Fire Station No. 15 (Rosamond), located at 3219 35th Street West, is approximately 8 miles to the southeast of the project site and would be the primary responder to a fire or emergency at the project site. In the event of a major fire or when short-staffed, other stations would be called on to respond, as necessary, including Fire Station No. 14 (Mojave), located at 1953 State Highway 58, Fire Station No. 12 (Tehachapi), located at 800 South Curry Street, and Fire Station No. 13 (Tehachapi), located at 21415 Reeves Street. Information on the three closest fire stations to the project site is included in **Table 4.13-1**, *List of Nearby Fire Stations*. The table identifies each type of facility, the name and address of the facility, and the approximate distance from the project site.

**TABLE 4.13-1: LIST OF NEARBY FIRE STATIONS**

Agency	Facility	Address	Approximate Distance from Project Site
KCFD	Station No. 15	3219 35th West Street Rosamond, CA 93560	8 miles southeast of the project site
KCFD	Station No. 14	1953 State Highway 58 Mojave, CA 93501	18 miles northeast of project site
KCFD	Station No. 12	800 South Curry Street Tehachapi, CA 93561	21 miles northwest of project site
KCFD	Station No. 13	21415 Reeves Street Tehachapi, CA 93561	23 miles northwest of project site

Kern County has 14 mutual-aid agreements with neighboring fire suppression organizations to further strengthen the emergency services (KCFD, 2020). The KCFD has a mutual aid agreement with the Los Angeles County Fire Department (LACoFD) in the event that KCFD is unable to be the primary responder to an emergency. The LACoFD has 177 fire stations throughout Los Angeles County (LACoFD, 2021). The nearest LACoFD fire station to the project site is Station No. 112, located at 8812 West Avenue E-8 in Lancaster, approximately 10.2 miles south of the project site.

Kern County applies and utilizes the National Fire Code set forth by the National Fire Protection Association, the California Fire Code, the California Building Code, and the Kern County Ordinance Code to regulate fire safety.

The Kern County Emergency Medical Services Division (EMS) is the lead agency for the emergency medical services system in Kern County and is responsible for coordinating all system participants in the County, which include the public, fire departments, ambulance companies, other emergency service providers, hospitals, and Emergency Medical Technician (EMT) training programs throughout the County. The EMS includes a system of services organized to provide rapid response to serious medical emergencies, including immediate medical care and patient transport to a hospital setting. EMS covers day to day emergencies, disaster medical response planning and preparation, and preventative health care. The department also provides certification and re-certification for EMT's, paramedics, specialized nurses (MICN), and specialized dispatchers (EMD) (KCFD, 2020). The nearest hospitals are the Antelope Valley Hospital, located at 1600 W. Avenue J in the City of Lancaster approximately 22.1 miles southeast of the project site, and the Adventist Health Tehachapi Hospital, located at 1100 Magellan Drive in the City of Tehachapi approximately 22.3 miles northwest of the project site.

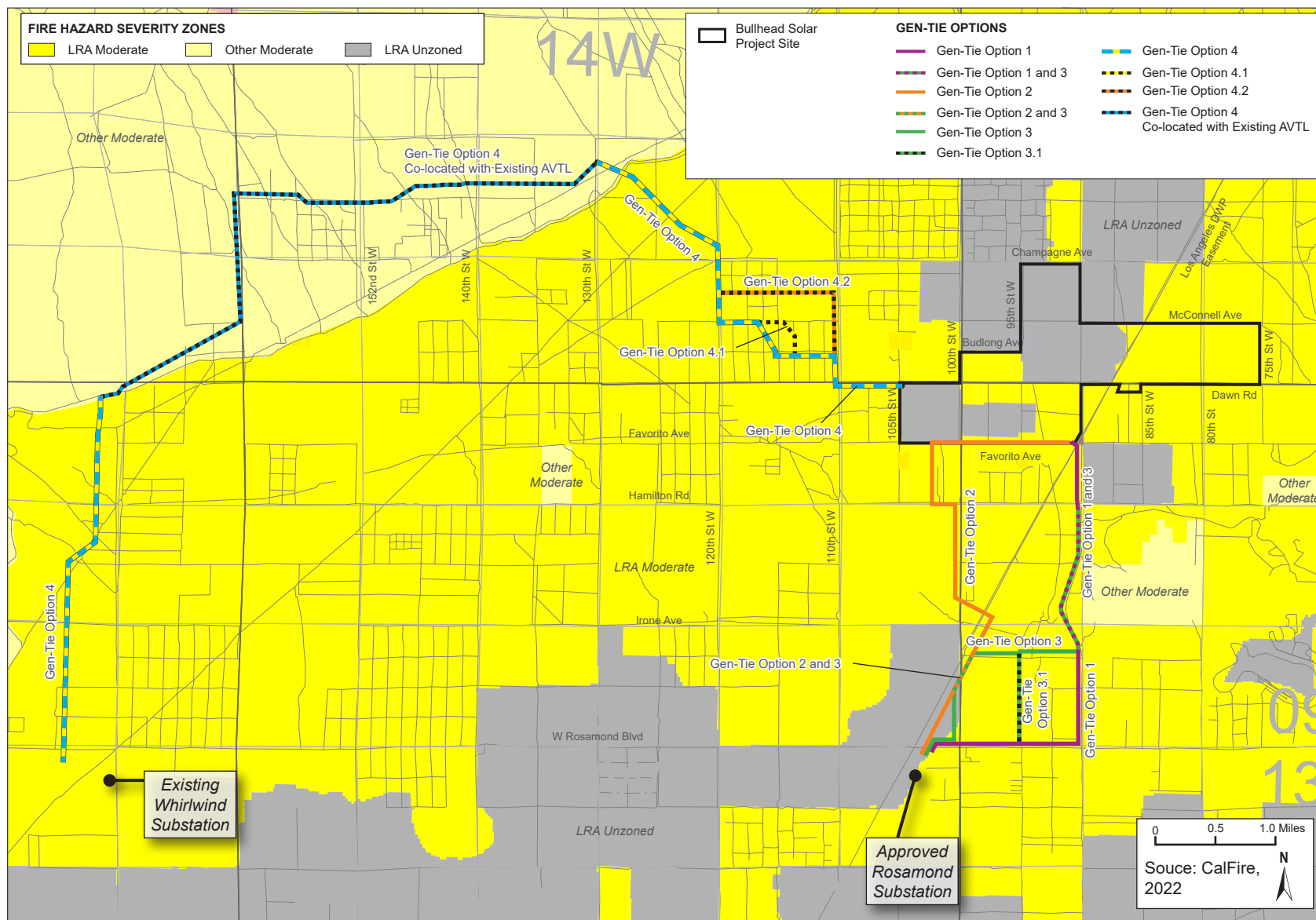


Figure 4.13-1: FIRE HAZARD SEVERITY ZONES FOR LOCAL RESPONSIBILITY AREAS

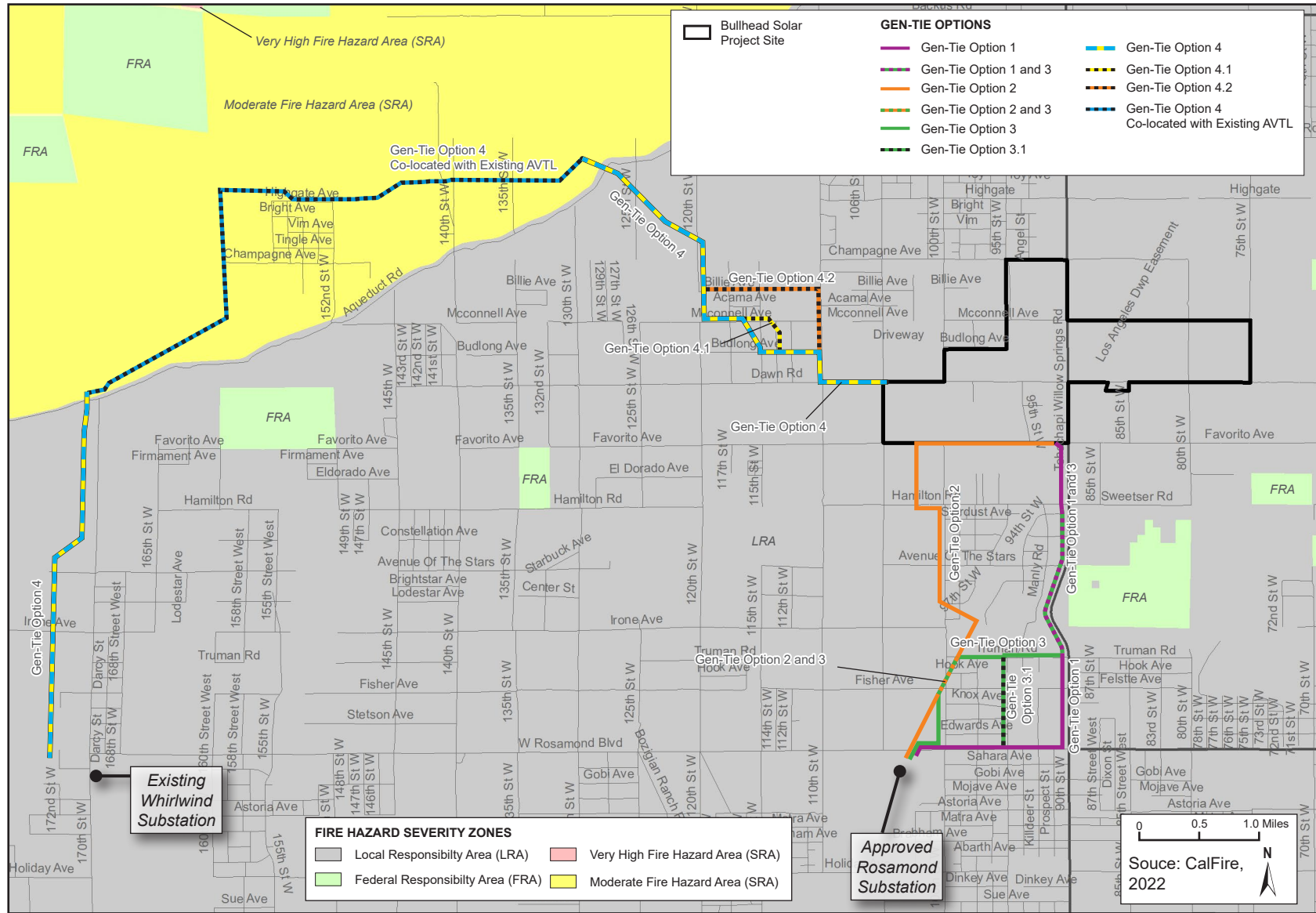


Figure 4.13-2: FIRE HAZARD SEVERITY ZONES FOR FEDERAL AND STATE RESPONSIBILITY AREAS



The Kern County Fiscal Year 2022-2023 Recommended Budget (KCAO, 2023) shows on-going deficiencies in funding for staffing and \$30.6 million spent on apparatus and equipment in FY 2022-23. The budget report finds that the current funding status, with one time infusion of funding, is not sustainable and requires continued strategic planning for capital needs and operational staffing stability.

## Law Enforcement Protection

### Kern County Sheriff's Department

The Kern County Sheriff's Office (KCSO) provides basic law enforcement services in the unincorporated areas of the County, which includes the project site. The KCSO enforces local, State, and federal laws and is responsible for crime prevention, field patrol (ground and air), crime investigation, the apprehension of offenders, regulation of noncriminal activity, and related support services such as, patrolling off-highway vehicle recreation areas in the desert and mountainous areas of the County. Traffic and parking control functions are also provided along with some investigation of property damage reports and traffic accidents. Complete investigations are conducted for injury, fatal, intoxication-related, and hit and run accidents.

In addition to providing police services to the unincorporated portions of the county, the Sheriff's office is also responsible for the jail system, providing bailiff and prisoner transportation service to the courts, search and rescue, coroner services, and civil process.

The KCSO currently employs 1,202 sworn and civilian employees, including 567 authorized deputy sheriffs, 338 detention deputy positions, and 297 sheriff's professional support staff and serves over 890,000 people in the Kern County area (KCSO, 2023). The KCSO headquarters is located at 1350 Norris Road in the City of Bakersfield. The KCSO consists of 14 substations that provide patrol services (KCSO, 2023). The nearest substation that would provide service to the project site is the Rosamond Substation located approximately 8 miles southeast of the project site, at 2980 Desert Street in the unincorporated community Rosamond. The Rosamond Substation serves over 20,000 residents on the southeastern most end of Kern County, and borders the cities of Lancaster and Palmdale in Los Angeles County (KCSO 2023). Other substations in proximity to the project site include the Mojave Substation, Tehachapi Substation and Boron Substation. Information on the four closest substations to the project site is included in **Table 4.13-2, List of Nearby Sheriff Substations.**

**TABLE 4.13-2: LIST OF NEARBY SHERIFF SUBSTATIONS**

Agency	Facility	Address	Approximate Distance from Project Site
KCSO	Rosamond Substation	1379 Sierra Highway Rosamond, CA 93560	8 miles southeast of the project site
KCSO	Mojave Substation	1771 State Highway 58 Mojave, CA 93501	17 miles northeast of the project site
KCSO	Tehachapi Substation	22209 Old Town Road Tehachapi, CA 93581	24 miles northwest of the project site
KCSO	Boron Substation	26949 Cote Street Boron, CA 93516	48 miles northeast of the project site

The KCSO strives to respond to calls as quickly as possible. Life-threatening calls that involve a danger to someone's personal safety are given first priority. Response time is defined as the time required to respond to a call for service, measured from the time a call is received until the time a patrol car arrives at the scene. Response times naturally vary depending on the severity of the call, available staff, and location of patrol car. Average response time for the KCSO is five minutes or less for an emergency or immediate-response incident (e.g., a crime that is in progress and/or a life-or-death situation) and 8 to 10 minutes for routine calls (e.g., a crime that has already occurred and/or an incident that is not life-threatening).

Response time to an emergency at or near the project site would vary depending on the level of demand at the substation at the time of the call. If demand is high, the response time would be longer than the average times given above. The response time for a nonemergency call could be eight minutes or more, depending on staffing and the number of other calls for service. In some areas, response may not occur at all for nonemergency calls due to funding deficiencies.

The Kern County Fiscal Year 2022-2023 Recommended Budget (KCAO, 2023) shows on-going deficiencies in funding for staffing, training and equipment. While the adopted Budget provides a transfer from the General Fund reserves to prioritize law enforcement, the County Administrative Office (CAO) report confirms this is not sustainable.

### ***Off-Highway Vehicle (OHV) Enforcement Team***

In 2000, the KCSO created the Off-Highway Vehicle (OHV) Enforcement Team that can be deployed to off road riding areas and adjacent communities in Kern County, as needed. The goal of the OHV Enforcement Team is to provide a safe and secure environment for the OHV community and nearby residents, and to help protect sensitive natural resources. Kern County attracts over 800,000 visitors a year to the local OHV riding. The OHV Enforcement Team patrols numerous off road riding areas in Kern County. The OHV Enforcement Team works closely with officers from the Bureau of Land Management (BLM), California State Parks, and other local law enforcement agencies (KCSO, 2023).

## **California Highway Patrol**

As a major statewide law enforcement agency, the California Highway Patrol (CHP) is responsible for managing and regulating traffic for the safe, lawful, and efficient use of California highways. The CHP patrols State highways and all County roadways, enforces traffic regulations, responds to traffic accidents, and provides service and assistance to disabled vehicles. The CHP has a mutual aid agreement with KCSO.

The CHP is divided into eight divisions that provide services in areas of California (CHP, 2023). The project site is within the jurisdiction of the Central Division, which includes two long freeway segments that run the flat length of the Division: a 244-mile stretch of State Route 99 and a 275-mile stretch of Interstate 5. (CHP, 2023). The nearest CHP office to the project site is the Fort Tejon office located at 1033 Lebec Road in Lebec, approximately 47 miles west of the project site.

## **Schools/Parks/Other Public Facilities**

The project site is located within the Southern Kern Unified School District (SKUSD), which consists of Abraham Lincoln Independent Study, Rare Earth High School, Rosamond Elementary, Rosamond High School Early College Campus, Tropic Middle School, and Westpark Elementary (SKUSD 2023). Other school districts located in the vicinity include Arvin Union Elementary School District, El Tejon Unified,

Maricopa Unified, General Shafter Elementary School District Lakeside Union Elementary School District, and Greenfield Union Elementary School, which include 27 other school facilities (Kern County Superintendent of Schools, 2023). The closest school to the project site is the Tropico Middle School, located approximately 7.8 miles east of the project site.

The Kern County Parks and Recreation Department manages an extensive system of large regional parks designed to serve the entire countywide population, and small neighborhood and community parks intended primarily to meet the recreational needs of nearby residents in unincorporated communities. Kern County Parks & Recreation manages 8 regional parks, 40 neighborhood parks, and 25 public buildings, supervises three golf courses and landscapes 76 county buildings (Kern County, 2023). There are no parks or trails within project site boundaries.

Other public facilities include library facilities, post office facilities, and courthouses. The Kern County Library has 24 branches and 2 mobile libraries, which serve 850,000 residents within the County, including incorporated municipalities (Kern County Library, 2023). Additionally, there are currently 37 post offices that serve the County (United States Postal Service [USPS], 2023). Furthermore, there are currently 12 facilities serving the Superior Court of California in Kern County (Superior Court of California, 2023).

The Kern County Fiscal Year 2022–2023 preliminary recommended budget shows ongoing deficiencies in funding for libraries and parks, with closing and lack of maintenance for facilities used to balance budget needs (Kern County 2023).

### **4.13.3 Regulatory Setting**

#### **Federal**

There are no applicable federal regulations for this issue area.

#### **State**

##### **California Fire Code**

The 2019 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operation. Chapter 6 (Building Services and Systems) of the Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the Code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. Features regulated include fire protection systems, fire fighter access to the site and building, means of egress, hazardous materials storage and use and temporary heating equipment and other ignition sources.

## California Department of Forestry and Fire Protection (CALFIRE)

CAL FIRE protects the people of California from fires, responds to emergencies, as well as protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of nearly 6,000 wildland fires each year. The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities (CAL FIRE, 2019).

The CAL FIRE Director's responsibilities include identifying FHSZs, transmitting that information to local agencies, and periodically reviewing the recommendations. CAL FIRE is required by California Public Resources Code Sections 4201–4204, and California Government Code Sections 51175–51189 to map these areas of significant fire hazards based on vegetative fuels, terrain, weather, and other relevant factors. Areas at risk of wildland fire losses are referred to as FHSZs and fall into three categories: Moderate, High, and Very High. FHSZs reflect variations in fire behavior and exposure and are used to develop permanent engineering mitigations associated with development in fire hazard areas (CAL FIRE, 2023d).

### Local

Construction and operation of the proposed project would be subject to applicable policies and regulations including those contained in the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to public services. The policies, goals, and implementation measures in the Kern County General Plan related to public services that are applicable to the proposed project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, in this EIR, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

## Kern County General Plan

### ***Chapter 1. Land Use, Conservation and Open Space Element***

#### **1.4. Public Facilities and Services**

##### ***Policies***

- Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- Policy 6: The County will ensure adequate fire protection to all Kern County residents.
- Policy 7: The County will ensure adequate police protection to all Kern County residents.

**Implementation Measures**

- Measure B: Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the site of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.
- Measure J: Ensure that the Superintendent of Schools and the respective school districts are informed of development proposals and are afforded the opportunity of evaluating their potential effect on the physical capacity of school facilities.
- Measure L: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.

**1.10. General Provisions****Goal**

- Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving viable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

**1.10.1. Public Services and Facilities****Policies**

- Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure that it generates and upon which it is dependent.
- Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.
- Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to ensure the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

**Chapter 4. Safety Element****4.6. Wildland and Urban Fire****Policies**

- Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.

- Policy 3: The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.
- Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- Policy 6: All discretionary projects shall comply with the adopted fire code and the requirements of the fire department.

### ***Implementation Measure***

- Measure A: Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

## **Willow Springs Specific Plan**

The entire project site is located within and subject to the provisions of the Willow Springs Specific Plan. The Willow Springs Specific Plan was adopted in April 2008 and contains goals, policies, and standards that are compatible with those in the Kern County General Plan, but are unique to the specific needs of the Willow Springs Area. The public services-related policies and measures contained in the Willow Springs Specific Plan that are applicable to the proposed project are outlined below. Note that only applicable goals, policies, and standards are included here; those goals, policies, and standards that are not applicable are not included below.

### ***Public Facilities***

#### ***Goals***

- Goal 4: To recognize early on the need for the Southern Kern Unified School District to advise the County of the need to establish and/or expand educational facilities in the area.
- Goal 5: The establishment of parks and recreational facilities of varying size, function, and location to serve Willow Springs residents.

#### ***Policies***

- Policy 2: In evaluating a development application, Kern County will consider both its physical and fiscal impact on the local school district and other public facilities. If it is found that the district or facilities involved will, as a result, require additional facilities or incur costs requiring additional local revenues, the development project will be required as a condition of approval to contribute funds to the district for the costs directly attributable to the project.
- Policy 5: New development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.

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**Mitigation/Implementation Measures**

- Measure 10: New development shall contribute its pro rata share for circulation improvements, school impact fees, park land dedications/fees, and possible biota impact fees. As additional impact fees are adopted, they shall be incorporated into the Specific Plan text.
- Measure 11: The school district, along with the developer, shall provide Kern County with an alternative funding method, should an alternative be submitted with an impending development.
- Measure 12: The school district, along with the developer, shall provide Kern County with an alternative funding method, should an alternative be submitted with an impending development.
- Measure 25: The applicants are subject to school assessment fees pursuant to AB 2926.

**Kern County Fire Department Wildland Fire Management Plan**

The Kern County Fire Department (KCFD) Wildland Fire Management Plan adopted in 2009 assesses the wildland fire situation throughout the SRA within the County. The Plan includes stakeholder contributions and priorities and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan systematically assesses the existing levels of wildland protection services and identifies high-risk and high-value areas, which are potential locations for costly and damaging wildfires. The plan also ranks the areas in terms of priority needs and prescribes what can be done to reduce future costs and losses. The project site is located within a moderate fire hazard severity zone under the KCFD Wildland Fire Management Plan (KCFD, 2009).

**Kern County Fire Code**

Chapter 17.32 of the County Municipal Code details the Kern County Fire Code, which is an adoption of the California Code of Regulations, Title 24, Part 9, 2022 edition of the California Fire Code with some amendments. The purpose of the Kern County Fire Code is to regulate the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release and/or explosion due to handling of dangerous and hazardous materials, conditions hazardous to life or property in the occupancy and use of buildings and premises, the operation, installation, construction, and location of attendant equipment, the installation and maintenance of adequate means of egress, and providing for the issuance of permits and collection of fees therefore (KCFD, 2022a).

**Kern County Fire Department Hazards Mitigation Plan**

The purpose of the KCFD Hazards Mitigation Plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Kern County. The plan includes specific recommendations for actions that can mitigate future disaster losses, as well as a review of the County's current capabilities to reduce hazards impacts. This multi-jurisdictional plan includes Kern County, and the incorporated municipalities Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The plan also covers 53 special districts that include school, recreation and park, water, community service and other districts. The plan has been formally adopted by each participating entity and is required to be updated a minimum of every five years (KCFD, 2012).

## Kern County Fire Department Unit Strategic Fire Plan

The KCFD Unit Strategic Fire Plan, adopted in April 2022, is the most current document that assesses the wildland fire situation throughout the SRA within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local area. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. The plan gives an overview of KCFD Battalions and ranks these areas in terms of priority needs as well as identifies the areas of SRA. According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas, Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 1 (Tehachapi) which is within a moderate fire hazard severity zone within the Tehachapi fire plan management area and not within a SRA (KCFD, 2022b).

## Fire Prevention Standard No. 503–507 Solar Panels

The Kern County Fire Department Fire Prevention Division adopted Standard No. 503–507 Solar Panels (Ground Mounted, Commercial & Residential) on March 27, 2019. The standard is implemented in accordance with the 2016 CFC and Kern County Ordinance and is an official interpretation of the Kern County Fire Marshal’s Office. The standard outlines installation requirements for photovoltaic ground-mounted and roof-mounted solar panels. The proposed project would mount systems for the modules on steel support posts that would be pile driven into the ground and would therefore comply with the ground mounted requirements of this fire prevention standard. Ground mounted solar panel requirements of this standard include water supply, clearance and combustibles, stationary storage battery/energy storage systems, clean agent system permits, fire extinguisher placement, and emergency vehicle access (KCFD, 2021).

## California State Legislature Active Solar Energy Exclusion

The State of California has provided reduced property taxes for the solar industry. No other industry has this type of property tax reduction outside a local government providing a specific incentive of a development project.

The California Franchise Tax Board’s website outlines that the property tax incentive for the installation of an active solar energy system is in the form of a new construction exclusion (California State Board of Equalization, 2020). It is not an exemption. The installation of a qualifying solar energy system will not result in either an increase or a decrease in the assessment of the existing property. The site states: *“Generally, when something of value is physically added to real property, the addition is assessed at current market value and this value is added to the existing base year value of the real property. When an active solar energy system is installed, it is not assessed, meaning that the existing assessment will not increase.”*

The value of the underlying land and some improvements such as operations and maintenance buildings and battery storage are assessed, but the solar panels and majority of equipment are not. Effective June 20, 2014, the sunset date for the active solar energy system new construction exclusion was extended through the 2023-24 fiscal year. The statute is now scheduled to sunset on January 1, 2025. The estimated fund balance as of June 30, 2023 is \$3.3 million, of which \$1.5 million is budgeted for use in FY 2023-24 and



\$1.8 million will be placed in designations to be utilized in future years (KCAO 2023). The increase in services and supplies expenditures for FY 2023-24 is primarily a result of anticipated increases in utility rates for locations that are not directly billed for usage.

## 4.13.4 Impacts and Mitigation Measures

### Methodology

The methodology used to evaluate potential public services impacts includes the following: (1) evaluation of existing fire and police services and personnel for the fire and law enforcement stations serving the project site; (2) determination of whether the existing fire and law enforcement services and personnel are capable of servicing the proposed project, in addition to the existing population and building stock; and (3) determining whether the proposed project's contribution to the future service population would cause fire or police station(s) to operate beyond service capacity. The determination of the significance of the proposed project on fire protection and emergency medical and police protection services considers the level of services required by the proposed project and the ability of KCFD and KCSO to provide this level of service and maintain the regular level of service provided throughout the County, which in turn could require the construction of new or expansion of existing facilities. The methodology for this analysis included a review of published information pertaining to KCFD and KCSO. The contribution of the proposed project through established property tax revenues was reviewed to fully document the project's contribution to all government services and facilities that provide for stability in communities and prevent decline of the communities' physical neighborhoods.

### 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 on public services.

A project could have a significant adverse effect on public services if it would:

- 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
  - ii. Law Enforcement Protection
  - iii. Schools
  - iv. Parks
  - v. Other Public Facilities

## Project Impacts

**Impact 4.13-1: The project would result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services or law enforcement protection services.**

### Fire Protection

#### ***Construction***

The proposed project would include the construction of a photovoltaic (PV) solar facility and associated infrastructure to generate up to 270 megawatts (MW) of renewable electrical energy, with a Battery Energy Storage System (BESS) capable of storing approximately 270 MW, or 1,080 megawatt-hours (MWh) of energy on a 1,343-acre project site. The proposed associated infrastructure includes laydown yards, a meteorological station, microwave/ communication tower, and a substation. PV panels, inverters, converters, foundations, and transformers will be installed onsite. The proposed project also includes preferred and optional generation-tie (gen-tie) routes to the Rosamond and Whirlwind Substations, only one of which would be constructed.

As described in **Chapter 3**, *Project Description*, in this EIR, construction is anticipated to commence in the third quarter of 2024. On-site workforce is expected to average 201 workers per day with a peak of up to 627 workers. The presence of the construction workers would be temporary and anticipated to last approximately 18 months for the project construction period starting in 2024.

According to the CAL FIRE, California Fire Hazard Severity Zones Viewer, the project site and surrounding area is not within an SRA and the project site is within an unincorporated Local Responsibility Area (LRA) Unzoned and within a LRA Moderate fire hazard severity zone (CAL FIRE, 2023) (See Figure 4.13-1 and Figure 4.13-2). Moderate zones are typically wildland-supporting areas of low fire frequency and relatively modest fire behavior. The proposed project would comply with all applicable wildland fire management plans and policies established by CAL FIRE and the KCFD. Accordingly, the proposed project is not expected to expose people or structures to a significant risk of loss, injury, or death involving wildland fires (refer to Section 4.17, *Wildfire*).

Fire protection facilities requirements are based on the number of residents and workers in the KCFD service area. Service demand is primarily tied to population, not building size, because emergency medical calls typically make up the majority of responses provided by the fire department. As the number of residents and workers increase, so do the number of emergency medical calls. There are no residential uses proposed as part of the proposed project. Therefore, no residents would occupy the project site, and an increase in service demands as a result of an increase in residential uses would not occur.

Although construction of the proposed project would increase the number of people on the project site, the increase would be temporary. Fire hazards from the proposed project as a large-scale construction project would increase the need for response from the KCFD for fire protection and emergency services. Although construction would be temporary and short term, fire hazards from the proposed project would potentially increase the need for fire response or emergency services during the construction period. However, as

required by Mitigation Measure MM 4.13-1, the Project Proponent would prepare and implement a Fire Safety Plan that would contain notification procedures and emergency fire precautions consistent with the 2019 California Fire Code and Kern County Fire Code. The Fire Safety Plan would be in use during the construction period and would include emergency fire precautions for vehicles and equipment, as well as implementing fire rules and trainings so temporary employees are equipped to support handling fire threats. The aforementioned fire safety plan would be for use during the anticipated 18-month construction period, as well as during operations and decommissioning, and would include emergency fire precautions for vehicles and equipment as well as implementation of fire rules and trainings so temporary employees are equipped to support handling fire threats. Given the temporary nature of the project's construction phase and implementation of Mitigation Measure MM 4.13-1, impacts to fire protection services and facilities during project construction would be less than significant.

### ***Operation***

During the operational phase, the proposed project would be operated on an unstaffed basis and monitored remotely. Periodically, personnel would visit the site for inspection, security, maintenance, and system monitoring purposes. Approximately up to 15 part-time and/or full-time staff from the adjacent BigBeau Solar O&M building would operate and maintain the facility. The proposed project staff would use the O&M facility west and immediately adjacent to the project site at the BigBeau Solar Project. The nearby BigBeau O&M building would house the proposed project's electronic controls and communications systems; provide storage for tools, maintenance supplies, and spare parts; and provide on-site office, kitchen, and bathroom facilities for operations staff.

The facility would operate seven days a week, 24 hours a day, generating electricity during normal daylight hours when the solar energy can be produced. Although unlikely, maintenance activities could introduce fire risks to the project site. However, all maintenance activities would be required to comply with the fire safety plan implemented per Mitigation Measure MM 4.13-1, which would help reduce fire risks onsite. In addition, all project facilities would have been designed and constructed in accordance with the 2019 California Fire Code and Kern County Fire Code such that fire hazards are reduced and/or avoided.

The Project Proponent/operator would be required to pay a Kern County cumulative impact fee (CIC), through implementation of Mitigation Measure MM 4.13-2 to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services and facilities. In addition, if the proposed project is sold to a city, county, or utility company with assessed taxes that total less than \$3,000 per megawatt per year, then that entity shall pay the taxes plus the amount necessary to equal the equivalent of \$3,000 per megawatt. The amount shall be paid for all years of operation, through implementation of Mitigation Measure MM 4.13-3. Through implementation of Mitigation Measure MM 4.13-4, the Project Proponent/operator shall work with the County to determine how the use of sales and use taxes from construction of the proposed project can be maximized. With implementation of Mitigation Measures MM 4.13-1 through MM 4.13-4, any potential operational impacts on fire protection services would be reduced. The proposed project would not result in the need for new or physically altered KCFD facilities and impacts would be less than significant.

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## Law Enforcement Protection

### **Construction**

As described above in Section 4.13.2, *Environmental Setting*, the KCSO provides primary law enforcement protection services for the project site and surrounding areas. The Rosamond Substation, located approximately 8 miles southeast of the project site, would provide primary law enforcement services to the project site. Similar to fire protection services, the need for police protection services would increase during construction of the proposed project as well as after construction.

The project site is in an area of low population density south surrounded by undeveloped lands, rural residential, active and fallow agricultural lands, access roadways, the California aqueduct, high-voltage transmission line corridors, and solar and wind development uses to the north, south, east and west of the project site. The closest sensitive receptor to the project site is a rural residence east of Tehachapi Willow Springs Road at Favorito Avenue, immediately south of the project site.

The proposed project is unlikely to attract attention that would make project facilities susceptible to crime. Therefore, a large increase for KCSO services is not expected. However, construction activities may temporarily increase traffic volumes along SR-158 and SR-14 during the 18-month construction period. The added traffic associated with workers commuting to the project site, haul routes, deliveries, and other project-related traffic would be temporary and, therefore, would not have a significant adverse effect on the KCSO protective service provision or CHP's ability to patrol the highways.

Additionally, fences would be installed around the perimeter of each site, substation, and other areas requiring controlled access, for safety and security purposes. All fencing shall comply with all applicable requirements of the Kern County Public Works Department/Building Inspection Division. The fencing would remain for the life of the proposed project.

While construction of the proposed project would temporarily increase the number of people on the project site, the increase would be temporary and, thus, would not necessarily substantially increase the service demand for law enforcement protection services in Kern County. Therefore, impacts would be less than significant.

### **Operation**

Project operation could attract vandals or present other security risks. As described above, the project site is located in a relatively remote location in a rural community and is thus unlikely to attract attention that would make project facilities susceptible to crime. The security fencing around the perimeter of the project site and other areas requiring controlled access and controlled access gates would minimize the need for surveillance and response by KCSO during project operation. Furthermore, all facility personnel, contractors, agency personnel, and visitors would be logged in and out of the facility at the BigBeau O&M building during normal business hours. Therefore, new or physically altered KCSO facilities would not be required to accommodate the proposed project. The additional volume of vehicles associated with workers from the adjacent BigBeau Solar O&M building commuting to the project site during routine maintenance would be minor and is not expected to adversely affect traffic (see Section 4.15, *Transportation and Traffic*, for more details). Therefore, impacts to the CHP patrol are not anticipated.

As described above, the Project Proponent/operator would be required to pay a Kern County cumulative impact fee (CIC), through implementation of Mitigation Measure MM 4.13-2 to provide funding for the county budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes that the county would otherwise receive for services and facilities thereby supporting a prosperous economy and assuring the provision of adequate public services and facilities.

In addition, if the proposed project is sold to a city, county, or utility company with assessed taxes that total less than \$3,000 per megawatt per year, then that entity shall pay the taxes plus the amount necessary to equal the equivalent of \$3,000 per megawatt. The amount shall be paid for all years of operation, through implementation of Mitigation Measure MM 4.13-3. Through implementation of Mitigation Measure MM 4.13-4, The Project Proponent/operator shall work with the County to determine how the use of sales and use taxes from construction of the proposed project can be maximized. Impacts would be less than significant.

## **Schools/Parks/Other Public Facilities**

### ***Construction***

As stated above, on-site workforce is expected to average 201 workers per day with a peak of up to 627 workers. The presence of the construction workers would be temporary and anticipated to last approximately 18 months for the project construction period starting in 2024. Construction workers would likely come from an existing local and/or regional construction labor force and would not likely relocate their households as a consequence of working on the proposed project. If temporary housing should be necessary, it is expected that accommodations would be available in the nearby hotels in Lancaster, Palmdale, or other local communities. Therefore, the short-term increased employment of construction workers on the project site would not result in a notable increase in the residential population of the area surrounding the project site. Prior to the issuance of any building permits on the property, the Project Proponent/operator shall submit a letter detailing the hiring efforts prior to commencement of construction, through the implementation of Mitigation Measure MM 4.13-5 which encourages all contractors of the project site to hire at least 50 percent of their workers from local Kern County communities. Accordingly, there would not be a corresponding demand or use of the local schools, parks, or public facilities. Therefore, project construction workers would not increase demand for local schools, parks, or public facilities such that substantial physical deterioration of such facilities would occur, nor would project construction require the construction or expansion of recreational facilities which might have an adverse effect on the environment, nor result in substantial adverse physical impacts associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios. Impacts during construction would be less than significant.

### ***Operation***

As stated above, the proposed project would be unstaffed and monitored remotely. Periodically, personnel would visit the site for inspection, security, maintenance, and system monitoring proposes. Approximately up to 15 part-time and/or full-time staff from the adjacent BigBeau Solar O&M building would operate and maintain the facility. These employees would likely come from an existing local and/or regional labor force and would not likely relocate their households as a consequence of working on the proposed project. Even if the maintenance employees were hired from out of the area and had to relocate to southern Kern County, the resulting addition of potential families to this area would not result in a substantial increase in the

number of users at local schools as accommodations for temporary housing would be available in the nearby hotels in Rosamond, Mojave, Lancaster, or other local communities. Therefore, staff required during operation would not increase demand for local schools, parks, or public facilities such that substantial physical deterioration of such facilities would occur, nor would project construction require the construction or expansion of recreational facilities which might have an adverse effect on the environment, nor result in substantial adverse physical impacts associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios. Impacts during construction would be less than significant.

Unlike other businesses in California, large scale solar has an exclusion from property taxes on their equipment. This property tax exclusion results in the proposed project not providing the revenue needed to provide services and facilities for both the proposed project and the communities that prevent decline of the physical neighborhoods in unincorporated Kern County. This is a direct impact from the project structure and the land if built with another type of land use would produce property tax revenue to provide necessary services and facilities and prevent physical decline of homes and businesses due to vacancy and inability for response for all services, including code enforcement to law enforcement, fire, roads and health and safety issues such as elderly care and child protection services. The cumulative impacts of this active solar tax exclusion over the life of the over 36,000 acres of projects has resulted in a loss to the General Fund over the last 10 years of over \$103 million and deepened the on-going fiscal emergency of the county. Public policies in the Kern County General Plan and Willow Springs Specific Plan require development to address economic deficiencies in public services and facilities costs. Further the cumulative impacts of all the projects in addition to this proposed project on various resources including aesthetics, air and biological resources have contributed to changing the visual and community character of the unincorporated communities and caused decline due to using land for a use that does not provide normal property tax revenue.

Mitigation Measure MM 4.13-2 provides a CIC calculated on net acreage that excludes assessable structures and permanent improvements (Operation and Maintenance Building and Energy Storage) and legally unbuildable land (recorded easements). The charge factor was calculated based on the fair share under the Government Code that the proposed project would have paid if the Tax Exclusion were not present. The amount the proposed project should pay is calculated as \$620 per net acre annual charge. This is in addition to the normal property tax revenue legally assessed on the property as the fair share that is provided to the Kern County General fund. As this project application had already been deemed complete and commenced processing when the December 8, 2020 report on the amount of the deficiency in the revenue from the State of California Active Solar Energy Exclusion was presented to the Kern County Board of Supervisors, an accommodation is included in the mitigation that requires a one-time charge for the General fund contribution. In addition, if the proposed project is sold to a city, county, or utility company with assessed taxes that total less than \$3,000 per megawatt per year, then that entity shall pay the taxes plus the amount necessary to equal the equivalent of \$3,000 per megawatt. The amount shall be paid for all years of operation, through implementation of Mitigation Measure MM 4.13-3. Through implementation of Mitigation Measure MM 4.13-4, The Project Proponent shall work with the County to determine how the use of sales and use taxes from construction of the proposed project can be maximized. With this CIC and assessed taxes if the proposed project is sold, the project impacts on public services and facilities and contribution to decline of communities is less than significant.

## ***Mitigation Measures***

**MM 4.13-1:** Prior to the issuance of grading or building permits, the Project Proponent/operator shall develop and implement a Fire Safety Plan for use during construction, operation and decommissioning.

The Project Proponent/operator shall submit the plan, along with maps of the project site and access roads, to the Kern County Fire Department for review and approval. A copy of the approved Fire Safety Plan shall be submitted to the Kern County Planning and Natural Resources Department. The Fire Safety Plan shall contain notification procedures and emergency fire precautions including, but not limited to the following:

- a. All internal combustion engines, both stationary and mobile, shall be equipped with spark arresters. Spark arresters shall be in good working order.
- b. Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. These vehicle types will maintain their factory-installed (type) muffler in good condition.
- c. Fire rules shall be posted on the project bulletin board at the contractor's field office and areas visible to employees.
- d. Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials.
- e. Personnel shall be trained in the practices of the fire safety plan relevant to their duties. Construction and maintenance personnel shall be trained and equipped to extinguish small fires to prevent them from growing into more serious threats.
- f. The Project Proponent/operator shall make an effort to restrict the use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and explosives to periods outside of the official fire season. When the above tools are used, water tanks equipped with hoses, fire rakes, and axes shall be easily accessible to personnel.
- g. Building plans shall be included for the energy storage system to verify adherence to County and California Building Code standards.

**MM 4.13-2:** The following Cumulative Impact Charge (CIC) shall be implemented as an annual payment due every year for the life of the project, or as a lump sum payment for multiple years, until the project is decommissioned and the Conditional Use Permit is voided.

- a. Submittal of Building Permit and Phasing
  1. Any building permit submitted shall be accompanied by a map and legal description of the entire approved Conditional Use Permit area.
  2. The map shall calculate the CIC net acreage as follows:
    - A. Total gross acreage of the approved Conditional Use Permit
    - B. Total acres for Operations and Maintenance building and permanent accessory improvements.
    - C. Total acres for Energy Storage structure and permanent accessory improvements, if full reassessed property taxes are paid.
    - D. Total acres of recorded easements.

3. Formula is Net Acreage = 2.A minus the sum of [2.B + 2.C + 2.D].
  4. Temporary storage areas or non-permanent commercial coaches or cargo containers for construction or operations are not eligible for inclusion under 2.B or 2.C, above.
  5. All areas of buildings, accessory improvements and easements used in the calculations shall be shown on the submitted Map.
- b. Calculation of Cumulative Impact Charge (CIC) and annual payment
1. A payment of \$550 per net acre shall be paid annually for all acres in the approved Conditional Use Permit regardless of phased implementation of building permits, the total number of building permits, or type of building permit issued.
  2. The first payment is due upon issuance of the first building permit. If it is not paid within 30 days after issuance of the first building permit, all such permits shall be suspended until the fee is paid in full.
  3. Annual payments are due every year on the date of the first building permit issuance.
  4. Payments shall be made to the Planning and Natural Resources Department for transfer directly to the County Administrative Office Fiscal Division (CAO) and labeled Cumulative Impact Charge (CIC) with the project name, location and APNs.
  5. Any acres denoted for an operation and maintenance building or energy storage that is not built, cannot be used for solar panels unless payment is provided for the Cumulative Impact Charge (CIC).
  6. An advance payment option for a lump sum of all payment years, or a reduction in each year's payment for 5 or more years, may be requested by submittal of a written request to the Planning and Natural Resources Department with details of the offer no later than 60 days before the yearly payment is due. A 10% discount in the lump sum amount will be applied if the advance payment option is accepted by the County Administrative Office Fiscal Division (CAO) by written response.

**MM 4.13-3:** Written verification of ownership of the project shall be submitted to the Kern County Planning and Natural Resources Department by April 15 of each calendar year. If the project is sold to a city, county, or utility company with assessed taxes that total less than \$3,000 per megawatt per year, then that entity shall pay the taxes plus the amount necessary to equal the equivalent of \$3,000 per megawatt. The amount shall be paid for all years of operation. The fee shall be paid to the Kern County Auditor/Controller by April 30 of each calendar year.

**MM 4.13-4:** The Project Proponent/operator shall work with the County to determine how the use of sales and use taxes from construction of the project can be maximized. This process shall include, but is not necessarily limited to, the Project Proponent/operator obtaining a street address within the unincorporated portion of Kern County for acquisition, purchasing and billing purposes, and registering this address with the State Board of Equalization. As an alternative to the aforementioned process, the Project Proponent/operator may make



arrangements with Kern County for a guaranteed single payment that is equivalent to the amount of sales and use taxes that would have otherwise been received (less any sales and use taxes actually paid); with the amount of the single payment to be determined via a formula approved by Kern County. The Project Proponent/operator shall allow the County to use this sales tax information publicly for reporting purposes.

- MM 4.13-5:** Prior to the issuance of any building permits on the property, the project operator shall submit a letter detailing the hiring efforts prior to commencement of construction, which encourages all contractors of the project site to hire at least 50 percent of their workers from local Kern County communities. The project operator shall provide the contractors a list of training programs that provide skilled workers and shall require the contractor to advertise locally for available jobs, notifying the training programs of job availability, all in conjunction with normal hiring practices of the contractor.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.13-1 through MM 4.13-5, impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or substantially increase other environmental impacts. Cumulative impacts for a project are considered significant if the incremental effects of the individual projects are considerable when viewed in connection with the effects of past projects, and the effects of other projects located in the vicinity of the project site. The cumulative impact analysis area for public services includes the service areas for each of the fire, police and other governmental offices/facilities serving the project site. For both the KCSO and the KCFD, service areas comprise unincorporated areas of Kern County. As discussed above, police and fire service impacts related to the proposed project would be less than significant. Mitigation Measure MM 4.13-1 requires implementation of a fire safety plan during project construction, operation and decommissioning that would include notification procedures and emergency fire precautions to help reduce fire risks and the consequential need for fire protection services onsite. Mitigation Measures MM 4.13-2 require the Project Proponent to pay a CIC to reduce significant impacts to all public services, including fire and law enforcement services, provided by the Kern County General Fund. Implementation of Mitigation Measures MM 4.13-2 through MM 4.13-5 would also prevent the decline of services in unincorporated communities that result in physical impacts on neighborhoods. Such cumulative impacts include increase in vandalism on public spaces such as parks, lack of road and park facilities maintenance, abandoned vehicles and buildings, trash abandonment on private property, and lack of funding for code enforcement of regulations for public health and safety, lack of services for homelessness prevention programs, as well as lack of services and facilities for elder, adolescent and child health and safety services and general mental health facilities. With payment of the required mitigation charge as assessed by the Kern County Planning and Natural Resources Department for transfer to the Kern County General Fund, impacts from the project's cumulative contribution to decline of services would be appropriately mitigated. Therefore, the proposed project would not create a cumulatively considerable impact on public services even from the State of California Active Solar Energy Exclusion which creates a lack of fair share funding by the project for public services.

Therefore, because the proposed project would not create a significant impact on public services, and the other related projects would also be expected to avoid or mitigate impacts on public services, this project would comply with the goals, policies, and implementation measures of the Kern County General Plan, and cumulatively significant impacts would be less than significant. Therefore, the proposed 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. The proposed project would not create a cumulatively considerable impact related to public services with the incorporation of MM 4.13-1 through MM 4.13-5, and the project would have a less than significant cumulative impact.

## **Mitigation Measures**

Implement Mitigation Measures MM 4.13-1 through MM 4.13-5.

## **Level of Significance after Mitigation**

With implementation of Mitigation Measures MM 4.13-1 through MM 4.13-5, cumulative impacts would be less than significant.

### **4.14.1 Introduction**

This section of the Environmental Impact Report (EIR) describes the affected environment, regulatory setting, and project impacts for transportation. It also describes mitigation measures that would reduce these impacts, where applicable. The information and analysis in this section is based on information provided in the *Transportation and Traffic Impact Analysis Memorandum* prepared by Ruetters & Schuler. This report is incorporated by reference and is provided in **Appendix M** of this EIR.

### **4.14.2 Environmental Setting**

The project site is located on approximately 1,343 acres, comprised of 22 privately owned parcels in the southern unincorporated area of Kern County, California adjacent to the previously approved BigBeau Solar project. Parcel 358-051-03 would be used by the Project Proponent as a connector road to the BigBeau Solar project. The parcel is part of the proposed project and project study area for purposes of analysis under the California Environmental Quality Act but would not be included in the CUP boundary. As such the CUP boundary includes 1,333 acres, comprised of 21 parcels. The project site is approximately 8 miles northwest of the community of Rosamond, and 2 miles north of the community of Willow Springs. The project site is approximately 12 miles southwest of State Route (SR) 58 and approximately 7 miles west of SR-14 (Antelope Valley Freeway). SR-138 (West Avenue D) is approximately 9 miles to the south in Los Angeles County. The project site is generally bounded by Favorito Avenue to the south, Champagne Avenue to the north, 110th Street West and the BigBeau Solar Project to the west, and 80th Street West to the east. The east side of the project site is bisected by Tehachapi Willow Springs Road/90th Street West. Primary access to the project site is provided by SR-14 (Antelope Valley Freeway) on Rosamond Boulevard to Tehachapi Willow Springs Road. A secondary route to the site is from 120th Street West, heading north from Rosamond Boulevard (see **Figure 4.14-1**, *Local Vicinity Map* and **Figure 4.14-2**, *Aerial Photograph*).

## **Regional Setting**

### **Major Highways**

The project site is located near four major highways that would provide access to the general vicinity of the proposed project during the construction and operation phases. Interstate 5 (I-5) is the largest highway that would provide regional access to the project site from the north and the south directions. SR-138 intersects with I-5 and SR-14 and runs south of the project site. SR-14 connects SR-138 to population centers northeast and southeast of the project site, providing primary access. SR-58 intersects with I-5 west of Bakersfield and runs east-west, north of the project site.

**Interstate 5** is a major, four-lane divided freeway that extends north from the Mexican border to the Canadian border and provides access for goods movement, shipping, and travel. This highway crosses the

western portion of Kern County and is designated as an arterial/major highway by the Kern County General Plan Circulation Element. The project site is located approximately 35 miles east of I-5.

**State Route 138** is a two-lane highway that runs east-west across the northern part of Los Angeles County, providing regional access from I-5 to SR-14. SR-138 is located approximately 3 miles south of the project site.

**State Route 14** is a divided highway that runs parallel to I-5 in the eastern portion of Kern County, providing regional access to the project site (SR-14 is located approximately 7 miles east of the project site). SR-14 connects Santa Clarita (Los Angeles County) and Inyokern (Kern County). SR-14 is a four-lane divided freeway with a grade-separated interchange near the project site at Rosamond Boulevard.

**State Route 58** is an east-west divided highway that provides regional access to the project site (SR-58 is located approximately 912 miles southwest of the project site). SR-58 connects San Luis Obispo County and San Bernardino County. In the project vicinity, SR-58 is a four-lane divided freeway with grade-separated interchanges at East Tehachapi Boulevard and SR-14.

## Scenic Highways

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there are no Designated State Scenic Highways within Kern County. The closest Eligible Scenic Highways are SR-14, located approximately 12 miles east of the project site and SR-58, located approximately 14 miles north of the project site (Caltrans, 2023b). Prominent views along SR-14 and SR-58 adding to the scenic elements in the landscape for motorists include panoramic views of the open Mojave Desert landscapes and surrounding mountains, including the Tehachapi Mountains, San Gabriel Mountains, and southeastern extent of the Sierra Nevada mountains. There are no available views of the project site from these highways.

In addition to the State Scenic Highway Mapping System, the Kern County General Plan Circulation Element designates scenic routes and defines a scenic route as any freeway, highway, road, or other public right-of-way, which traverses an area of exceptional scenic quality and must be officially set as a Scenic Route by the Kern County Board of Supervisors or the State of California. A route may not be selected as scenic until a visual assessment of the route has been conducted to determine if the route meets the current scenic highway criteria as mentioned above and to what extent development has encroached on the scenic views. The County also has to prepare and adopt a plan and program for the protection and enhancement of adjacent roadside viewshed land.

The Kern County General Plan acknowledges the three routes identified as part of the California Scenic Highways Master Plan that are designated “Eligible State Scenic Highway” within the County. Route 1, which begins north of Mojave and continues to the Inyo County Line, consists of SR-14 and State Highway 395, and traverses high desert land, hilly areas, and is next to the Sierra Nevada Mountains. Route 2, which consists of SR-58 between Mojave and Boron, crosses a desert landscape with Joshua trees, and includes the Red Hills, Castle Butte, and Edwards Air Force Base (Rogers Dry Lake). Route 3, which consists of 5 miles of SR-41 in northwest Kern County, connects Kings County with San Luis Obispo County (Kern County 2009). The project site is not visible from any of these routes.

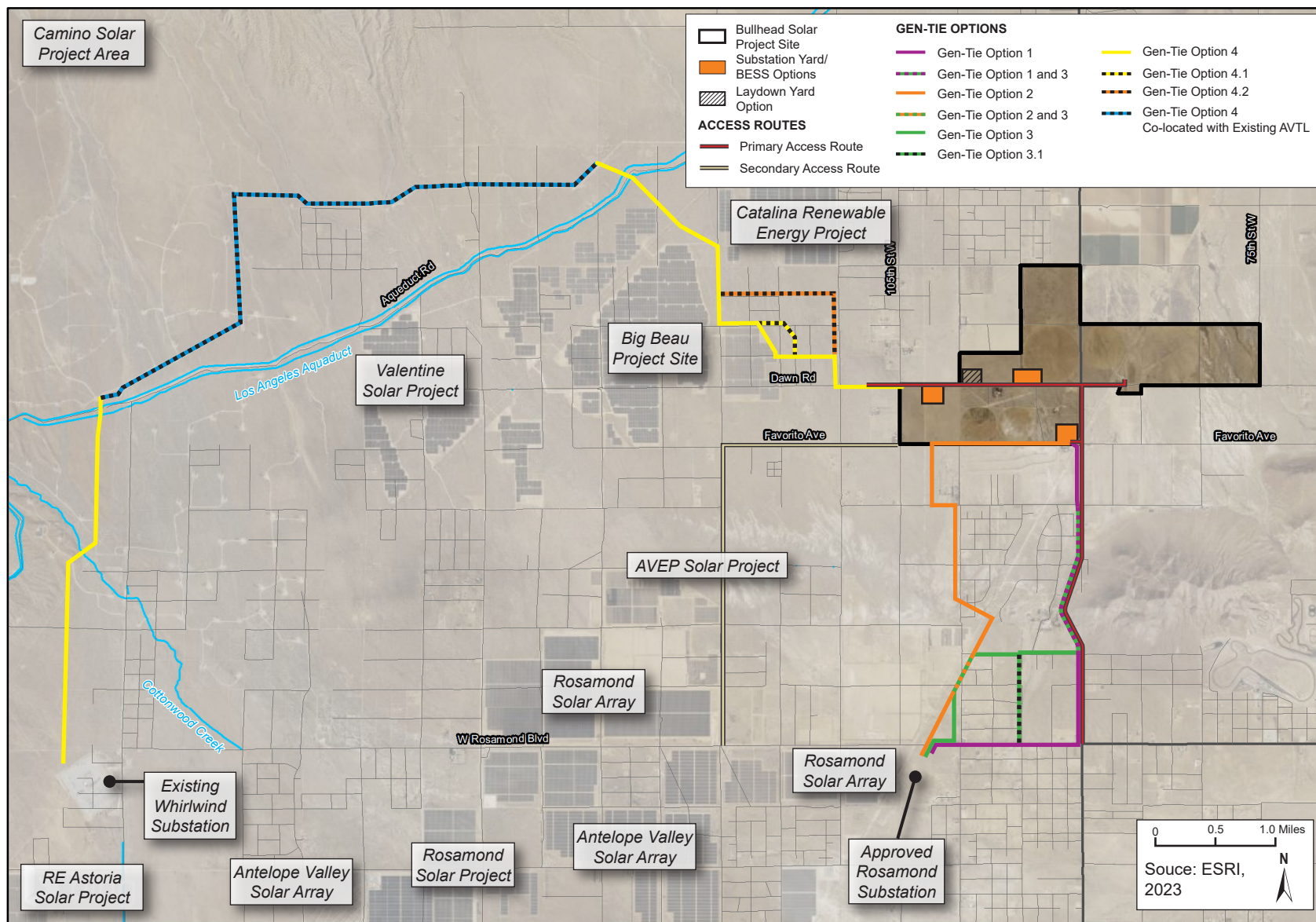


Figure 4.14-1: LOCAL VICINITY MAP

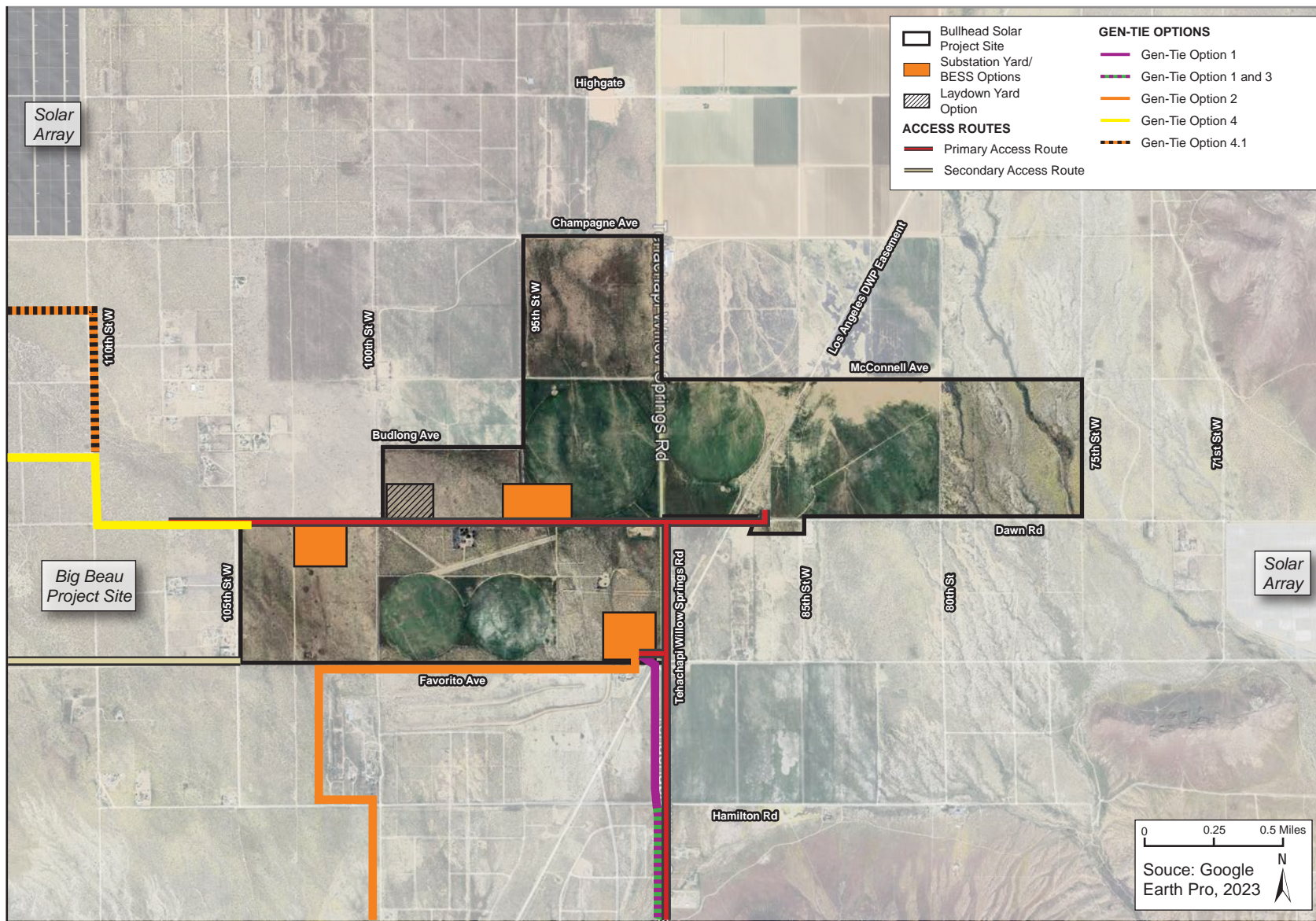


Figure 4.14-2: AERIAL PHOTOGRAPH

## Non-Motorized Transportation

Bicycling is considered an effective alternative mode of transportation that can help to improve air quality, reduce the number of vehicles traveling along existing roads and highways, and reduce energy consumption. There are 67 miles of existing bicycle facilities in the unincorporated portions of Kern County (Kern County 2012). There are no dedicated bicycle facilities in the immediate vicinity of the project site or along the surrounding roadways.

## Other Transportation Facilities

### *Public Transportation*

Public transportation in Kern County is provided by Kern Transit, which offers 13 fixed routes throughout the County and a dial-a-ride general public transportation service for residents in most communities (Kern Transit, 2023). Route 100 provides fixed route scheduled bus service between Bakersfield and Lancaster on SR-58 and SR-14, with stops in the communities of Tehachapi, Keene, Mojave, and Rosamond. Route 250 provides fixed route scheduled bus service between California City and Lancaster on SR-14, with stops in the unincorporated communities of Mojave and Rosamond. No public transit routes pass or stop near the project site. The nearest stop to the project site is approximately seven miles east.

### *Railways*

The closest railway, the Mohave Subdivision, is operated by the Union Pacific Railroad and is located approximately eight miles east of the project site.

### *Airport Facilities*

A nonoperational private airport landing area owned by the Project Proponent is located on parcel 346-032-53 in the eastern portion of the project site. The facility receives no flights and is not accessible. Any remnant would be removed with project construction.

**Rosamond Skypark** is a privately-owned and operated residential airport that is open for public use, and is located about six miles southeast of the project site. This airport has a 3,600-foot asphalt runway and exclusively serves general aviation aircraft. In operation since 1953, the facility serves an average of 29 flight operations per day.

**General William J. Fox Airfield** is a public airfield located about 10 miles southeast of the project site. This airport has a 7,200-foot asphalt runway and serves general aviation aircraft, limited scheduled cargo service, and U.S. Forest Service aircraft. In operation since 1959, the airfield serves an average of 224 flight operations per day.

**Mountain Valley Airport** is a private airport that allows public access located approximately 15 miles to the north of the project site. The airport has two runways, each 4,890 feet long, and primarily serves general aviation aircraft, with some military flights also using the facility. In operation since 1968, the airport serves an average of 137 flight operations per day.

**Mojave Air and Space Port** is a public airfield located about 15 miles northeast of the project site. This airport has three asphalt runways (with lengths of 3,946, 7,049, and 12,503 feet) and primarily serves

general aviation aircraft, with some commercial, air taxi, and military flights also using the facility. In operation since 1940, the airport serves an average of 48 flight operations per day. In 2004, this facility was the first to be certified as a spaceport by the Federal Aviation Administration.

**Edwards Air Force Base** is a military base and airstrip located approximately 25 miles east of the project site. The base is owned and operated by the U.S. Air Force (not open to public use) and includes three runways that range in length from 8,000 feet to 12,000 feet and that are paved with concrete or asphalt. The base covers more than 301,000 acres, and also includes additional landing areas on the hard packed surface of the Rogers Dry Lake and Rosamond Dry Lake. The base also supports the U.S. space shuttle program as a backup landing site.

## Local Setting

### Site Access

Primary access to the project site is provided by SR-14 to Rosamond Boulevard to the existing paved Tehachapi Willow Springs Road. A secondary route to the project site is from 120th Street West, heading north from Rosamond Boulevard. In association with other solar projects in the area, 120th Street West is currently graded and recently widened. As seen in **Figure 4.14-3, Project Access Routes and Proposed Road Vacations**, 120th Street West connects to the previously permitted BigBeau Solar Project; construction vehicles could use 120th Street West, and then continue through the BigBeau site to access the Bullhead Solar project site.

### Traffic Analysis

Considering the access routes described above, this traffic impact analysis evaluates the following five study intersections in the vicinity of the project site, where project traffic would contribute turning vehicles:

1. Tehachapi–Willow Springs Road and Backus Road
2. 170th Street West and Rosamond Boulevard
3. 90th Street West/Tehachapi–Willow Springs Road and Rosamond Boulevard
4. SR 14 Southbound Ramps and Rosamond Boulevard
5. SR 14 Northbound Ramps and Rosamond Boulevard

Existing morning (AM) and afternoon (PM) daily hour turning movement volumes were field measured at the study intersections in March 2021 and historical counts were used from 2014. As shown in **Table 4.14-1, Existing AM and PM Peak Hour Level of Service (LOS)**, the intersections serving the project area currently operate at LOS D or better during the analyzed time periods based on average intersection delay and roadway volume-to-capacity (v/c) ratios. The minimum LOS for conformance with the Kern County General Plan is LOS D.



**TABLE 4.14-1: EXISTING AM AND PM PEAK HOUR LEVEL OF SERVICE**

<b>Study Intersection</b>	<b>AM Peak Hour</b>	<b>PM Peak Hour</b>
1. Tehachapi–Willow Springs Road & Backus Road	LOS A	LOS A
2. 170th Street West & Rosamond Boulevard	LOS A	LOS A
3. Tehachapi–Willow Springs Road/90th Street West & Rosamond Boulevard	LOS A	LOS A
4. SR 14 SB Off Ramp & Rosamond Boulevard	LOS B	LOS A
5. SR 14 NB Off Ramp & Rosamond Boulevard	LOS B	LOS C

Source: Ruettggers & Schuler, 2023 (Appendix M)

## 4.14.3 Regulatory Setting

### Federal

#### Federal Aviation Administration (FAA)

The FAA regulates aviation at regional, public, and private airports. The FAA regulates objects affecting navigable airspace. According to 49 Code of Federal Regulations Part 77.9, any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA of:

- Any construction or alteration exceeding 200 feet above ground level;
- Any construction or alteration:
  - Within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway where the longest airport runway exceeds 3,200 feet in actual length;
  - Within 10,000 feet of a public use or military airport which exceeds a 50:1 surface from any point on the runway where the longest airport runway is less than 3,200 feet in actual length; and
  - Within 5,000 feet of a public use heliport which exceeds a 25:1 surface;
- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed the above standards;
- When requested by the FAA; and
- Any construction or alteration located on a public use airport or heliport regardless of height or location.

Failure to comply with the provisions of Federal Aviation Regulation Part 77 is subject to civil penalty under Section 902 of the Federal Aviation Act of 1958, as amended, and pursuant to 49 United States Code Section 46301(a).

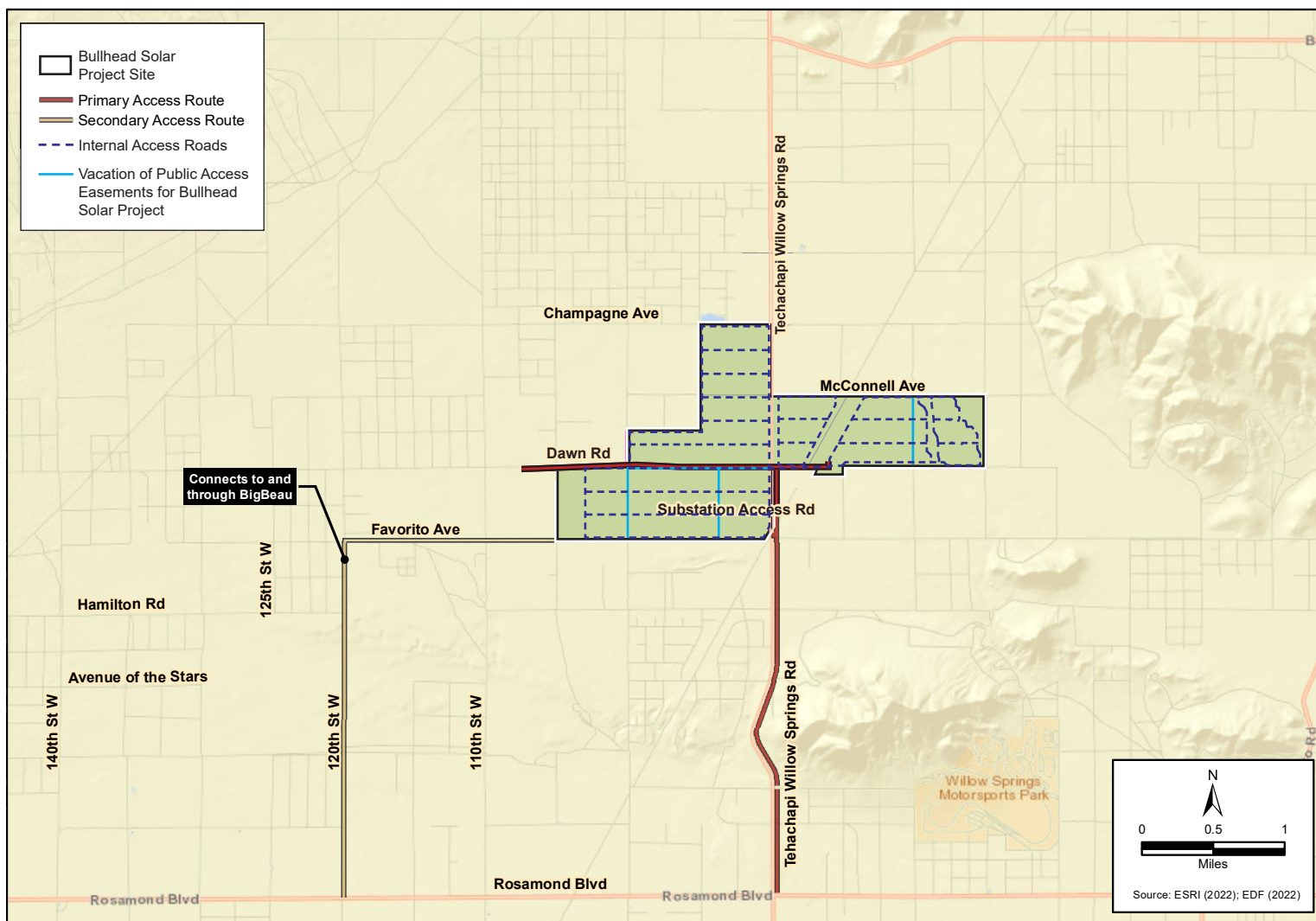


Figure 4.14-3: PROJECT ACCESS ROUTES AND PROPOSED ROAD VACATIONS

## State

### California Department of Transportation

Caltrans has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Eastern Kern County (i.e., including the project site and surrounding area) has been under the jurisdiction of Caltrans District 9 as of November 2015; prior to that time, all of Kern County was under the jurisdiction of Caltrans District 6. The Caltrans regulations below apply to potential transportation and traffic impacts of the project.

- **California Vehicle Code (CVC), Division 15, Chapters 1 through 5 (Size, Weight, and Load).** Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- **California Street and Highway Code, Sections 660-711, 670-695.** Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of State and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.
- **Project Development Procedures Manual, Chapter 27.** Access Control Modification. Requires Caltrans approval of proposed connections to a public road through submittal of a proposal to Caltrans (Caltrans, 2023).

## Local

### Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan Circulation Element for transportation that are applicable to the proposed project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the proposed project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference. The design level-of-service (LOS) for Kern County is LOS C. As stated above, the minimum LOS for conformance with the Kern County General Plan is LOS D.

#### ***Circulation Element***

##### **2.1 Introduction**

###### ***Goals***

- Goal 4: Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.
- Goal 5: Maintain a minimum [level of service] LOS D for all roads throughout the County.

### 2.3.3 Highway Plan

#### **Goal**

Goal 5: Maintain a minimum LOS D.

#### **Policies**

Policy 1: Development of roads within the County shall be in accordance with the Circulation Diagram Map. The charted roads are usually on section and midsection lines. This is because the road centerline can be determined by an existing survey.

Policy 2: This plan requires, as a minimum, construction of local road widths in areas where the traffic model estimates little growth through and beyond 2010. Where the Kern County Planning and Natural Resources Department's growth estimates indicate more than a local road is required, expanded facilities shall be provided. The timing and scope of required facilities should be set up and implemented through the Kern County Land Division Ordinance. However, the County shall routinely protect all surveyed section lines in the Valley and Desert regions for arterial right-of-way. The County shall routinely protect all midsection lines for collector highways in the same regions. The only possible exceptions shall be where the County adopts special studies and where Map Code 4.1 (Accepted County Plan) areas occur. In the Mountain Region where terrain does not allow construction on surveyed section and midsection lines, right-of-way width shall be the size shown on the diagram map. No surveyed section and midsection "grid" will comprehensively apply to the Mountain Region.

Policy 3: This plan's road-width standard are listed below. These standards do not include state highway widths that would require additional right-of-way for rail transit, bike lanes, and other modes of transportation. Kern County shall consider these modifications on a case-by-case basis.

- Expressway [Four Travel Lanes] Minimum 110-foot right-of-way;
- Arterial [Major Highway] Minimum 110-foot right-of-way;
- Collector [Secondary Highway] Minimum 90-foot right-of-way;
- Commercial-Industrial Street Minimum 60-foot right-of-way; and
- Local Street [Select Local Road] Minimum 60-foot right-of-way.

#### **Implementation Measure**

Measure A: The Planning Department shall carry out the road network policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which implements the Kern County Development Standards that includes road standards related to urban and rural planning requirements. These ordinances also regulate access points. The Planning Department can help developers and property owners in identifying where planned circulation is to occur.

### 2.3.4 Future Growth

#### **Goal**

Goal 1: To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.

#### **Policies**

Policy 2: The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below LOS D. Utilization of the California Environmental Quality Act (CEQA) process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space, and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.

Policy 4: As a condition of private development approval, developers shall build roads needed to access the existing road network. Developers shall build these roads to County standards, unless improvements along state routes are necessary then roads shall be built to California Department of Transportation (Caltrans) standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.

Policy 5: When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.

Policy 6: The County may accept a developer's road into the County's maintained road system. This is at Kern County's discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.

#### **Implementation Measures**

Measure A: The County should relate traffic levels to road capacity and development levels. To accomplish this, the Kern County Roads Department and the Kern County Planning and Natural Resources Department should set up a monitoring program. The program would identify traffic volume to capacity ratios and resulting level of service. The geographic base of the program would be traffic zones set up by Kern Council of Governments.

Measure C: Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.

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### 2.3.6 Vacation of Existing or Recorded Future Streets, Highways, or Public Easements

#### **Goal**

Goal 2: Kern County intends to set up a system maintaining and coordinating road vacation procedures in all elements of the General Plan and the incorporated cities general plans.

#### **Policies**

- Policy 1: A road vacation influencing the construction or operation of expressway, an arterials or collector highway may occur with, or after, amending this Element. Kern County will not vacate any public expressway, arterial or collector highway right-of-way without amendment to this Element. The County will need to amend the right-of way status to local or commercial-industrial streets.
- Policy 2: A study, prepared at the applicant's expense, shall accompany the road vacation application. The study should provide information that will aid in finding the importance of the entire length of the right-of-way. The study would include a review of existing and proposed land uses and localized traffic modeling. This will help Kern County decide what corresponding changes are needed to the Land Use, Open Space and Conservation Element, or affected specific plan. This also will help Kern County decide if additional public road services or other traffic management are required elsewhere.
- Policy 3: If the road vacation applicant is a private entity, all costs for the public hearing shall be borne by the applicant. Also, costs associated with providing any necessary additional public road services or other traffic management caused by the road vacation shall be paid by the applicant.
- Policy 4: The vacation of a road shall not take away legal access to adjacent properties or "land-lock" any legal lot or parcel of record. Legal access shall be determined through a report submitted with the application for road vacation.
- Policy 5: If Kern County determines that the right-of-way is not needed for circulation in the general area, a road vacation may be authorized. An acceptable project shall be determined through a report submitted with the road vacation application and in keeping with traffic modeling parameters of this Plan.
- Policy 6: A road vacation may be authorized if physical conditions such as natural, or manmade topography prevent rational extension of the facility. Physical conditions affecting roadways shall be determined through a report submitted with the road vacation application.
- Policy 7: A road vacation shall only affect public, recorded rights-of-way or public service easements. The potential effects of a road vacation upon rights-of-way and easements are to be determined by a report submitted with the road vacation application. A vacation of private access or private service easement is not under County jurisdiction. Kern County considers these matters "civil" actions. These civil actions should be acted upon accordingly.

- Policy 8: A road vacation may be authorized if the right-of-way is not improved or used for its original purpose. Existing improvements and facility use shall be determined by a report submitted with the road vacation application.
- Policy 9: A road vacation may be authorized to remove excess right-of-way caused by relocation, or at the beginning of a general plan amendment proceeding. Excess right-of-way shall be determined through a report submitted with the road vacation application.
- Policy 10: A road vacation may be approved if there is an agreement to close a public street. A road vacation may be approved with acknowledgment of an impassable street. A road vacation may be approved with a land division map over the area of vacation if the project has comparable methods of vehicular access.
- Policy 11: A road vacation procedure may be used for considering public service easement or utility service easement abandonments. The procedure is the same as any public right-of-way vacation.
- Policy 12: A vacation of improved road right-of-way, or public service easement, should not occur until the lead agency makes findings. One important finding is the land is no longer needed for public use. A vacation of improved road right-of-way, or public service easement, should not occur until the right-of-way is superseded by relocation, and improved to acceptable Kern County Development standards. The Board of Supervisors shall have accepted the replacement facility into the maintained road system.
- Policy 13: A general vacation proceeding (consistent with State of California Streets and Highway Code) will require a public hearing when the vacation affects existing in place facilities or is a project caused by relocating right-of-way.
- Policy 14: A summary vacation shall be consistent with State of California Streets and Highway Code. A summary vacation may be used when the right-of-way does not exist, is unused, or moved. A summary vacation may be used where right-of-way is impassable, unnecessary for present or prospective public use, or is excess or public service easement land.

### ***Implementation Measures***

- Measure A: Kern County should require a research fee to determine if a complex vacation application is acceptable.
- Measure B: In resolving a vacation request, the Board of Supervisors will follow the policies and laws applicable to such vacation request. Before taking final action, the Board of Supervisors may require the applicant to submit additional study(s). Staff shall oversee the applicant's information gathering process and suggest alternatives if necessary.
- Measure C: The Planning Department shall issue guidelines for applicants to use in the preparation of road vacation applications and attendant reports.

### **2.3.10 Congestion Management Programs**

State law requires that urbanized counties prepare an annual congestion management program (CMP). City and county eligibility for new gas tax subventions is contingent upon their participation in the congestion management program. To qualify for funding provided through the State Transportation Improvement

Program (STIP) or the Federal Transportation Improvement Program (FTIP), the regional transportation agency must keep current a Regional Transportation Program (RTP) that contains the CMP. Also, the CMP offers local jurisdictions the opportunity to find cooperative solutions to the multi-jurisdictional problems of air pollution and traffic congestion.

The CMP has links with air quality requirements. The California Clean Air Act requires that cities and counties implement transportation control measures (TCMs) to attain, and maintain, the State air quality standard.

### ***Goals***

- Goal 1: To satisfy the trip reduction and travel demand requirements of the Kern Council of Government's Congestion Management Program.
- Goal 2: To coordinate congestion management and air quality requirements and avoid multiple and conflicting requirements.

### ***Policies***

- Policy 1: Pursuant to California Government Code 65089(a), Kern County has designated Kern Council of Governments as the County's Congestion Management Agency (CMA).
- Policy 2: The Congestion Management Agency is responsible for developing, adopting, and annually updating a Congestion Management Plan. The Plan is to be developed in consultation with, and with the cooperation of, the regional transportation agency (also Kern Council of Governments), regional transportation providers, local governments, Caltrans, and the air pollution control district.

### ***Implementation Measures***

- Measure A: Kern County Council of Governments should request the proper consultation from County of Kern to develop and update the proper congestion management program.
- Measure B: The elements within the Kern Congestion Management Program are to be implemented by each incorporated city and the County of Kern. Specifically, the land use analysis program, including the preparation and adoption of deficiency plans is required. Additionally, the adoption of trip reduction and travel demand strategies are required in the Congestion Management Program.

## **2.5.1 Trucks and Highways**

The Kern County road network handles a high ratio of heavy truck traffic. State highways carry most of this traffic. Most of the trucks are interstate carriers. As such, interstate trucking is not under the direct control of County officials. In as much as this traffic affects County residents and taxpayers, they need actions to guarantee State highways in Kern County receive a fair share of California's transportation investment.

### ***Goals***

- Goal 1: Provide for Kern County's heavy truck transportation in the safest way possible.



- Goal 2: Reduce potential overweight trucks.
- Goal 3: Use State Highway System improvements to prevent truck traffic in neighborhoods.

***Policies***

- Policy 1: Caltrans should be made aware of the heavy truck activity on Kern County's roads.
- Policy 2: Start a program that monitors truck traffic operations.
- Policy 3: Promote a monitoring program of truck lane pavement condition.

**Willow Springs Specific Plan**

Portions of the proposed project are subject to the provisions of the Willow Springs Specific Plan. The Willow Springs Specific Plan was adopted in April 2008 and contains goals, policies, and standards that are compatible with those in the Kern County General Plan but are unique to the specific needs of the Willow Springs Area. The transportation-related policies and measures contained in the Willow Springs Specific Plan that are applicable to the proposed project are outlined below. Note that only applicable goals, policies, and standards are included here; those goals, policies, and standards that are not applicable are not included.

***Circulation Element******Goals***

- Goal 5 To maintain public safety within the plan area by providing a more direct and efficient circulation system for law enforcement and fire protection vehicles.
- Goal 7 To provide an adequate circulation system which will support the proposed land uses.

***Policies***

- Policy 7 Require the widening of impacted roadways to handle increased traffic generated by new development.
- Policy 8 Encourage resourceful air quality improvement and reduction methods.

***Mitigation/Implementation Measures***

- Measure 9 A traffic study in accordance with the requirements of Kern County and Caltrans, as appropriate, shall be submitted for all discretionary projects. Study shall demonstrate consistency with the Willow Springs Specific Plan.
- Measure 13 The Traffic Impact Fee Program implements Mitigation Measure 10 of the Willow Springs Final Environmental Impact Report (EIR).

## Kern Council of Governments Congestion Management Program

All urbanized areas with a population larger than 200,000 residents are required to have a Congestion Management System, program, or process. The Kern Council of Governments (Kern COG) refers to its congestion management activities as the Congestion Management Program (CMP). Kern COG was designated as the Congestion Management Agency.

The CMP provides a systematic process for managing congestion and information regarding (1) transportation system performance, and (2) alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The purpose of the CMP is to ensure that a balanced transportation system is developed that relates population growth, traffic growth and land use decisions to transportation system level of service (LOS) performance standards and air quality improvement. The program attempts link land use, air quality, transportation, advanced transportation technologies as integral and complementary parts of this region's plans and programs.

The purpose of defining the CMP network is to establish a system of roadways that will be monitored in relation to established LOS standards. At a minimum, all State highways and principal arterials must be designated as part of the Congestion Management System of Highways and Roadways. Kern County has 18 designated state highways.

## Regional Transportation Plan

The Kern Council of Governments adopted the *2022 Regional Transportation Plan and Sustainable Communities Strategy* (RTP/SCS) on July 21, 2022 (Kern COG, 2022). The RTP is updated every four years and serves as a blueprint for the region's transportation system, encompassing various modes including freight, intermodal, and aviation. Included in the 2022 RTP is the Sustainable Communities Strategy (SCS) required by California's Sustainable Communities and Climate Protection Act, of Senate Bill (SB) 375. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing needs Allocation (RHNA) ensuring consistency between low-income housing need and transportation planning. The SCS is included to specifically address emissions reductions from passenger vehicle travel, including 9 percent per capita reductions by 2020 and 15 percent per capita by 2035, compared to baseline year 2005. The plan contains seven core goals.

1. Mobility—Improve the mobility of people and freight.
2. Accessibility—Improve accessibility to, and the economic wellbeing of, major employment and other regional activity centers.
3. Reliability—Improve the reliability and safety of the transportation system.
4. Efficiency—Maximize the efficiency and cost effectiveness of the existing and future transportation system.
5. Livability/Quality of Life—Promote livable communities and satisfaction of consumers with the transportation system.
6. Sustainability—Provide for the enhancement and expansion of the system, while minimizing effects on the environment.
7. Equity—Ensure an equitable distribution of the benefits among various demographics and user groups.

## Kern County Airport Land Use Compatibility Plan (ALUCP)

The Kern County Airport Land Use Compatibility Plan (ALUCP) establishes procedures and criteria to assist Kern County and affected incorporated cities in addressing compatibility issues between airports and surrounding land uses. The Rosamond Skypark is located approximately 5.5 miles east of the project site. The General William J. Fox Airfield is located approximately 10 miles southeast of the project site. The Mountain Valley Airport is located approximately 15 miles north of the project site. The Mojave Air and Space Port is located approximately 15 miles northeast of the project site. The proposed project is also located approximately 25 miles west of the airstrips at Edwards Air Force Base. However, the proposed project is not located within a designated Airport Land Use Compatibility zone.

### 4.14.4 Impacts and Mitigation Measures

#### Methodology

The proposed project's potential impacts to transportation have been evaluated in the *Transportation and Traffic Impact Analysis Memorandum (Appendix M)*.

#### Build Year and Cumulative Traffic

As noted above in Section 4.14.2, *Environmental Setting*, existing AM and PM peak hour turning movement volumes were field measured at the study intersections in March 2021. To analyze traffic for the build-year scenario, existing volumes were projected out to the year 2026, using growth rates ranging from 0.72 to 7.41 percent. Growth rates were determined from the Kern Council of Governments (COG) model.

The Kern County Planning and Natural Resources Department provided a list of cumulative (i.e., past, present, and reasonably foreseeable) projects in the vicinity of the proposed project. Based on the locations and types of projects provided in the cumulative list, resultant peak-hour turning-movement volumes were added to the 2026 volumes to account for these cumulative impacts. The 2026 cumulative traffic volumes are shown in **Figure 4.14-4**, *2026 Peak Hour Traffic*, and **Figure 4.14-5**, *2026 + Project Peak Hour Traffic*.

#### Project Trip Generation, Distribution, and Assignment

##### **Construction**

Traffic generated during the construction phase would include personnel vehicles and heavy trucks. The onsite workforce is expected to average 201 workers per day, with a peak of up to 627 workers. Construction would occur primarily during daylight hours, Monday through Friday, between 6:00 AM and 5:00 PM. Several specialized construction contractors would construct the proposed project, with construction activities taking place as specified in the County's Code of Ordinances, Chapter 8.36, as required to meet the construction schedule. Construction activities are allowable between the hours of 6:00 AM and 9:00 PM on weekdays and between the hours of 8:00 a.m. and 9:00 PM on weekends. These vehicles would access the project site by way of Tehachapi–Willow Springs Road, with possible secondary access via 120th and 140th Streets West. Additionally, traffic accessing the project site is anticipated to be generated primarily from surrounding population centers, such as Rosamond, Tehachapi, Lancaster, and Palmdale, as

well as from other nearby population centers. This analysis was conducted to assess the level of impact on the adjacent roadway system during the proposed project construction. Trip generation estimates for construction traffic using these roadways are presented in **Table 4.14-2, Project Trip Generation – Construction.**

**TABLE 4.14-2: PROJECT TRIP GENERATION – CONSTRUCTION**

Traffic Type	Variable	ADT	AM Peak Hour Trips		PM Peak Hour Trips	
			In Trips	Out Trips	In Trips	Out Trips
Personnel	627 (peak per day)	1,254	100% 627	0% 0	0% 0	100% 627
Heavy Trucks	167 (peak per day)	334	100% 28	0% 0	0% 0	100% 28
<b>Total Trips</b>		<b>1,588</b>	<b>655</b>	<b>0</b>	<b>0</b>	<b>655</b>

Source: Ruettggers & Schuler, 2023 (Appendix M)

It is anticipated that during the peak of construction, an average of 201 workers would be onsite daily, with a peak of 627 workers and 167 heavy trucks. This assumption results in 1,254 daily personal vehicle trips (combined inbound and outbound). The number would be reduced if some workers carpool to the project site.

Following the *Highway Capacity Manual* guidelines, heavy truck volumes were converted to passenger-car equivalent volumes using a factor of 1.7 trips per day to account for the effective reduction in free-flow speed (i.e., mean traffic speed under low-flow conditions) that the presence of heavy vehicles in the traffic flow can cause. The results are shown in **Table 4.14-3, Project Construction - Project Trip Generation With Adjusted Truck Trips.** Heavy truck trips were estimated to be 568 per day, based on assumptions regarding daily deliveries of materials, equipment, and water anticipated for construction. It was assumed that the trucks would enter the facility throughout the day, and therefore only a portion of the trucks are estimated to be traveling during the peak AM and PM hours.

**TABLE 4.14-3: PROJECT CONSTRUCTION - PROJECT TRIP GENERATION WITH ADJUSTED TRUCK TRIPS**

Traffic Type	Variable	ADT	AM Peak Hour Trips		PM Peak Hour Trips	
			In Trips	Out Trips	In Trips	Out Trips
Personnel	627 (peak per day)	1,254	100% 627	0% 0	0% 0	100% 627
Heavy Trucks	167 (peak per day)	568 <sup>1</sup>	100% 47	0% 0	0% 0	100% 47
<b>Total Trips</b>		<b>1,822</b>	<b>674</b>	<b>0</b>	<b>0</b>	<b>674</b>

Source: Ruettggers & Schuler, 2023 (Appendix M)

<sup>1</sup> Represents passenger-car equivalent for heavy truck traffic using a factor of 1.7.

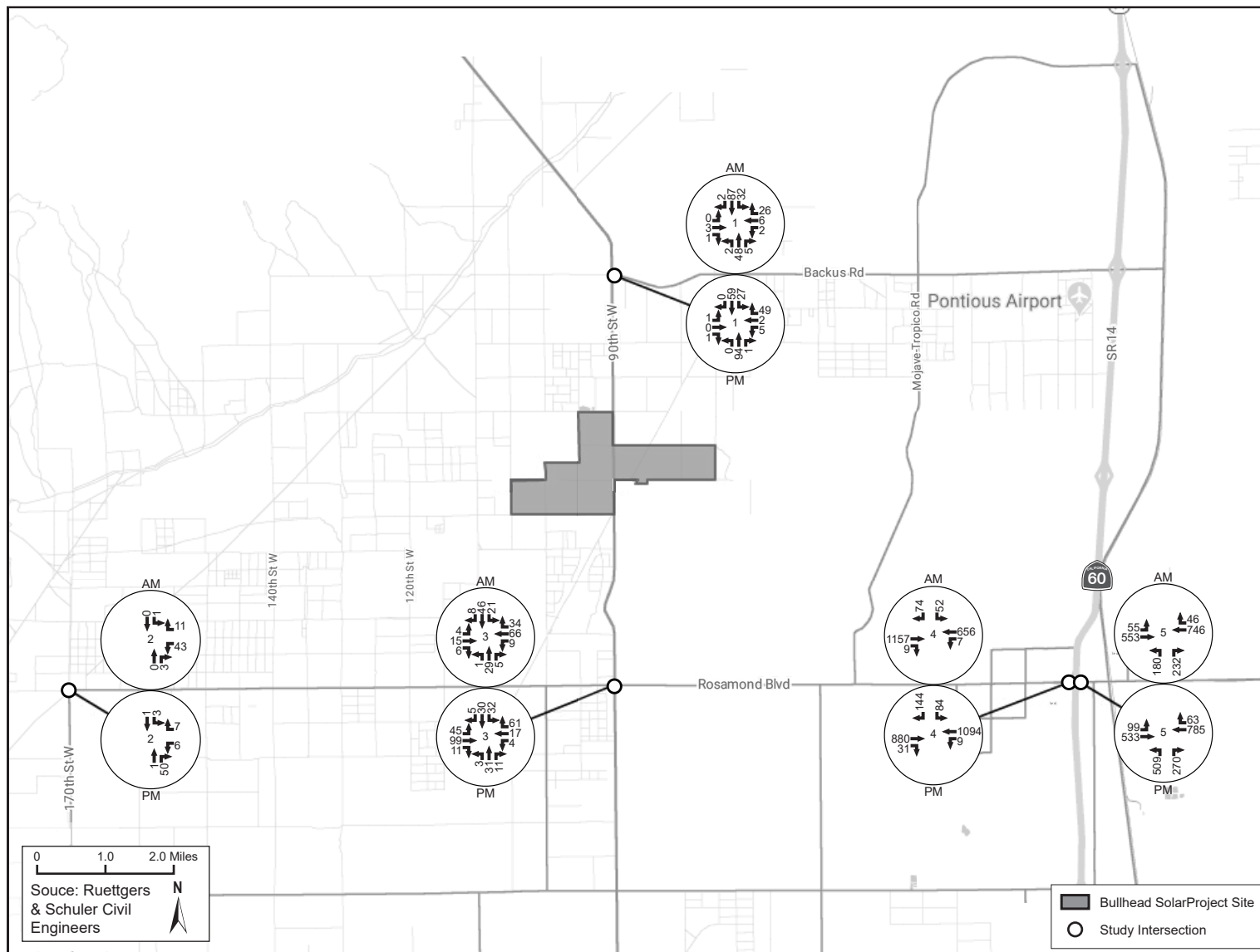


Figure 4.14-4: 2026 PEAK HOUR TRAFFIC

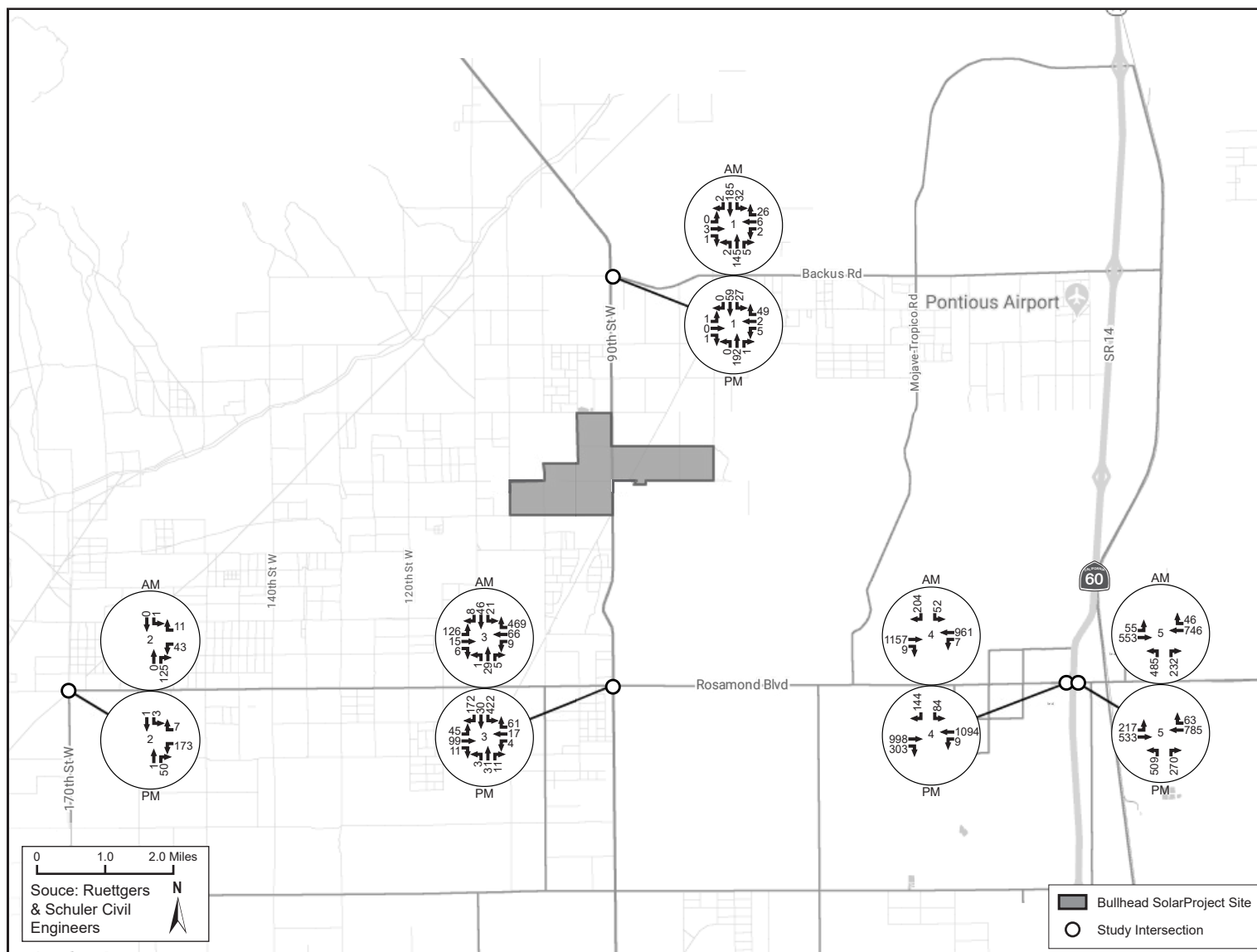


Figure 4.14-5: 2026 + PROJECT PEAK HOUR TRAFFIC

## Operation & Maintenance Phase

On completion of the construction and testing phases, approximately 15 part-time and/or full-time staff, located at the adjacent BigBeau Operations & Maintenance (O&M) facility, would operate the proposed project. O&M staff would visit various parts of the project site for inspection, security, maintenance, and system-monitoring purposes. It is anticipated that the washing would use up to 8 acre-feet of water over a 3-month period. Using 5,000-gallon trucks, this equates to approximately nine trucks a day. It is anticipated that the panels would be washed once per year, using water from onsite sources. Water demand for panel washing, dust control, and fire suppression is not expected to exceed 11 acre-feet per year. Panel washing is expected once per year. Trip generation estimates for traffic accessing the project site, including both personnel and heavy truck trips, are presented in **Table 4.14-4, Operation & Maintenance Phase Project Trip Generation**.

**TABLE 4.14-4: OPERATION & MAINTENANCE PHASE PROJECT TRIP GENERATION**

Traffic Type	Variable	ADT	AM Peak Hour Trips		PM Peak Hour Trips	
			In Trips	Out Trips	In Trips	Out Trips
Personnel	15 (per day)	30	100% 15	0% 0	0% 0	100% 15
Heavy Trucks	9 (per day)	18	100% 1	0% 0	0% 0	100% 1
<b>Total Trips</b>		<b>48</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>

Source: Ruettggers & Schuler, 2023 (Appendix M)

## Vehicle Miles Traveled

The new *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 greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses. Vehicle miles traveled, or VMT, is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person.

The newly adopted guidance provides that a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide. Kern County is currently engaged in this process and have not yet formally adopted its updated transportation significance thresholds or its updated transportation impact analysis procedures. Since the regulations of SB 743 have not been finalized or adopted by the County, guidance from the State of California Office of Planning and Research's (OPR) December 2018 *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Guidelines), was relied upon in this EIR to determine the significance of transportation impacts (OPR, 2018).

To establish a baseline for daily VMT in the Kern County area, Kern COG provided VMT data that is estimated based on Select Zone Analyses conducted for the region for establishing traffic models of existing

and future land development projects. Based on household and employment populations in the greater Kern County area, as well as travel patterns throughout the region, Kern COG data shows an average VMT per trip of 43.2 miles.

In order to establish the anticipated VMT profile for the project, an investigation into the personnel trips involved in the construction process was conducted. The primary factor involved in this evaluation is the location of the project site in relation to the surrounding population centers and points of origin for equipment, supplies, and personnel. Heavy truck trips were screened out of the VMT analysis per Office of Planning and Research guidelines.

The California Governor's Office of Planning and Research advisory provides screening thresholds for identifying whether a land use project should be expected to result in a less-than-significant transportation impact under CEQA. Projects meeting one or more of these criteria would not be required to undergo a detailed VMT analysis. According to the advisory, projects that generate fewer than 110 trips per day may be assumed to cause a less-than-significant transportation impact.

## 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 on traffic.

A project could have a significant adverse effect on transportation if it would:

- a. Conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, as follows:
  - i. Metropolitan Bakersfield General Plan LOS C, and
  - ii. Kern County General Plan LOS D
- b. Conflict or be inconsistent with *CEQA Guidelines* section 15064.3, subdivision (b);
- c. Substantially increases hazards due to a geometric design feature (such as sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and
- d. Result in inadequate emergency access.

## Project Impacts

### **Impact 4.14-1: The project would conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, as follows: Kern County General Plan LOS "D."**

A request for approval would be provided to allow non-summary vacations of various public access easements in Zone Map No. 232, in and around the project site (see **Figure 4.14-3**, *Project Access Routes and Proposed Road Vacations*). The purpose of the request is to facilitate the optimal layout of solar panels by removing recorded but unused public rights-of-way on vacant land.



## Construction

An analysis was performed to determine the level of service (LOS) of the intersections during the construction phase of the project. The guidelines in the Caltrans publication *Guide for the Preparation of Traffic Impact Studies*, dated December 2002, states that a facility is required to be analyzed when a project will generate more than 50 peak hour trips at a facility operating at or below a LOS C. Per the Kern County General Plan, Section 2.3.2, Traffic Levels of Service (LOS), LOS D is an acceptable standard for county-maintained roads, unless the roads are part of an adopted specific plan. 120th Street West is not paved, and has negligible amounts of existing background traffic. Average daily traffic (ADT) on Rosamond Boulevard near the intersection with 120th Street West is approximately 2,600. It is anticipated that a maximum of 10 percent of the project construction traffic may access the project using 120th Street West, which would equate to approximately 67 peak-hour trips. Although slightly over the 50-trips threshold, with low existing volumes, the addition of project traffic at this location is not expected to cause an impact on this intersection or Rosamond Boulevard. Although the secondary access point of 120th Street West may be used at certain times, project volumes will be low (if any) and are not expected to reach thresholds of significance.

Also included in the LOS analysis is the cumulative traffic generated by other projects, as provided by Kern County, within a 6-mile radius of the project site. Based on a review of the project site and the surrounding roadway network, it was determined that traffic generated by other projects farther than 6 miles from the project site would not have a significant impact on the study intersections and roadway segments.

**Table 4.14-5**, *Intersection Level of Service AM Peak Hour*, and **Table 4.14-6**, *Intersection Level of Service PM Peak Hour*, below, show the results of the analysis for project-related construction traffic at key study area intersections during the AM and PM peak hours, respectively. As shown in **Tables 4.14-5** and **4.14-6**, all intersections currently operate at acceptable LOS during both AM and PM peak hours and would continue to operate at acceptable LOS with the addition of project construction traffic. Therefore, impacts would be less than significant.

**TABLE 4.14-5: CONSTRUCTION - INTERSECTION LEVEL OF SERVICE AM PEAK HOUR**

#	Intersection	Control Type	2022	2022+ Project	2026	2026+ Project
1	Tehachapi–Willow Springs Road & Backus Road	EB	A	B	B	B
		WB	A	A	A	B
2	170th Street West & Rosamond Boulevard	AWSC	A	A	A	A
3	Tehachapi–Willow Springs Road/90th Street West & Rosamond Boulevard	AWSC	A	B	A	B
4	SR 14 SB Off Ramp & Rosamond Boulevard	Signal	B	B	B	B
5	SR 14 NB Off Ramp & Rosamond Boulevard	Signal	B	B	B	B

**TABLE 4.14-5: CONSTRUCTION - INTERSECTION LEVEL OF SERVICE AM PEAK HOUR**

#	Intersection	Control Type	2022	2022+ Project	2026	2026+ Project
Source: Ruetters & Schuler, 2023 (Appendix M)						
EB = Eastbound						
WB = Westbound						
AWSC = all-way stop-controlled						

**TABLE 4.14-6: CONSTRUCTION-INTERSECTION LEVEL OF SERVICE PM PEAK HOUR**

#	Intersection	Control Type	2022	2022+ Project	2026	2026+ Project
1	Tehachapi–Willow Springs Road & Backus Road	EB WB	A A	A A	A A	B A
2	170th Street West & Rosamond Boulevard	AWSC	A	A	A	A
3	Tehachapi–Willow Springs Road/90th Street West & Rosamond Boulevard	AWSC	A	C	A	D
4	SR 14 SB Off Ramp & Rosamond Boulevard	Signal	A	A	A	A
5	SR 14 NB Off Ramp & Rosamond Boulevard	Signal	C	C	C	C

Source: Ruetters &amp; Schuler, 2023 (Appendix M)

EB = Eastbound

WB = Westbound

AWSC = all-way stop-controlled

### **Operation and Maintenance**

As shown in **Table 4.14-4**, *Operation & Maintenance Phase Project Trip Generation*, the proposed project is expected to generate fewer than 50 trips during the weekday AM and PM peak hours during project operation. The County's guidelines require that analysis be conducted at intersections where a project would generate 50 or more peak hour trips. Therefore, an analysis of LOS conditions for project operation and maintenance was not conducted, and the impact is presumed to be less than significant for operation and maintenance.

### **Decommissioning**

Decommissioning of the proposed project would result in impacts similar to those caused by the project construction traffic, but the duration would be about one-third less than project construction (approximately

four months). Therefore, decommissioning of the proposed project would result in a less than significant impact with respect to LOS for roadways.

### ***Mitigation Measures***

No mitigation would be required.

### ***Level of Significance***

Impacts would be less than significant.

## **Impact 4.14-2: The project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).**

### ***Construction***

In accordance with the California Environmental Quality Act (CEQA), an evaluation of the average VMT for the project's construction traffic was conducted.

In order to establish a baseline for daily VMT in the Kern County area, Kern COG provided VMT data that is estimated based on Select Zone Analyses conducted for the region for establishing traffic models of existing and future land development projects. Based on household and employment populations in the greater Kern County area, as well as travel patterns throughout the region, Kern COG data shows an average VMT per trip of 43.2 miles.

It is anticipated that up to 50 percent of the construction personnel would be hired from the local population, which is considered to be the cities and communities of Rosamond, Tehachapi, Lancaster, and Palmdale, and other nearby population centers. It is anticipated that approximately 30 percent of personnel would relocate temporarily to one of these population centers for the duration of construction. The remaining 20 percent or more of the construction personnel would be considered non-local and are anticipated to come from Bakersfield and other areas outside of Antelope Valley. Based on the location of the various communities and the distribution described above, an approximation of the directional split is provided in **Table 4.14-7**, Construction VMT Analysis.

The average trip length for construction personnel traveling to and from the site was determined to be approximately 26.5 miles, as shown in **Table 4.14-7**, *VMT Analysis – Construction Traffic*. The directional percentages shown in **Table 4.14-7** were determined based on the assumptions of where personnel would be travelling to or from. The average VMT of 26.5 miles per vehicle per day is less than the baseline average VMT of 43.2 described in the methodology section above. Therefore, construction activities are not expected to significantly increase VMT in the region, and the VMT impact related to construction would be less than significant.

**TABLE 4.14-7: CONSTRUCTION VMT ANALYSIS**

Vehicle Type	Direction	Percentage of Total Trips (%)	Average Trip Length Passenger Vehicles (miles)	Total Trips <sup>1</sup>	Weighted Average Trip Length (miles)
Passenger Vehicles	North	25	32.96	367.0	<b>26.53</b>
	South	40	15.95	587.2	
	East	25	28.91	367.0	
	West	10	46.81	146.8	

Source: Ruetters & Schuler, 2023

<sup>1</sup> Based on 1,468 average daily trips.

### ***Operation and Maintenance***

The California Governor's Office of Planning and Research advisory provides screening thresholds for identifying whether a land use project should be expected to result in a less-than-significant transportation impact under CEQA. Projects meeting one or more of these criteria would not be required to undergo a detailed VMT analysis. According to the advisory, projects that generate fewer than 110 trips per day may be assumed to result in a less than significant transportation impact.

Therefore, because traffic would be below the 110 average daily trips threshold, the O&M vehicle trips would be screened out of this process. Therefore, no VMT analysis is necessary, and it is assumed that the operation and maintenance traffic will not cause a significant transportation impact.

### ***Mitigation Measures***

No mitigation would be required.

### ***Level of Significance***

Impacts would be less than significant.

### **Impact 4.14-3: The project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

During construction, the proposed project would require the delivery of heavy construction equipment and PV solar components using area roadways, some of which may require transport by oversize vehicles. Heavy equipment associated with these components would not be hauled to/from the site daily, but rather would be hauled in and out on an as-needed basis. Nevertheless, the use of oversize vehicles during construction can create a hazard to the public by limiting motorist views on roadways and by the obstruction of space, which is considered a potentially significant impact. Mitigation Measure MM 4.14-1 would require that all oversize vehicles used on public roadways during construction obtain required permits, require approval of a Construction Traffic Control Plan, and would require identification of anticipated

construction delivery times and vehicle travel routes in advance to minimize construction traffic during AM and PM peak hours. This would ensure that construction-related oversize vehicle loads adhere to applicable California Vehicle Code sections and California Street and Highway Codes applicable to licensing, size, weight, load, and roadway encroachment of construction vehicles. Therefore, with the implementation of Mitigation Measure MM 4.14-1, the proposed project would not substantially increase hazards due to a design feature or incompatible use. Impacts during construction would be reduced to less than significant.

If 120th Street West is used as a secondary access route, portions of this road may require additional improvements near Avenue of the Stars; however, 120th Street West was recently graded and widened in association with other nearby solar projects. In addition, a 20-foot-wide–minimum road would be required around the perimeter of the solar arrays for the fire department and emergency vehicles. Additional internal maintenance roads would be located throughout the project site. Spacing between each row would depend on final panel type, orientation, and any Kern County regulations. Internal access roads would be up to 20 feet wide and would be cleared and compacted for equipment and emergency vehicle travel and access to the solar blocks.

The proposed project would not include a design feature or utilize vehicles with incompatible uses that would create a hazard on the roadways surrounding the project site. Chain-link security fencing would be installed around the perimeter of the facilities and other areas requiring controlled access, prior to commencement of construction, to restrict public access during construction and operations. Additionally, the proposed project would not include the development of sharp curves, dangerous intersections or other hazardous design features. The proposed project would be set back from the roadways as required by Kern County Zoning Ordinance. Additionally, the need for and number of escorts, California Highway Patrol escorts, as well as the timing of transport, would be at the discretion of Caltrans and Kern County, and would be detailed in respective oversize load permits. Thus, potential impacts would be reduced to a less than significant level.

### ***Mitigation Measures***

**MM 4.14-1:** Prior to the issuance of construction or building permits for the Facility, the Project Proponent/operator shall:

- a. Prepare and submit a Construction Traffic Control Plan to Kern County Public Works Department-Development Review and the California Department of Transportation offices for District 6 & 9, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following issues:
  1. Timing of deliveries of heavy equipment and building materials. To the extent feasible, restrict deliveries and vendor vehicle arrivals and departures during either the AM and PM peak periods;
  2. Directing construction traffic with flaggers along the Rosamond Corridor;
  3. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;
  4. Ensuring access for emergency vehicles to the project sites;

5. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections;
  6. Maintaining access to adjacent property;
  7. Specifying both construction-related vehicle travel and oversize load haul routes and avoiding residential neighborhoods to the maximum extent feasible; and
  8. Consult with the County to develop coordinated plans that would address construction-related vehicle routing and detours adjacent to the construction area for the duration of construction overlap with neighboring projects. Key coordination meetings would be held jointly between applicants and contractors of other projects for which the County determines impacts could overlap.
- b. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the Kern County Planning and Natural Resources Department, the Kern County Public Works Department-Development Review, and Caltrans.
  - c. Enter into a secured agreement with Kern County to ensure that any County roads that are demonstrably damaged by project-related activities are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the State and/or Kern County.
  - d. Submit documentation that identifies the roads to be used during construction. The Project Proponent/operator shall be responsible for repairing any damage to non-county maintained roads that may result from construction activities. The Project Proponent/operator shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Kern County Public Work Department-Development Review and the Kern County Planning and Natural Resources Department.
  - e. Within 30 days of completion of construction, the Project Proponent/operator shall submit a post-construction video log and inspection report to the County. This information shall be submitted in DVD format. The County, in consultation with the Project Proponent/operator's engineer, shall determine the extent of remediation required, if any.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.14-1, impacts would be less than significant.

### **Impact 4.14-4: The project would result in inadequate emergency access.**

#### ***Construction***

Haul trips and equipment deliveries often use large trucks, which may temporarily cause hazards, such as sudden stops and queuing, on these roadways during delivery and removal. Construction contractors

would be required to comply with all Kern County standard conditions pertaining to construction including work hours, haul route, and access. However, this impact would be potentially significant. Implementation of Mitigation Measure MM 4.14-1 would be required to ensure adequate emergency access during construction.

### ***Operation***

Development of the project site would not alter emergency response routes or plans set in place by the County. The project driveways would be designed to comply with turning radius requirements for emergency vehicles and would not cause hazardous driving conditions. The proposed project's detailed design would be completed in compliance with California Fire Code requirements and not impair emergency vehicle access in the vicinity of the proposed project during construction and in ongoing operation. Compliance with the California Fire and Building Codes will be mandated through the plan check and approval process. This process would also ensure that adequate access for emergency services is provided, and the County's emergency response plan would be upheld during construction.

As described above, increased project-related traffic would not cause a significant increase in congestion and would not significantly worsen the existing service levels at intersections on area roads; therefore, project-related traffic would not affect emergency access to the project site or any other surrounding location. The proposed project would not require closures of public roads, which could inhibit access by emergency vehicles. Therefore, impacts associated with operational emergency access would be less than significant.

### ***Mitigation Measures***

Implement Mitigation Measures MM 4.14-1 would be required.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.14-1, impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

Cumulative impacts from the proposed project, when considered with nearby, reasonably foreseeable planned projects, would occur only during project construction because project operation traffic would be very minimal. Additionally, the potential for cumulative construction impacts exists where there are multiple projects proposed in an area that have overlapping construction schedules that could affect similar resources. As stated above in the evaluation of operational impacts, there would be minimal trip generation once construction activities have concluded. Therefore, operation of the proposed project would result in less than significant cumulative impacts.

To determine cumulative project traffic, trip generation was completed for four of the six projects on the cumulative projects list. These four cumulative projects were included due to their proximity to the project and the use of the study area intersections. The Raceway Solar project was excluded from cumulative projects analysis because the estimated date of completion does not overlap with the construction of Bullhead Solar. Additionally, the Gem Energy Storage Project and the Bakersfield to Palmdale Section of the California High Speed Rail Authority are in the planning and permitting phases and have not yet started

construction. The finalized trip generation traffic was then distributed over the five project intersections. Based on the locations and types of projects provided in the cumulative list, resultant peak-hour turning-movement volumes were added to the 2026 volumes to account for these cumulative impacts.

**Roadway Capacity**

**Table 4.14-8, Intersection Level of Service PM Peak Hour Road Segment Analysis – Construction Traffic**, contains roadway ADT and analysis results for roadway segments in the vicinity of the proposed project. A volume-to-capacity ratio (v/c) of greater than 0.80 corresponds to a LOS of less than C, as defined in the *Highway Capacity Manual*. The same guidelines used for intersection analysis from the Caltrans guidelines were used to determine the extent of the roadway study area for this analysis. Four road segments were evaluated, as listed in **Table 4.14-8**. The projected volumes, ADTs, and v/c ratios for the four traffic scenarios are also provided in **Table 4.14-8** and represent construction traffic only.

**TABLE 4.14-8 INTERSECTION LEVEL OF SERVICE PM PEAK HOUR ROAD SEGMENT ANALYSIS – CONSTRUCTION TRAFFIC**

Road Segment	2022 <sup>1</sup>	Project ADT	Cumu-lative <sup>2</sup> ADT	2022 + Project	2026 Cumu-lative <sup>2</sup>	2026 Cumu-lative <sup>2</sup> + Project ADT	Existing Capacity	v/c 2022	v/c 2022 + Project	v/c Cumu-lative <sup>2</sup> 2026	v/c Cumu-lative <sup>2</sup> 2026 + Project
Tehachapi–Willow Springs Rd: Hamilton Rd to Rosamond Blvd	2,411	1,114	155	3,525	2,615	3,729	15,000	0.16	0.24	0.17	0.25
Rosamond Blvd: 170th St W to 130th St W	2,776	289	163	3,065	3,857	4,146	15,000	0.19	0.20	0.26	0.28
Rosamond Blvd: 130th St W to 90th St W	2,311	825	387	3,136	3,043	3,868	15,000	0.15	0.21	0.20	0.26
Rosamond Blvd: 90th St W – SR 14	5,731	825	592	6,556	6,822	7,647	15,000	0.38	0.44	0.45	0.51

Source: Ruetters & Schuler, 2023 (Appendix M)

<sup>1</sup> 2022 Data not available. Traffic grown out from most recent year available.

<sup>2</sup> Cum = Other project traffic added to future background volumes.



All roadway segments within the project study area are projected to operate within acceptable levels of service under existing-year conditions (2022) and are projected to continue to do so with the addition of cumulative and project construction traffic in 2026.

The proposed project would not include a design feature or use vehicles with incompatible uses that would create a hazard on the surrounding roadways with implementation of mitigation measures. Furthermore, implementation of mitigation measures would ensure the proposed project's contribution to emergency access and design hazards are reduced to a less than cumulatively considerable level.

### ***Mitigation Measures***

Implement Mitigation Measure 4.14-1.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.14-1, cumulative impacts would be less than significant.

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### **4.15.1 Introduction**

This section of the Environmental Impact Report (EIR) provides an assessment of potential impacts related to tribal cultural resources that could result from implementation of the proposed project. The analysis in this section is based on the results of the Native American consultation conducted by the County for purposes of compliance with Senate Bill 18 (SB 18) and CEQA requirements prompted by Assembly Bill 52 (AB 52), located in **Appendix F.1** and **Appendix F.2** of this EIR.

This section is also primarily based on the cultural resources technical reports prepared by ICF. The *Phase I Cultural Resources Technical Report* (**Appendix F.1**) details the results of a cultural resources records search and field survey of the project site and the *Phase II Cultural Resources Technical Report* (**Appendix F.2**), presents the results of testing and significance evaluation at the sites within the project site. Due to the confidential nature of the location of tribal cultural resources, information regarding location of cultural resources has been redacted from the report and is not included in the EIR.

### **4.15.2 Environmental Setting**

Refer to Section 4.5, *Cultural Resources*, of this EIR for additional information regarding the tribal cultural resources environmental setting, such as ethnographic and prehistory information.

## **Existing Tribal Cultural Resources**

### **Native American Outreach**

In accordance with Public Resources Code Section 21080.3.1(d), a lead agency is required to provide formal notification of intended development projects to Native American tribes that have requested to be on the lead agency's list for receiving such notification. The formal notification is required to include a brief description of the proposed project and its location, lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation regarding potential impacts to tribal cultural resources.

As part of the Phase I Cultural Resources Study, on February 17, 2021, a Sacred Lands File search from the Native American Heritage Commission (NAHC) was requested to determine if there are Native American cultural resources within and near the project site. The NAHC responded on March 12, 2021, stating that the Sacred Lands File search found no Native American cultural resources in the within or within the immediate vicinity of the project site. The NAHC also provided a list of 20 Native American groups and individuals who may have knowledge of cultural resources in the study area. On April 27, 2021, letters were mailed to each of the contacts, identifying the project location and requesting input. As of July 25, 2021, three responses were received. Shana Powers, Cultural Director of the Santa Rosa Rancheria Tachi Yokut, responded by email that the project site is outside the tribe's area of concern and recommended contacting the Tejon Indian Tribe or another local tribe. Jill McCormick, Historic Preservation Officer for

the Quechan Indian Tribe, responded via email on May 4, 2021, that the tribe has no comments and defers to more local tribes. A follow-up email with project information was sent to the Tejon Indian Tribe on July 7, 2021. Ryan Nordness, Cultural Resources Analyst for the San Manuel Band of Mission Indians, stated that the project site exists within Serrano ancestral territory and is therefore of interest to the tribe. However, due to the nature and location of the proposed project and given the Cultural Resources Management department's present state of knowledge, San Manuel Band of Mission Indians does not have any concerns with the project's implementation, as planned, at the time of this report. The tribe also provided cultural resources and tribal cultural resources mitigation measures that they requested be included as part of the proposed project and its permits or plans (Appendix F.1).

## Native American SB 18 and AB 52 Consultation

As part of the County's government-to-government responsibilities pursuant to AB 52 and Senate Bill (SB) 18, the County submitted a Local Government Tribal Consultation List Request to the NAHC. The NAHC responded on May 14, 2022 with a tribal consultation list. The County sent consultation notification letters via certified mail to four California Native American tribal contacts on the County's Master List for AB 52 consultation. Similarly, as part of the County's government-to-government consultation responsibilities pursuant to both SB 18 and AB 52, on June 17, 2022, the County sent outreach letters via certified mail to 11 California Native American tribal contacts identified by the NAHC. Results of the outreach are shown in **Table 4.15-1, AB 52 and SB 18 Native American Consultation**. To date, one response has been received Ryan Nordness, Cultural Resources Analyst for the San Manuel Band of Mission Indians (San Manuel), requesting that the provided mitigation measures be included as part of the proposed project. The correspondence between the County and San Manuel is summarized below following **Table 4.15-1, B 52 and SB 18 Native American Consultation**.

**TABLE 4.15-1: AB 52 AND SB 18 NATIVE AMERICAN CONSULTATION**

Contact	Tribe	Legal Requirement	Date of Letter	Response
James Rambeau, Chairperson	Big Pine Paiute Tribe of the Owens Valley	SB 18	June 22, 2022	No response
Danelle Gutierrez, Tribal Historic Preservation Officer	Big Pine Paiute Tribe of the Owens Valley	SB 18 and AB 52	June 22, 2022	No response
Sally Manning, Environmental Director	Big Pine Paiute Tribe of the Owens Valley	SB 18	June 22, 2022	No response
Robert Robinson, Chairperson	Kern Valley Indian Community	SB 18	June 17, 2022	No response
Delia Dominguez, Chairperson	Kitanemuk and Yowlumne Tejon Indians	SB 18	June 17, 2022	No response
Donna Yocum, Chairperson	San Fernando Band of Mission Indians	SB 18	June 17, 2022	No response
Jessica Mauck, Director of Cultural Resources	San Manuel Band of Mission Indians	SB 18 and AB 52	June 17, 2022	No response

**TABLE 4.15-1: AB 52 AND SB 18 NATIVE AMERICAN CONSULTATION**

<b>Contact</b>	<b>Tribe</b>	<b>Legal Requirement</b>	<b>Date of Letter</b>	<b>Response</b>
Ryan Nordness, Cultural Resources Analyst	San Manuel Band of Mission Indians	AB 52	March 10, 2022	Responded on April 18, 2022. Provided cultural resources and tribal cultural resources mitigation measures requested be included as part of the proposed project.
Octavio Escobedo, Chairperson	Tejon Indian Tribe	SB 18 and AB 52	June 17, 2022	No response
Colin Rambo	Tejon Indian Tribe	SB 18 and AB 52	June 17, 2022	No response
Darrell Mike, Tribal Chairman	Twenty-Nine Palms Band of Mission Indians	AB 52	March 10, 2022	No response
Anthony Madrigal Jr., Tribal Grants Administrator	Twenty-Nine Palms Band of Mission Indians	AB 52	March 10, 2022	No response
Michael Mirelez, Cultural Resources Coordinator	Torres Martinez Desert Cahuilla Indians	AB 52	March 10, 2022	No response
Neil Peyron, Chairperson	Tule River Indian Tribe	SB 18 and AB 52	August 16, 2018	No response

In an email dated April 18, 2022 Ryan Nordness, Cultural Analyst for the San Manuel, replied to the County's SB 18 and AB 52 consultation notifications stating the project is located in San Manuel ancestral territory. In that email, San Manuel requested the following for review upon availability, if required for the project:

- Cultural report
- Geotechnical report
- Project plans showing the vertical extent of proposed disturbance

In response, the County subsequently sent the following information to San Manuel on April 26, 2022:

- Geology and Soils Technical Report
- Bullhead Solar Panel Figures
- Phase I Cultural Resources Technical Report
- Phase II Cultural Resources Technical Report

Refer to Section 4.5, *Cultural Resources*, for a discussion of impacts to archaeological resources and a list of mitigation measures.

## 4.15.3 Regulatory Setting

### Federal

There are no applicable federal regulations for this issue area.

### State

#### Native American Heritage Commission

Public Resources Code (PRC) Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

#### Assembly Bill 52 and Related Public Resources Code Sections

AB 52 was approved by California State Governor Edmund Gerry “Jerry” Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR) or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the *CEQA Guidelines*, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a proposed project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the proposed project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency’s formal notification and the lead agency must begin consultation within 30 days of receiving the tribe’s request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the

project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is 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 without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information 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.

## Senate Bill 18

Senate Bill 18 (SB 18) (Statutes of 2004, Chapter 905), which went into effect January 1, 2005, requires local governments (city and county) to consult with Native American tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to “provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places” (OPR, 2005).

The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use designations are made by a local government. The consultation requirements of SB 18 apply to general plan or specific plan processes proposed on or after March 1, 2005.

According to the *Tribal Consultation Guidelines: Supplement to General Plan Guidelines* (OPR, 2005), the following are the contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.

- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).

## Local

There are no applicable local regulations for this issue area.

## 4.15.4 Impacts and Mitigation Measures

### Methodology

The proposed project's potential impacts to tribal cultural resources have been evaluated using a variety of resources, including a Sacred Lands File search conducted by the NAHC. SB 18 and AB 52 notification letters were sent to Native American groups and individuals indicated by the NAHC to solicit information regarding the presence of tribal cultural resources. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

### 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 on tribal cultural resources.

A project would have a significant impact on tribal cultural resources if it would:

- 1) 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:
  - a) 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
  - b) 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.



## Project Impacts

**Impact 4.15-1a: The project would 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 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).**

The SLF searches conducted by the NAHC did not indicate the presence of tribal cultural resources within or immediately adjacent to the project site. As a result of Native American outreach conducted during the preparation of the cultural resources studies, Ryan Nordness, Cultural Resources Analyst for the San Manuel, stated that the project site exists within Serrano ancestral territory. However, due to the nature and location of the proposed project and given the Cultural Resources Management department's present state of knowledge, San Manuel does not have any concerns with the proposed project's implementation, as planned, at the time of this report. The tribe also provided recommendations for mitigation measures that were considered in the preparation of this EIR. As a result of AB 52 and SB 18 consultation, San Manuel responded on April 18, 2022 with a request for project information including cultural resources technical reports, geotechnical reports, and project plans. The County submitted these reports and data on April 26, 2022. No further comments from San Manuel were received as of the date of this report. The County's government-to-government consultation efforts conducted pursuant to SB 18 and AB 52 did not result in the identification of known tribal cultural resources within the project Site. Refer to **Section 4.5, *Cultural Resources***, in this EIR, for a discussion of impacts to archaeological resources and a list of mitigation measures.

Based on the lack of identified tribal cultural resources within the project site, there is no potential for ground-disturbing activities associated with the proposed project to result a substantial adverse change in the significance of a known tribal cultural resource as defined in PRC Section 21074. However, given the extent of ground-disturbing activities proposed, known archaeological sites in the vicinity, and the historical use of the area by tribes, there is the potential for unknown and/or buried tribal cultural resources to be encountered during project construction activities. Should such resources be determined to be eligible for listing in the California Register of Historical Resources, the proposed project would result in significant impacts related to the substantial adverse change in the significance of tribal cultural resources. Mitigation Measures MM 4.5-1 through MM 4.5-5 would reduce the proposed project's impacts to less than significant.

### ***Mitigation Measures***

Implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5 would be required, (see Section 4.5, *Cultural Resources*), in this EIR, for full text of mitigation measures.

### ***Level of Significance***

With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5, impacts would be less than significant.

**Impact 4.15-1b: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources 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 that is 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.**

As noted above, no tribal cultural resources were identified through the Sacred Lands File search conducted by the NAHC, or as part of the County's government-to-government notification and consultation efforts pursuant to SB 18 and AB 52. Given that no tribal cultural resources have been identified within or immediately adjacent to the project site, the proposed project would not cause a substantial adverse change in the significance of a known significant tribal cultural resource. However, given the extent of ground-disturbing activities proposed, the known archaeological resources within and near the project site, and the historical use of the area, there is the potential for unknown and/or buried resources, that may be determined to be tribal cultural resources, to be encountered during proposed project construction. Should such resources be determined by the Tribe(s) and/or the lead agency to be significant through its discretion, the proposed project could result in significant impacts related to the substantial adverse change in the significance of tribal cultural resources. Implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5 would reduce the proposed project's impacts.

### ***Mitigation Measures***

Implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5 would be required, see Section 4.5, *Cultural Resources*, in this EIR, for full text of mitigation measures.

### ***Level of Significance***

With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5, impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

An analysis of cumulative impacts takes into consideration the entirety of impacts that the proposed project discussed in **Chapter 3, Project Description**, of this EIR, would have on tribal cultural resources. The geographic area of analysis for tribal cultural resources includes the western Antelope Valley. This geographic scope of analysis is appropriate because the resources within this area are expected to be similar

to those that occur on the project area because of their proximity, their similarities in environments and landforms, and their location within the same Native American tribal territories. This is a large enough area to encompass any effects of the proposed project on tribal cultural resources that may combine with similar effects caused by other projects, and provides a reasonable context wherein cumulative actions could affect tribal cultural resources.

Multiple projects, including solar energy production facilities, are proposed throughout the Antelope Valley. Cumulative impacts to tribal cultural resources in the Antelope Valley could occur if other related projects, in conjunction with the proposed project, had or would have impacts on cultural resources that, when considered together, would be significant.

Potential impacts of the proposed project to tribal cultural resources, in combination with other projects in the area, could contribute to a cumulatively significant impact due to the overall loss of resources unique to the region. As discussed above there were no known or identified tribal cultural resources on the project site. With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5, no tribal cultural resources are anticipated to be impacted as a result of project implementation and the proposed project would not have a cumulatively considerable contribution to impacts to tribal cultural resources.

### ***Mitigation Measures***

Implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5 would be required, see Section 4.5, *Cultural Resources*, in this EIR, for full text of mitigation measures.

### ***Level of Significance***

With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-5, cumulative impacts would be less than significant.

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### **4.16.1 Introduction**

This section of the Environmental Impact Report describes the affected environment and regulatory setting of the proposed project pertaining to demand for operational utilities (water supply, stormwater, electricity, natural gas, telecommunications, and solid waste disposal). This section describes existing infrastructure and levels of service and evaluates whether any improvements would be necessary to accommodate the proposed project. The information and analysis in this section is based on multiple online sources and published documents, as well as the technical documents prepared by ICF for the proposed project including the *Energy Memo*, **Appendix G**, the *Hydrology Assessment Technical Report*, **Appendix K**, and the *Water Supply Assessment*, **Appendix L**, incorporated by reference and provided as part of this EIR.

### **4.16.2 Environmental Setting**

#### **Water Supply**

There are typically three sources of water supply for development: (1) natural sources; (2) manmade sources; and (3) reclamation. Natural sources include rivers, lakes, streams, and groundwater stored in aquifers. Manmade sources include runoff water that is treated and stored in reservoirs and other catchment structures. Reclaimed water is wastewater that has been conveyed to a treatment plant and then treated to a sufficient degree that it may again be used for certain uses, such as irrigation. However, reclaimed water is not potable (drinkable) and must be conveyed in a separate system in order to ensure that there is no possibility of direct human consumption.

The proposed project is located on approximately 1,343 acres of privately owned land located in southern Kern County. The project site lies within the Antelope Valley-East Kern Water Agency (AVEK) service area. AVEK serves an area of approximately 2,400 square miles in northern Los Angeles and eastern Kern Counties, as well as a small portion of Ventura County. AVEK also provides a small amount of water to areas outside of the Antelope Valley.

Other water agencies in the vicinity of the project site include the Rosamond Community Services District (RCSD) and the Los Angeles County Waterworks District (LACWD) 40. LACWD 40 and RCSD purchase surface water from AVEK and obtain groundwater from the Antelope Valley Groundwater Basin (AVGWB) based on their adjudicated production rights. Water supplies to the project site could be provided by RCSD. Water supplies from RCSD could be obtained from one of two hydrants approximately 7 miles from the project site and trucked in by water tanker.

In addition, Mutual Water Companies, including the Sundale Mutual Water Company and the Land Projects Mutual Water Company, are less than 5 miles and 6 miles south from the project site. Mutual water companies provide water service in rural areas that have no alternative supplies. Much, but not all, of the water provided by these agencies is purchased from AVEK.

## Groundwater Supply

The project site is in the South Lahontan Hydrologic Region, and specifically within the Antelope Valley Groundwater Basin (AVGWB) which is primarily fed from runoff from Big Rock Creek, Little Rock Creek, and Oak Creek. Total water storage within the AVGWB is reported to be in the range of 68 million to 70 million acre-feet (AF). AVGWB covers about 940 square miles and is separated from the northern part of the Antelope Valley by faults and low-lying hills (USGS, 2014). Groundwater has been and is an important resource within the Antelope Valley given limits on the available local and imported surface water supply. One fundamental challenge in the Antelope Valley Region is that demand for water exceeds available supplies in future average and dry years. The historical declines in groundwater levels within the Antelope Valley Region have caused permanent damage to aquifers in some areas through land subsidence (Antelope Valley IRWMP, 2019). For a discussion of AVGWB characteristics, please refer to Section 4.10, *Hydrology and Water Quality*, of this EIR.

### Groundwater Wells

The project site includes six wells as shown in **Figure 4.16-1, Local Water Resources**. Well DW245 is an approximately 960-foot-deep irrigation well. U.S. Geological Survey groundwater monitoring in March 2021 indicated a groundwater depth of 198.56 feet below ground surface in DW245. It is unknown if the privately owned irrigation well could be utilized as a source of project water and historical production data for this well were not available, but a constant-rate pumping test following the completion of the well in April 2008 indicated an estimated yield of 170 gallons per minute (gpm). The constant-rate pumping test was 5 hours long and resulted in drawdown of 492 feet within the 960-foot well. Five additional groundwater wells are also on the project site, on the former Miner residence property, known collectively for this analysis as the “Miner Groundwater Wells.” They were previously associated with adjudicated water rights held by the former landowner for production from the underlying Antelope Valley Groundwater Basin. Historical production and pump test data could not be obtained for these wells.

## Groundwater Basin Adjudication

Prior to the Sustainable Groundwater Management Act (SGMA), the primary method for solving groundwater disputes and protecting groundwater basins was litigation. When over-pumping led to a crisis like seawater intrusion or chronic overdraft, people had little choice but to file a lawsuit—called an adjudication—in which all rights to water in a groundwater basin could be defined by a court. SGMA now ensures that groundwater basins can be managed sustainably through local management plans. In October 2015, Governor Brown signed Assembly Bill No. 1390, which is legislation that provides a comprehensive adjudication process for all groundwater basins that are regulated under the SGMA. Groundwater basins that have been adjudicated by court decision are subject to management by a court-approved Watermaster.

A groundwater rights adjudication process has been underway for over 15 years to manage the AVGWB through the Antelope Valley Integrated Regional Water Management (AVIRWM) Plan, which is applicable to the project site. The case defines who controls and uses the water in the basin (AVT, 2015).

In May 2011, the California Superior Court issued an official decision determining that the AVGWB adjudication area is in a state of overdraft and establishing a safe yield for the basin of 110,000 acre-feet per year (AFY) (AVEK, 2016; Antelope Valley Watermaster, 2022).

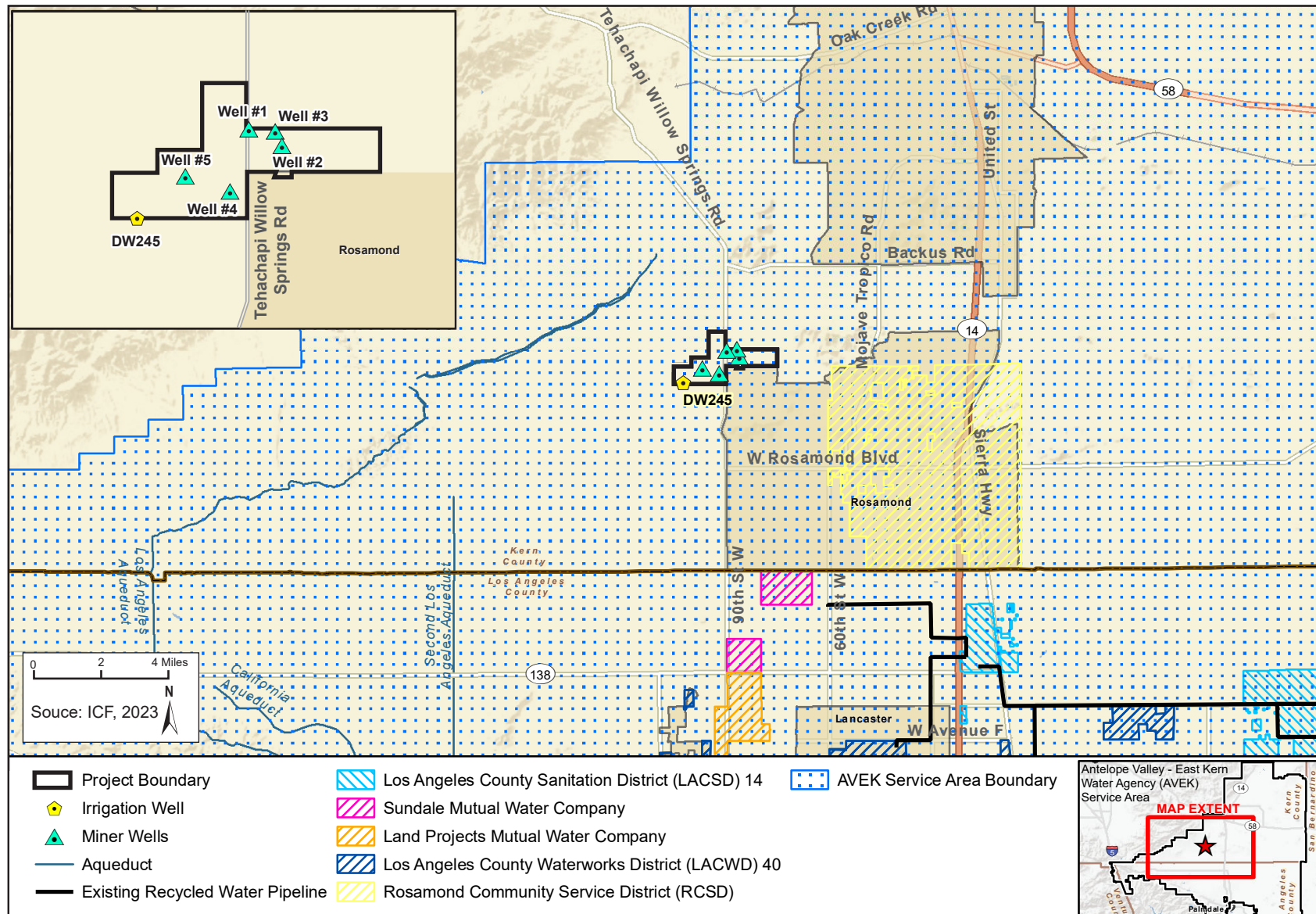


Figure 4.16-1: LOCAL WATER RESOURCES

On December 23, 2015, a final judgment was issued which set in motion court-directed procedures for the Directors of the AVEK to create a Watermaster organization empowered to monitor the AVGWB groundwater basin. In their first meeting of the year following settlement of long-running litigation over water rights adjudication, AVEK, as directed by the court, took action to begin the Watermaster transition process. The judgment specifies that the Watermaster board be made up of five members, including a representative from AVEK and the Los Angeles County Waterworks District 40. The Watermaster board was also tasked with arriving at a unanimous decision on a Watermaster engineer. Todd Groundwater was selected as the Watermaster engineer in April 2017 and will assign pumping allocations per user that will be metered and monitored on an annual basis.

A native safe yield of 82,300 AF per year was established by the court for the Antelope Valley Area of Adjudication, and the adjudication parties were divided into various classes to establish respective water rights among groundwater producers. To achieve sustainable groundwater elevations, groundwater production was reduced (i.e., ramped down) over a 7-year period (2016–2022) to a final Production Right.

## Wastewater

The project site supported agricultural uses on approximately 380 acres until 2018, with the remaining lands undeveloped. There is no connection to a public sewer system on the project site. There are also no septic systems on the project site.

## Stormwater Drainage

As described in **Section 4.10, *Hydrology and Water Quality***, of this EIR, the project site is on generally undeveloped former farmland, naturally vegetated land, and disturbed or vacant land. The existing impervious surface area is well under 1 percent. The project site has no existing stormwater infrastructure.

The project site is in the South Lahontan Hydrologic Region, and specifically within the Antelope–Fremont Valley watershed. The Gen-tie Options 1 through 3, solar array, substation, battery complex, and associated equipment would be located in the Tropico Hill–Oak Creek subwatershed. Gen-tie Option 4 would traverse from the Tropico Hill–Oak Creek subwatershed into Cottonwood Creek–Tylerhorse Canyon and Sacatara Creek–Kings Canyon subwatersheds. The total drainage area of the Tropico Hill–Oak Creek watershed is approximately 100,140 acres.

The watersheds are closed drainages inside the Antelope Valley; therefore, there is no connection to the ocean, and any precipitation or surface water is transferred via ephemeral streams to existing playas. The closest playa to the project site is Rosamond Lake approximately 10 miles southeast. Most rainfall rapidly infiltrates into the surrounding soils.

## Solid Waste

Solid waste generally refers to garbage, refuse, sludge, and other discarded solid materials that come from residential, industrial, and commercial activities. Construction, demolition, and inert wastes are also classified as solid waste. Such wastes include nonhazardous building materials such as asphalt, concrete, brick, drywall, fencing, metal, packing materials, pallets, pipe, and wood. The general waste classifications used for California waste management units, facilities, and disposal sites are outlined below. Nonhazardous solid waste consists of organic and nonorganic solid, semi-solid, and liquid wastes, including garbage, trash,



refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, and other discarded waste, provided that such wastes do not contain hazardous materials or soluble pollutants in concentrations that would exceed applicable water quality objectives or cause a degradation of waters of the State.

California State law regulates the types of waste that can be disposed of at the different classes of landfills. Class I landfills may accept hazardous and nonhazardous wastes. Class II landfills may accept designated and nonhazardous wastes, and Class III landfills may accept nonhazardous wastes.

Kern County is responsible for meeting the California Integrated Waste Management Act of 1989 (AB 939). AB 939 required cities and counties to reduce the amount of solid waste being sent to landfills by 50 percent by January 1, 2000. It also required cities and counties to prepare solid waste planning documents. These documents include the Source Reduction and Recycling Element (SRRE), the Hazardous Waste Element (HHWE), and the Nondisposal Facility Element (NDFE). All three of these documents, as well as the Integrated Waste Management Plan, approved February 1998 by the California Integrated Waste Management Board, have been approved for Kern County. The Kern County Integrated Waste Management Plan is the long-range planning document for landfill facilities.

Construction and demolition (C&D) waste is heavy, inert material. This material creates significant problems when disposed of in landfills. Because C&D waste is heavier than paper and plastic, it is more difficult for counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste has been specifically targeted by the State of California for diversion from the waste stream. Projects that generate C&D waste should emphasize deconstruction and diversion planning rather than demolition. Deconstruction is the planned, organized dismantling of a prior construction project, which allows maximum use of the deconstructed materials for recycling in other construction projects and sends a minimum amount of the deconstruction material to landfills.

## Landfills

The Kern County Public Works Department operates seven recycling and sanitary landfills throughout the County. Landfills are located in Bakersfield, Boron, Mojave-Rosamond, Ridgecrest, Shafter-Wasco, Taft, and Tehachapi (Kern County, 2023b). No solid waste is currently generated at the project site. The proposed project would likely be served primarily by the Mojave-Rosamond Landfill, located at 400 Silver Queen Road, in the community of Mojave, approximately 5.8 miles northeast of the project site. This Class III landfill accepts clean inert materials (e.g., source separated asphalt, brick and concrete); C&D waste (e.g., asphalt, brick, concrete, dirt, and metal); dead animals; electronic waste; greenwaste; ordinary household trash; tires; treated wood waste (e.g., grape stakes, utility poles; foundation lumber); and used motor oil. The landfill does not accept hazardous waste, hot ashes, liquids of any kind, and non-friable asbestos (Kern County Waste Management, 2019b). As of 2013, approximately 76,310,297 cubic yards (97.8 percent of the total 78,000,000 cubic yard capacity) remained. The permitted maximum daily disposal is 3,000 tons per day (CalRecycle, 2019). The Mojave-Rosamond Landfill is expected to operate until 2123.

## Electric Power, Natural Gas, and Telecommunications

Southern California Edison (SCE) has existing electrical and transmission facilities in the project area, including the SCE Tehachapi Renewable Transmission Project, SCE Whirlwind Substation, and SCE transmission line, which convey electricity from the renewable energy developments in the region.

Southern California Gas (SoCalGas) is the natural gas provider in this area of Kern County. No known natural gas pipelines or existing telecommunication facilities are located onsite. .

### **4.16.3 Regulatory Setting**

#### **Federal**

There are no applicable federal regulations for this issue area.

#### **State**

##### **California Energy Commission**

The California Energy Commission (CEC) is the state's primary energy policy and planning agency. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the state response to energy emergencies.

##### **California Public Utilities Commission**

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912, the Legislature passed the Public Utilities Act, expanding the Railroad Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Railroad Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

##### **California Department of Resources Recycling and Recovery**

California Department of Resources Recycling and Recovery (CalRecycle) is the state agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency. CalRecycle administers and provides oversight for all of California's State-managed non-hazardous waste handling and recycling program. CalRecycle provides training and ongoing support for local enforcement agencies that regulate and inspect California's active and closed solid waste landfills (CalRecycle, 2023).

##### **State Water Resources Control Board and Regional Water Quality**

###### **Control Board**

The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs). The

SWRCB sets statewide policy for the implementation of state and federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans), which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The project site is within the jurisdiction of the Lahontan RWQCB.

## **California Department of Water Resources**

The DWR is responsible for protecting, conserving, developing, and managing much of California's water supply. These duties include: preventing and responding to floods, droughts, and catastrophic events; informing and educating the public on water issues; developing scientific solutions; restoring habitats; planning for future water needs, climate change impacts, and flood protection; constructing and maintaining facilities; generating power; ensuring public safety; and providing recreational opportunities.

## **California Water Code Section 13260**

California Water Code Section 13260 requires any person who discharges waste, other than into a community sewer system, or proposes to discharge waste that could affect the quality of waters of the State to submit a report of waste discharge to the applicable Regional Water Quality Control Board (RWQCB). Any actions of the projects that would be applicable under California Water Code Section 13260 would be reported to the Lahontan RWQCB.

## **Senate Bills 610 and 221**

Senate Bill (SB) 610 and SB 221, passed in 2001, are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during normal, single and multiple dry years, presented in five-year increments for a 20-year projection. In accordance with these measures, a Water Supply Assessment (WSA) is required for a proposed industrial, manufacturing, or processing plant that would house more than 1,000 persons; occupy more than 40 acres of land; or have more than 650,000 square feet of floor area (California Water Code, Section 10912).

## **California Integrated Solid Waste Management Act of 1989 or Assembly Bill 939**

Pursuant to the California Integrated Solid Waste Management Act of 1989 (Public Resources Code [PRC] Section 40050, et seq.) or Assembly Bill (AB) 939, all cities in California are required to reduce the amount of solid waste disposed in landfills. AB 939 required a reduction of 25 percent by 1995 and 50 percent by 2000. Contracts that include work that will generate solid waste, including construction and demolition debris, have been targeted for participation in source-reduction, reuse, and recycling programs. The contractor is urged to manage solid waste generated by the work to divert waste from disposal in landfills (particularly Class III landfills) and maximize source reduction, reuse, and recycling of C&D debris.

## **Assembly Bill 341**

Since the passage of AB 939, diversion rates in California have been reduced to approximately 65 percent, the statewide recycling rate is approximately 50 percent, and the beverage container recycling rate is approximately 80 percent. In 2011, the State passed AB 341, which established a policy goal that a minimum of 75 percent of solid waste must be reduced, recycled, or composted by the year 2020. The State provided the following strategies to achieve that 75 percent goal:

1. Moving organics out of the landfill;
2. Expanding the recycling/manufacturing infrastructure;
3. Exploring new approaches for state and local funding of sustainable waste management programs;
4. Promoting state procurement of post-consumer recycled content products; and
5. Promoting extended producer responsibility.

To achieve these strategies, the State recommended legislative and regulatory changes including mandatory organics recycling, solid waste facility inspections, and revising packaging. With regard to construction and demolition, the State recommended an expansion of California Green Building Code standards that incentivize green building practices and increase diversion of recoverable construction and demolition materials. Current standards require 50 percent waste diversion on construction and some renovation projects, although this may be raised to 65 percent for nonresidential construction in upcoming changes to the standards. The State also recommends promotion of the recovery of construction and demolition materials suitable for reuse, compost or anaerobic digestion before residual wastes are considered for energy recovery.

## **California Solid Waste Reuse and Recycling Access Act of 1991 or Senate Bill 1327**

The California Solid Waste Reuse and Recycling Access Act of 1991 (PRC Chapter 18) identified a lack of adequate areas for collecting and loading recyclable materials, resulting in a significant impediment to diverting solid waste. This act requires state and local agencies to address access to solid waste for source reduction, recycling, and composting activities. Each local agency must adopt an ordinance related to adequate areas for collecting and loading recyclable materials for development projects.

## **Local**

### **Antelope Valley Integrated Regional Water Management Plan**

The Antelope Valley Integrated Regional Water Management (AVIRWM) Plan is a joint water planning effort aimed at ensuring water supply reliability for the Antelope Valley Region, undertaken by agencies which joined to form a Regional Water Management Group, including the following: AVEK Water Agency, Antelope Valley State Water Contractors Association, City of Lancaster, City of Palmdale, Littlerock Creek Irrigation District, Los Angeles County Sanitation District Nos. 14 and 20, Los Angeles County Waterworks District No. 40, Palmdale Water District, Quartz Hill Water District, and Rosamond Community Services District.

These agencies agreed to contribute funds to help develop the AVIRWM Plan, provide and share information, review and comment on drafts, adopt the final AVIRWM Plan, and assist in future grant applications for the priority projects identified in the Plan. In January 2007, the Regional Water Management Group (RWMG) have collectively defined a water resource management plan in the AVIRWM Plan, which describes a course of action to meet the expected demands for water within the entire Antelope Valley Region through 2035. In 2012, the RWMG developed an update to the AVIRWM Plan to incorporate changes to the Region's water resources that occurred since 2007. The AVIRWM Plan was revisited in 2017 and updated once again in two phases. The first phase revised the Plan to comply with the 2016 AVIRWM Grant Program Guidelines and the second phase (the 2019 AVIRWM Plan Update) conducted an extensive update of the AVIRWM Plan so that the Plan is reflective of the current conditions of the Region. The 2019 AVIRWM Plan Update extended the planning horizon through 2040. (Antelope Valley IRWMP, 2019).

The primary goals of the AVIRWM Plan are to address the following:

- How to reliably provide the quantity and quality of water that will be demanded by a growing population;
- Options to satisfy agricultural users' demand for reliable supplies of reasonable cost irrigation water; and
- Opportunities to protect, enhance, and manage current water resources and the environmental resources for human and natural benefit within the Antelope Valley Region (Antelope Valley IRWMP, 2019).

## **Antelope Valley Watermaster**

In accordance with the 2015 adjudication of the AVGWB establishing a safe yield and decreased respective water rights among groundwater producers, the Antelope Valley Watermaster Board and Advisory Committee were formed in 2016 (Antelope Valley Watermaster, 2023). The Antelope Valley Watermaster is responsible for administering adjudicated water rights within the Antelope Valley, including approving new production wells, collecting and reviewing groundwater production reporting forms, and producing annual reports summarizing overall groundwater production and replenishment in the Antelope Valley Groundwater Basin.

## **Kern County Integrated Waste Management Plan**

The Kern County Public Works Department (KCPWD) is required by the State to plan and implement waste management activities and programs in the County's unincorporated area to assure compliance with AB 939 and subsequent State mandates. The Kern County Integrated Waste Management Plan (IWMP) includes a Reduction and Recycling Element, Household Hazardous Waste Element, and Non-disposal Facility Element. The Plan was approved February 1998 by the California Integrated Waste Management Board (now California Department of Resources Recycling and Recovery or CalRecycle). The Kern County IWMP is the long-range planning document for landfill facilities.

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## **Kern County Construction Waste Diversion Requirements per the California Green Building Code**

As part of compliance with the State of California Green Building Code Requirements (known as CALGreen) that took effect beginning January 2011, Kern County implemented the following construction waste diversion requirements:

- Submittal of a Construction Waste Management Plan prior to project construction for approval by the Kern County Building Department;
- Recycling and/or reuse of a minimum 65 percent of construction & demolition waste; and
- Recycling or reuse of 100 percent of tree stumps, rocks and associated vegetation and soils resulting from land clearing (Kern County, 2023a).

## **Kern County Public Works Department Recycling Programs**

The Waste Operations Division of the Kern County Public Works Department administers or sponsors the following recycling programs, which contribute toward meeting State-mandated solid waste diversion goals to achieve 75 percent recycling, composting, or source reduction of solid waste by 2020:

- Recycling programs at landfills to recycle or divert a wide variety of products, such as wood waste, cathode ray tubes, tires, inert materials, appliances, etc.;
- Drop-off recycling centers for household recyclables. The County- and the City-operated drop-off recycling centers, which are located in the unincorporated metropolitan area and the city, may be used by both County and city residents;
- Financial assistance for operation of the City of Bakersfield Green Waste Facility;
- The Kern County Special Waste Facility for the disposal of household hazardous waste. Services are provided to all Kern County residents;
- Semi-annual “bulky waste” collection events, which are held in the Bakersfield area and available to both County and city residents (co-sponsor);
- Christmas tree recycling campaign (participates jointly with the City of Bakersfield);
- Telephone book recycling program (co-sponsors with Community Clean Sweep);
- Community Clean Sweep summer workshops called “Trash to Treasure,” which educate children about recycling and other Kern County Waste Management Department programs (sponsor);
- An innovative elementary school program called the “Clean Kids Hit the Road Puppet Show” (operates in collaboration with Community Clean Sweep); and
- Recycling trailers for churches, schools, and nonprofit organizations (Kern County, 2023b).

## **Kern County General Plan**

The policies, goals, and implementation measures in the Kern County General Plan for utilities and service systems applicable to the proposed project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific

to development such as the proposed project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

## **1.4 Public Facilities and Services**

### ***Goals***

- Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.
- Goal 5: Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.

### ***Policies***

- Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.
- Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the CEQA documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

### ***Implementation Measures***

- Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.
- Measure D: Involve utility providers in the land use and zoning review process.

## **1.9 Resources**

### ***Goal***

- Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

## **1.10 General Provisions**

### **1.10.1 Public Services and Facilities**

#### ***Policies***

- Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.
- Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents,

staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

### ***Implementation Measures***

Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.

Measure D: Involve utility providers in the land use and zoning review process.

Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the County's Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.

## ***Chapter 5. Energy Element***

### **5.4.5 Solar Energy Development**

#### ***Goal***

Goal 1: Encourage safe and orderly commercial solar development.

#### ***Policies***

Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.

Policy 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.

Policy 4: The County shall encourage solar development in the desert and valley regions previously disturbed, and discourage the development of energy projects on undisturbed land supporting state or federally protected plant and wildlife species.

## **Willow Springs Specific Plan**

The project site is subject to the provisions of the Willow Springs Specific Plan. The Willow Springs Specific Plan was adopted in April 2008 and contains goals, policies, and standards that are compatible



with those in the Kern County General Plan, but are unique to the specific needs of the Willow Springs Area. The utilities and service systems-related policies and measures contained in the Willow Springs Specific Plan that are applicable to the proposed project are outlined below. Note that only applicable goals, policies, and standards are included here; those goals, policies, and standards that are not applicable are not included.

### **Public Facilities**

#### **Policies**

- (1) New development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- (2) Operation of any solid waste facility shall comply with standards provided by the Kern County Solid Waste Management Plan.

#### **Mitigation/Implementation Measures**

- (2) Consideration shall be given to implementation of the following measure to reduce the impacts associated with solid waste generation:
  - a) Compacting refuse would substantially reduce the number of refuse hauling trips and allow for more effective and sanitary disposal.
  - b) Each project applicant shall comply with guidelines set forth by Kern County in accordance with AB 939 which mandates recycling programs for each jurisdiction in California and shall agree to be subject to universal collection for one- to four-unit residential projects and commercial.

### **Water Quality and Availability**

#### **Goal**

To ensure that new developments are provided with an adequate water supply and wastewater disposal/treatment facilities.

#### **Policies**

- (1) Water supply method and wastewater disposal/treatment facility shall be as required by Kern County.
- (2) Separate environmental documentation shall be required for the methods of water supply and wastewater disposal/treatment selected.

## **4.16.4 Impacts and Mitigation Measures**

### **Methodology**

Potential impacts to utilities and service systems associated with construction and operation of the proposed project have been evaluated using a variety of resources, including multiple online sources and published documents, as well as the project-specific *Energy Memo*, *Hydrology Assessment Technical Report* and the

*Water Supply Assessment* prepared by ICF, included in **Appendix G**, **Appendix K** and **Appendix L** of this EIR. In addition, current data obtained from the County and State of California about the capacity of landfills was used to identify potential impacts. Using these resources and professional judgment, impacts were analyzed according to significance criteria established in Appendix G of the *CEQA Guidelines*, described below.

## 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 on utilities and service systems.

A project could have a significant adverse effect on utilities and service systems if it would:

- 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;
- b. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;
- c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition the provider's existing commitments;
- d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals; or
- e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

## Project Impacts

**Impact 4.16-1: The project would 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.**

### Construction

#### *Water*

The majority of water use for the proposed project would occur during the initial 18-month construction phase. Construction activities for the proposed project are anticipated to require approximately 200 AF of water. Construction water needs would be for soil conditioning, dust suppression, fire water support, and other miscellaneous purposes. Water truck refilling stations (as required) would be established for dust control and other construction purposes. Daily water use would vary, depending on the weather conditions and time of year, both of which affect the need for dust control: hot, dry, windy conditions would require

greater amounts of water. Tanker trucks would apply water to construction areas to aid in road compaction and reduce construction-generated dust where needed (see **Appendix L** of this EIR).

Construction worker needs—including water for drinking and for sanitation facilities—would require a minimal amount of water. This water would be trucked in or delivered as bottled drinking water. A local sanitation company would provide and maintain appropriate construction sanitation facilities, including portable toilets and sinks, which would be placed at each staging area; additional facilities would be placed at specific construction locations, as necessary.

The water supply for the project during construction would be supplied from existing onsite well(s), which would be from the AVGWB – no new water wells would be needed. Groundwater from the AVGWB could be sourced using a completed Watermaster-approved purchase for the proposed project of 1 AF of permanent water production rights and 200 AF of carry-over water rights. Additionally, parcels that were purchased by the project applicant were entitled to produce groundwater from the AVGWB per the terms of the adjudication. The post-rampdown production rights were 999 AFY per the terms of the adjudication for the former landowner. Most of these water rights were severed from the purchased parcels by the former landowner; however, the project applicant has completed the transfer of a 3 AFY allotment from the former landowners' adjudicated water rights.

Additionally, RCSD obtains its supply through AVEK and groundwater extracted from the underlying AVGWB in accordance with its adjudicated production rights. RCSD anticipates that it will have an adequate supply to meet its increasing demand through 2045 in normal, single-dry, and multiple-dry years, assuming the availability of groundwater production rights, replenishment water, return flows, transferred production rights, and the ability of AVEK to deliver State Water Project (SWP) supplies. RCSD has historically conserved groundwater use during average years for additional pumping and availability in dry years to make up for decreased deliveries of imported surface water from the SWP. Furthermore, customer demand reduction during drought conditions would ensure reliable supply in the future. The proposed project's water requirements for construction represent approximately 5 percent of RCSD's projected available supply. Based on RCSD's available supply, it appears likely that it would not be able to support the full construction demands of the proposed project but rather supplement the onsite groundwater supply.

Furthermore, estimates of water demand for the former agricultural water use on the project site range from 450 AFY to 2,400 AFY, whereas the proposed project would use an estimated 133 AFY during the 18-month construction phase. This represents at least a 70 percent reduction from former uses. Additionally, the existing six wells onsite would be sufficient for use and no new wells or infrastructure would be necessary. Therefore, construction of the proposed project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

### ***Wastewater Treatment***

Construction of the proposed project would generate a minimal volume of wastewater. During construction activities, wastewater contained within portable toilet facilities and portable hand washing facilities would be disposed of at an approved offsite disposal site. The Kern County Public Health Services Department/Environmental Health Services Division is responsible for monitoring the use of portable toilet facilities, and the Project Proponent would be required to provide documentation of a portable toilet pumping contract. No offsite sewage or disposal connections to a municipal sewer system exist or are proposed. Therefore, construction of the proposed project would not require or result in the relocation or

construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

### ***Stormwater Drainage***

As discussed in Section 4.10, *Hydrology and Water Quality*, of this EIR, the proposed project would be required to adhere to Kern County Public Works Department storm water requirements, which include measures to address stormwater controls on both management of runoff volume and water quality, including controlling erosion and protection of water quality of stormwater runoff. Additionally, construction of the proposed project would disturb more than 1 acre and therefore is required to comply with the Kern County National Pollutant Discharge Elimination System (NPDES) program. The proposed project would design and submit a site-specific Storm Water Pollution Prevention Plan (SWPPP) to minimize the discharge of stormwater during construction per Mitigation Measure MM 4.10-1. Further, the hydrologic study and final drainage plan required by Mitigation Measure MM 4.10-2 would detail any necessary design features required to properly control stormwater runoff, both onsite and offsite.

Construction of the proposed project is not expected to exceed the capacity of existing storm water drainage systems in the area. Therefore, construction of the project is not anticipated to result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

### ***Electric Power***

Electricity is not expected to be consumed in large quantities during project construction, as construction equipment and vehicles are not electric (but rather diesel- or gasoline-powered). However, electricity is expected to be consumed from well-water pumping and for temporary construction offices during construction. Electricity for construction use would either be provided by diesel generators and/or a temporary SCE distribution line hookup would be installed on the project site. Because construction of the proposed project would not displace existing electrical facilities, and would tie into existing off-site facilities, relocation of electrical facilities would not be required. Therefore, as construction of the proposed project would not require or result in the relocation or construction of new or expanded electric power facilities, the construction or relocation of which could cause significant environmental effects, impacts would be less than significant.

### ***Natural Gas***

The proposed project would not use natural gas during the construction phase. Therefore, construction of the proposed project would not require or result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects. There would be no impact.

### ***Telecommunications***

One microwave/communication tower is proposed within the proposed substation, consisting of up to three 6-foot-high-performance microwave dish(es) fixed to a steel monopole of up to 90 feet in height. A separate Conditional Use Permit (CUP) would be required for the microwave tower. The proposed project radio equipment would be within an equipment shelter and connected to the microwave dish(es) via coaxial or fiber optic cables. If the microwave tower were to be outside the selected substation footprint, fencing

would consist of an up to 6-foot chain-link fence with up to three strands of barbed wire (up to 2 feet high), for a total maximum height of 8 feet. When considering impacts resulting from the installation of any required telecommunications infrastructure, all impacts are of a relatively short duration and would cease to occur when installation is complete. Any work that may affect services to the existing telecommunications lines would be coordinated with service providers. Therefore, construction of the proposed project would not require or result in the relocation or construction of new or expanded telecommunication facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

## **Operation**

### ***Water***

During the operations phase, the solar PV facility would require minimal water use, limited to occasional panel washing to increase average optical transmittance, as-needed dust control, and emergency fire suppression. Panel washing is expected once per year using the water from multiple loads carried by 5,000-gallon water trucks. The annual water consumption for facility operations, including periodic PV module washing, dust control, and fire suppression, is expected to be up to 11 AFY, which equates to approximately 385 AF over a 35-year period.

Similar to construction, the water supply for the proposed project during operation would be supplied either from existing onsite wells accessing AVGWB water, or the purchase of water from RCSD. The proposed project's water requirements for the operational phase represent approximately 0.5 percent of RCSD's projected available supply. Based on available supply per RCSD's 2020 UWMP, it appears likely that RCSD could support the operational phase demands of the proposed project. Water demand during the operational phase could also be supplemented by the applicant's procured adjudicated water production rights.

Estimates of water demand for the former agricultural water use on the project site compared to the proposed project's estimated 11 AFY during operational phase would result in at least a 98 percent reduction of water use during project operation. Therefore, operation of the proposed project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

### ***Wastewater***

The proposed project would not generate wastewater during the construction phase and would not require or result in the relocation or construction of new or expanded municipal wastewater facilities, and no connection to a public wastewater system is required or proposed. Wastewater generated during the construction phase would be accommodated in the adjacent previously approved BigBeau Solar O&M facility. There would be no impacts.

### ***Stormwater Drainage***

The project site is in an area with no existing or planned stormwater infrastructure. There are no existing stormwater drainage systems on the project site, and no stormwater drainage systems are proposed as part of the project.

Installation of the proposed facilities discussed in **Chapter 3, Project Description**, of this EIR, could alter existing on-site drainage patterns and flowpaths to some degree and could alter the way that stormwater from upgradient flows across the project site during major events. The proposed project would be required to adhere to Kern County Public Works Department storm water requirements, which include measures to address stormwater controls on both management of runoff volume and water quality, including controlling erosion and protection of water quality of stormwater runoff. The project site would include large pervious surfaces that would continue to absorb runoff, thus allowing infiltration of the runoff produced by the new minor impervious surfaces. The proposed project is not expected to exceed the capacity of existing storm water drainage systems in the area. Therefore, operation of the proposed project would not result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

### ***Electric Power***

Project operation would generate up to 270 megawatts (MW) of renewable electrical energy, with a Battery Energy Storage System (BESS) capable of storing approximately 270 MW, or 1,080 megawatt-hours (MWh) of energy. The proposed project would help to reduce or offset electricity on the statewide utility grid. Upon completion of construction and testing phases, the proposed project would be operated primarily during daylight hours, but also when the BESS is being dispatched. The proposed project would receive service power from SCE, whereas the substation control house would include a generator for emergency backup. Electricity consumption during operation is anticipated to be mainly from monitoring equipment and safety lighting and from providing backup power to the BESS. The proposed project is expected to use 39,822 kWh per year of electricity during the operational phase. Project operation would generate a combined annual total of approximately 870,000 MWh of renewable electrical energy including associated energy storage systems, that would help to reduce or offset electricity on the state-wide utility grid. The electricity use would be offset by the power produced by the solar panels. The proposed gen-tie would be designed to have adequate capacity to accept the renewable electric energy that would be generated by the proposed project. Therefore, operation of the proposed project would not require or result in the relocation or construction of new or expanded electric power facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

### ***Natural Gas***

The proposed project would not use natural gas during the operation phase. Therefore, operation of the proposed project would not require or result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects. There would be no impact.

### ***Telecommunications***

The proposed project would require telecommunication connections with multiple back-ups. The primary telecommunication line would consist of fiber optic cable and/or copper telecommunication line installed above and/or below ground. One microwave/communication tower would be located with the substation in one of three location options within the project site, consisting of up to three 6-foot-high-performance microwave dish(es) fixed to a steel monopole of up to 90 feet in height. An approximately 12-foot by 20-foot equipment shelter would also be included within a fenced area. The shelter would have a maximum height of 10 feet. The proposed project radio equipment would be within the equipment shelter and

connected to the microwave dish(es) via coaxial or fiber optic cables. Telecommunications facilities would be constructed in compliance with all relevant requirements and would be maintained throughout the lifetime of the proposed project.

Additional telecommunication demands for the operational phase of the proposed project are not expected to result in additional demand such that the construction of off-site facilities would be required. Therefore, operation of the proposed project would not require or result in the relocation or construction of new or expanded telecommunication facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant.

## Mitigation Measures

Implementation of Mitigation Measure MM 4.10-1 and MM 4.10-2 as provided in **Section 4.10, Hydrology and Water Quality**, of this EIR would be required.

### *Level of Significance after Mitigation*

With implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2, impacts would be less than significant.

### **Impact 4.16-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.**

Most of the water use for the proposed project would occur during the initial 18-month construction phase. Water would primarily be used for soil conditioning, dust suppression, fire water support, and other miscellaneous purposes. The estimated water use during the construction phase is approximately 200 AF.

The proposed project's operational water consumption is expected to be approximately 11 AF per year. The principal uses would be panel washing to increase average optical transmittance, water to aid in as-needed dust control, and water for fire suppression.

**Table 4.16-1, 20-Year Annual Project Water Supply Requirements**, identifies the proposed project's estimated annual water requirements over 20 years from the start of construction to satisfy the analysis time frame required under SB 610. The total forecasted project water use over 20 years is 404 AF. While the project is anticipated to have an approximately 35-year lifespan, a 20-year timeframe use used in the analysis based on requirements of SB 610 to assess water supply under normal year, single dry year, and multiple dry year conditions over a 20-year period.

**TABLE 4.16-1: 20-YEAR ANNUAL PROJECT WATER SUPPLY REQUIREMENTS**

Year	2024-2025	2025-2026	2027-2043
Acre-Feet Per Year	133	73 <sup>a</sup>	11 <sup>b</sup>
<b>Running Total (Acre-Feet)<sup>b</sup></b>	<b>133</b>	<b>211</b>	<b>400</b>

SOURCE: ICF, 2023.

<sup>a</sup> 67 AF for 6 months of construction and 5.5 AF for 6 months of operations.

<sup>b</sup> 11 AFY for 18 years.

As discussed in Impact 4.16-1 above, water supply for the proposed project during construction and operation would be supplied either from existing onsite wells or the purchase of water from RCSD. Groundwater from the AVGWB could be sourced from:

- A completed Watermaster-approved purchase for the proposed project of 1 AF of permanent water production rights and 200 AF of carry-over water rights. This water supply can be drawn by the project applicant from existing wells on the property.
- A 3 AFY pumper allotment from existing water wells onsite procured from the former landowners' adjudicated water rights.
- Water supply from RCSD obtained from AVEK and groundwater extracted from the underlying AVGWB in accordance with RCSD's adjudicated production rights.

RCSD has adequate supply to meet its increasing demand through 2045 in normal, single-dry, and multiple-dry years. The project's water requirements for construction and operation represent approximately 5 percent and less than 0.5 percent of RCSD's projected available supply. Based on the available supply per RCSD's 2020 UWMP it appears likely that RCSD would not be able to support the full construction demands of the proposed project but rather supplement the onsite groundwater supply. RCSD could support the operational phase demands of the proposed project. Water demand during the operational phase could also be supplemented by the applicant's procured adjudicated water production rights.

Long-term water demands for the proposed project would be relatively minor, with estimated water requirements substantially lower than the agricultural activities that formerly occurred at the project site. Estimates of water demand for agricultural use range from 450 AFY to 2,400 AFY, whereas the proposed project would use an estimated 133 AFY and 11 AFY during the construction and operations. This represents at least a 70-percent reduction during the construction phase and at least a 98-percent reduction during the operation phase compared to the estimated former agricultural demand.

Therefore, the proposed project would have sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts would be less than significant.

## Mitigation Measures

No mitigation measures would be required.

### *Level of Significance*

Impacts would be less than significant.

**Impact 4.16-3: The project would result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition the provider's existing commitments.**

No septic system or wastewater disposal is proposed for the proposed project; wastewater generated during the operations phase would be accommodated in the adjacent previously approved BigBeau Solar O&M



facility. Therefore, the proposed project would not adversely affect any existing wastewater treatment facilities. Impacts would be considered less than significant.

## Mitigation Measures

No mitigation measures would be required.

### *Level of Significance*

Impacts would be considered less than significant.

### **Impact 4.16-4: The project would 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.**

The proposed project is not expected to generate a significant amount of solid waste because of the small number of workers and the absence of activities that would generate wastes on an ongoing basis. 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. No C&D wastes would be generated as there is no demolition necessary. Impacts would be less than significant.

## Mitigation Measures

No mitigation measures would be required.

### *Level of Significance*

Impacts would be less than significant.

### **Impact 4.16-5: The project would comply with Federal, State, and Local management and reduction statutes and regulations related to solid waste.**

The proposed project would generate solid waste during construction, operation, and decommissioning. Common construction waste may include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste related to land development. AB 341 requires Kern County to attain a waste diversion goals of 75 percent by 2020 through reduction, recycling, or composting. In addition, as part of compliance with CALGreen requirements, Kern County implements the following construction waste diversion requirements:

- Submittal of a Construction Waste Management Plan;
- Recycle and/or reuse a minimum 65 percent C&D waste; and
- Recycle or reuse 100 percent of tree stumps, rocks, and associated vegetation and soils resulting from land clearing.

Furthermore, 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 project design. Implementation of Mitigation Measure MM 4.16-1 would ensure compliance with waste diversion

and recycling requirements by requiring recycling during construction, operation, and decommissioning of the proposed project. The proposed project would be required to comply with all federal, State, and local statutes and regulations related to the handling and disposal of solid waste. Therefore, implementation of the proposed project would result in less-than-significant impacts regarding compliance with management and reduction statutes and regulations related to solid waste.

## Mitigation Measures

- MM 4.16-1:** Prior to issuance of a grading or building permit, an onsite Waste Disposal and Recycling Coordinator shall be designated by the project proponent/operator to facilitate waste disposal and recycling as part of the Maintenance, Trash Abatement, and Pest Management Program. The provisions listed below shall apply to the project:
- a. The project proponent/operator shall provide a storage area for waste and recyclable materials within the fenced project area that is clearly identified for waste and recycling. This area shall be shown on a submitted site plan and maintained on the site during construction, operations and decommissioning.
  - b. During construction, operation, and decommissioning, debris and waste generated shall be recycled to the extent feasible.
  - c. The Waste Disposal and Recycling Coordinator shall facilitate recycling of all construction and decommissioning waste through coordination with contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes.
  - d. The Waste Disposal and Recycling Coordinator shall coordinate with Kern County Public Works Department – Solid Waste Division the acceptance for disposal or recycling of construction and decommissioning waste prior to being transported to any public disposal facility.
  - e. The Waste Disposal and Recycling Coordinator shall ensure that materials transported to public disposal facilities for recycling shall be separated by material type so as not to be co-mingled or contaminated with waste material.
  - f. The Waste Disposal and Recycling Coordinator shall also be responsible for ensuring wastes requiring special disposal are handled according to State and County regulations that are in effect at the time of disposal.
  - g. Contact information of the coordinator shall be provided to the Kern County Planning and Natural Resources Department prior to issuance of building permits.

### ***Level of Significance after Mitigation***

With implementation of MM 4.16-1, impacts would be less than significant.

## Cumulative Setting, Impacts, and Mitigation Measures

The geographic scope for cumulative analysis of impacts on water supply and wastewater are the related projects that would impact the Antelope Valley Groundwater Basin. The geographic scope of analysis for stormwater drainage, electricity, telecommunications, and solid waste disposal, includes the projects that

would be relying on the same facilities and infrastructure. Impacts of the proposed project would be cumulatively considerable if the incremental effects of the project when combined with other past, present, or reasonably foreseeable projects (listed in **Table 3-4**, *Cumulative Projects List*, in **Chapter 3**, *Project Description*, of this EIR) would result in a significant cumulative effect. Physical impacts to public services, utilities, and service systems are usually associated with population in-migration and growth in an area, which increase the demand for a particular service, leading to the need for expanded or new facilities. There is little to no growth associated with the proposed project and nearby other solar and wind energy projects, thereby limiting the potential to contribute to demand for a particular service.

As described above, the proposed project would place few demands on water, wastewater, stormwater drainage, electricity, telecommunications, and solid waste disposal (during construction, operation, and decommissioning). As described above, the proposed project would place no demands on natural gas.

## Water

Several utility-scale renewable energy projects are proposed in the Antelope Valley that would impact the existing water supply, which is derived almost entirely from the Antelope Valley Groundwater Basin. The water-intensive use period for renewable energy projects is typically the construction phase. Given the limited water supply in the area, other projects are expected to either rely on new or existing wells or truck in their water supply (similar to the proposed project). In response to the recent adjudication of the Antelope Valley Groundwater Basin, all projects relying on water from AVGWB would be required to obtain water from water purveyors that have existing water rights within the Antelope Valley Groundwater Basin or would be required to apply for new water rights from the Antelope Valley Watermaster. New water rights may or may not be granted. Any projects that cannot secure a water supply would not move forward to construction or operation. It is further noted that water use of solar production projects is generally less than other uses that are existing, typically agricultural areas in which they would be located. In these instances, the proposed project and other such projects, would have less water demand than the existing uses on those sites. Therefore, cumulative impacts related to water supply and facilities would be less than significant.

## Wastewater

The project site is in an area with no wastewater treatment provider or infrastructure and is not expected to generate a significant amount of wastewater. Wastewater produced during construction would be collected in portable toilet facilities and portable hand washing facilities and disposed of at an approved facility. No wastewater would be generated by the proposed project during the operational phase. Other planned renewable energy projects may or may not propose an O&M building that would require the installation of a septic system. Therefore, the proposed project would not have the potential, when combined with impacts from past, present, or reasonably foreseeable projects, to result in a cumulative impact to a regional wastewater treatment facility or the capacity of said facilities.

## Stormwater Drainage

As described above, the project site is in a remote, rural region with no existing or planned stormwater infrastructure, even though there are existing agricultural uses on the project site. The proposed project would be required to adhere to Kern County Public Works Department storm water requirements, which include measures to address stormwater controls on both management of runoff volume and water quality, including controlling erosion. In addition, a large amount of pervious surfaces would surround the proposed

facilities that would continue to absorb runoff thus allowing infiltration of the runoff produced by the new minor impervious surfaces. Further, the hydrologic study and final drainage plan required by Mitigation Measure MM 4.10-2 would detail any necessary design features required to properly control stormwater runoff onsite. Cumulative projects would also be required to prepare a hydrologic study and final drainage plan that would help avoid substantial increases of stormwater generated onsite by their respective ground disturbance. Depending on the findings of their respective hydrologic studies and final drainage plans, these projects may need to construct stormwater control structures onsite to reduce the potential for increased stormwater runoff. Other projects in the vicinity would be required to offset substantial increases in stormwater as well per County requirements and would also be required to implement best management practices (BMPs), as well as comply with the Kern County National Pollutant Discharge Elimination System program and their respective Storm Water Pollution Prevention Plan as applicable. Therefore, the proposed project would not substantially contribute to a cumulative impact on stormwater drainage facilities.

## **Electric Power**

Electricity is not expected to be consumed in large quantity during project construction, as construction equipment and vehicles are not electric (but rather diesel- or gas-powered). Operation of the proposed project would consume 39,822 kilowatt hours (kWh) per year of electricity. Total annual electricity generation is estimated to be 870,000 MWh, which more than offsets the energy consumed annually to operate the proposed project. This proposed project in combination with other cumulative solar projects would help to reduce or offset electricity on the state-wide utility grid and therefore provide a beneficial cumulative impact on electrical demand and facilities.

## **Natural Gas**

The proposed project would not use natural gas during the construction, and/or operational phase. Therefore, the proposed project would not contribute to a cumulatively considerable impact related to natural gas demand and facilities.

## **Telecommunications**

The proposed project in combination with cumulative projects would increase demand on telecommunication facilities. However, demand associated with energy projects and other cumulative development would be minimal and is expected to be within the planning forecasts of the affected telecommunications provider. Therefore, cumulative impacts related to telecommunications facilities would be less than significant.

## **Solid Waste**

Construction and decommissioning materials from the proposed project would be recycled where feasible, with remaining materials disposed in landfills in compliance with all applicable regulations. Materials brought to the project site would be used to construct facilities and few residual materials are expected. Non-hazardous construction refuse and solid waste would either be collected and recycled or disposed of at a local landfill. In addition, the proposed project would generate a minimal amount of solid waste during operation and is not expected to significantly impact Kern County landfills. The Mojave-Rosamond

Sanitary Landfill is expected to operate until 2123 and could accommodate solid waste generated during construction, operation and decommissioning of the proposed project. However, generation of waste from cumulative projects, including other solar and wind projects, could result in a cumulative impact. To ensure that the proposed project reduces the amount of waste sent to landfills, implementation of Mitigation Measure MM 4.16-1 requires that debris and waste generated shall be recycled to the extent feasible, and an onsite recycling coordinator be designated by the Project Proponent to facilitate recycling efforts. With implementation of MM 4.16-1, the proposed project's incremental contribution would be less than cumulatively considerable. Furthermore, other cumulative projects would also be required to comply with State and local waste reduction policies.

## **Conclusion**

In conclusion, the proposed project would not have a significant impact on public utilities and service systems. The incremental effects of the proposed project would also not be substantial enough to result in a cumulatively considerable impact on utilities and service systems with implementation of Mitigation Measures MM 4.10-1, MM 4.10-2, and MM 4.16-1. Furthermore, the proposed project would result in a beneficial impact on utility services and offset future stress on energy service providers as energy demand grows in Kern County and Southern California.

## **Mitigation Measures**

Implementation of Mitigation Measure MM 4.10-1 and MM 4.10-2 as provided in Section 4.10, *Hydrology and Water Quality*, of this EIR would be required.

Implementation of Mitigation Measure MM 4.16-1 would be required.

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measures MM 4.10-1, MM 4.10-2, and MM 4.16-1 cumulative impacts would be less than significant.

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### **4.17.1 Introduction**

This section of the Environmental Impact Report (EIR) identifies and evaluates impacts related to wildfire and evacuation. The section includes the physical and regulatory setting for the project, the methods used in evaluating these potential impacts, the criteria used to evaluate the significance of potential impacts, and an analysis of potential impacts from wildfire. The analysis in this section is based on the project plans, California Department of Forestry and Fire Protection (CAL FIRE), Kern County Fire Hazards Severity Zone (FHSZ) Maps, *Air Quality and Greenhouse Gas Technical Report* (ICF, 2023a; **Appendix D.1**), and the *Biological Resources Technical Report* (ICF, 2023b; **Appendix E.1**).

### **4.17.2 Environmental Setting**

#### **Site Characteristics and Fire Environment**

The project site primarily consists of undeveloped land with desert vegetation and large areas of inactive or fallow agricultural fields. The project site is on relatively flat land that gently slopes from the northwest toward the southeast. Topography within the project site decreases gradually from 2,760 feet down to 2,640 feet above mean sea level. The area generally has low relief without significant topographic features. Existing land use in the vicinity of the project site generally includes undeveloped lands, rural residential, active and fallow agricultural lands, access roadways, the California aqueduct, high-voltage transmission line corridors, and solar and wind development uses to the north, south, east and west of the project site.

The California Department of Forestry and Fire Protection (CAL FIRE) maps Fire Hazard Severity Zones (FHSZs), based on factors such as fuel, slope, and fire weather to identify the degree of fire hazard throughout California (i.e., moderate, high, or very high). These areas are also classified as Local Responsibility Areas (LRAs), State Responsibility Areas (SRAs), and Federal Responsibility Areas (FRAs) which indicates areas where the local, state, or federal government assumes financial responsibility for fire prevention and protection. While FHSZs do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and therefore are of greater concern. According to the CAL FIRE, Kern County Fire Hazards Severity Zone Maps for the Local Responsibility Areas, portions of the solar array area of the project site are classified as LRA Moderate or LRA Unzoned (CAL FIRE, 2022a) (see **Figure 4.17-1**, *Fire Hazard Severity Zones for Local Responsibility Areas*). A majority of the gen-tie options are also within LRA Moderate and LRA Unzoned areas, with the exception of a portion of Gen-Tie Option 4 (which would co-locate with the existing Antelope Valley Transmission line (AVTL)), which is in Other Moderate. The project site is outside of areas identified by CAL FIRE as having substantial or very high risk (CAL FIRE, 2023a). Moderate zones are typically wildland supporting areas of low fire frequency and relatively modest fire behavior. The solar array area and all gen-tie options are not within an FRA or SRA except for a portion of Gen-Tie Option 4, which is in an area classified as SRA Moderate approximately 2.4 miles to the northwest of the project site (see **Figure 4.17-2**, *Fire Hazard Severity Zones for Federal and State Responsibility Areas*) (CAL FIRE, 2023a).

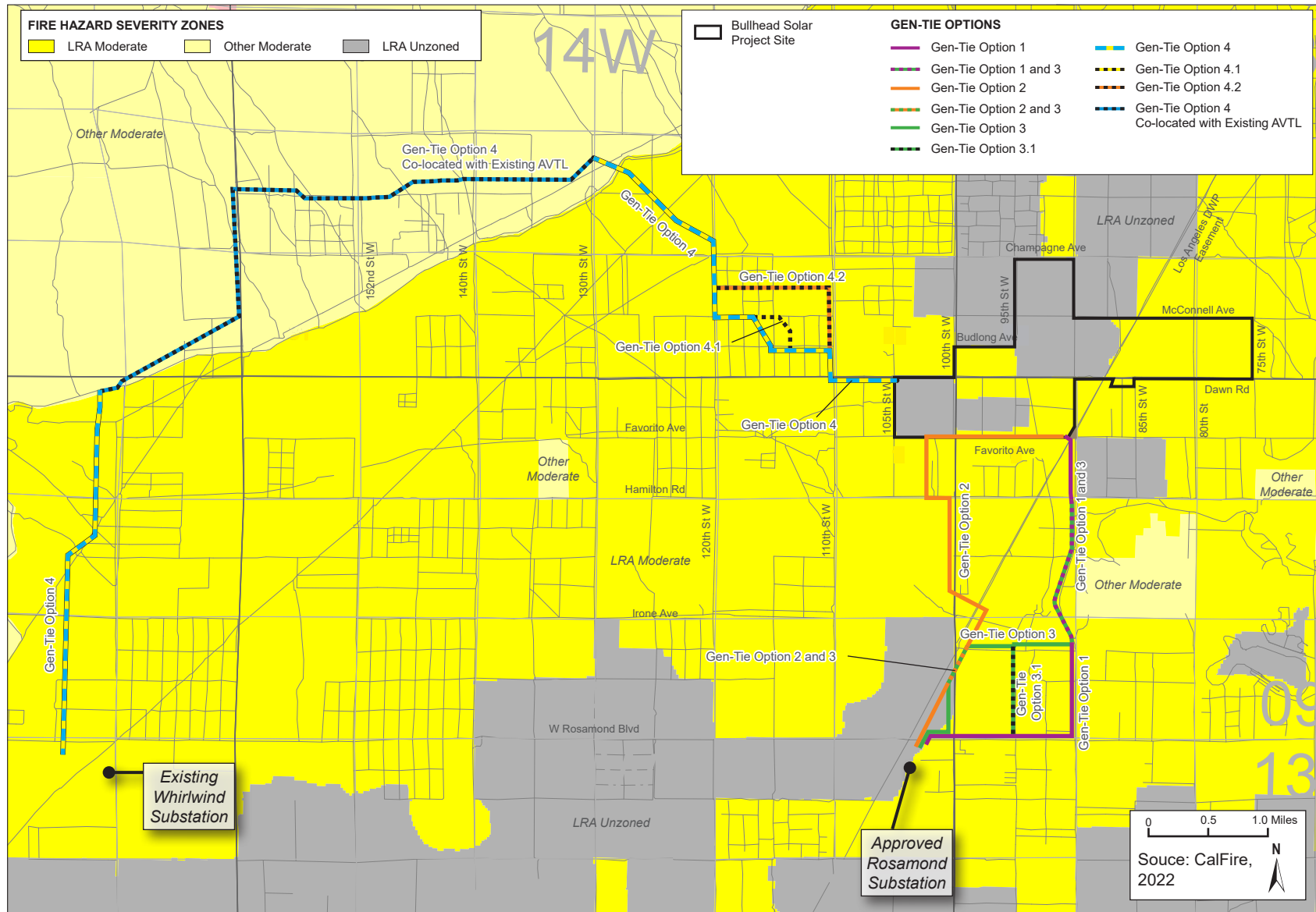


Figure 4.17-1: FIRE HAZARD SEVERITY ZONES FOR LOCAL RESPONSIBILITY AREAS



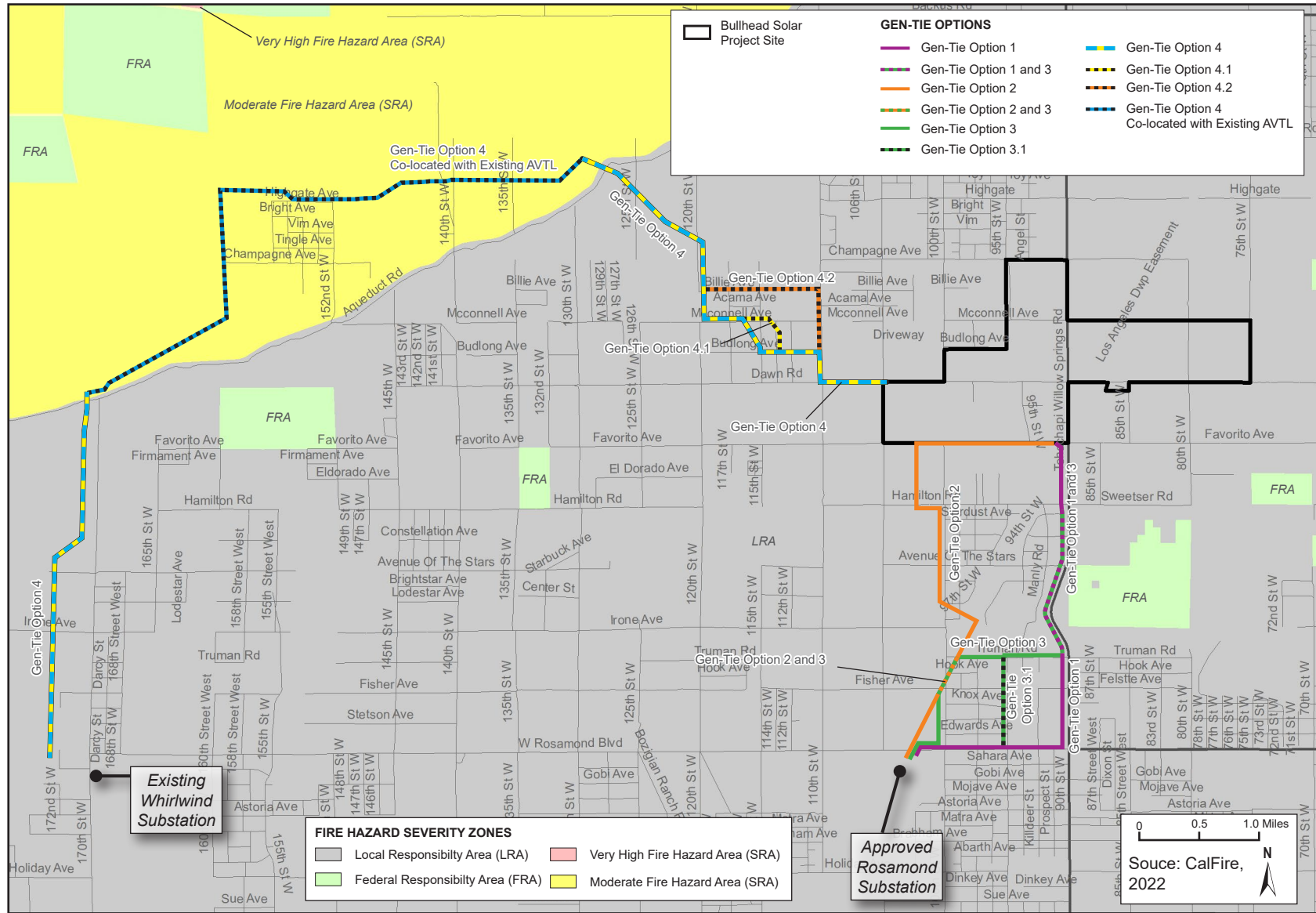


Figure 4.17-2: FIRE HAZARD SEVERITY ZONES FOR FEDERAL AND STATE RESPONSIBILITY AREAS

## Fire History

Fire history information can provide an understanding of fire frequency, fire type, most vulnerable project areas, and significant ignition sources. Fire history data is provided from CAL FIRE's California Statewide Fire Map that provides fire data from 2016 through 2023 (CAL FIRE, 2023b), CAL FIRE's Fire and Resource Assessment Program (FRAP) Fire Perimeters through 2021 map (CAL FIRE, 2022b), and CAL FIRE's California Perimeters (all) map (CAL FIRE, 2023c). Based on a review of these maps, no fires in the recorded history have burned across the project site. The nearest fire was the Canyon Fire in 2011 caused by aircraft, which burned approximately 14,585 acres about 3.3 miles northwest of the project site (2023c).

## Vegetation (Fuels)

Vegetation communities on the project site are further detailed in Section 4.4, *Biological Resources*, of this EIR. The project site consists of a variety of vegetation communities and land cover types. The project site consists primarily of Creosote Bush Scrub, disturbed Creosote Bush Scrub, Rubber Rabbitbrush Scrub, disturbed Rabbitbrush Scrub, and inactive agriculture/fallow fields.

Undisturbed Creosote bush scrub covers approximately 237.9 acres within the Biological Study Area (BSA). Disturbed creosote bush scrub, which accounts for 141.8 acres in the BSA, is characterized by reduced native shrub diversity, often limited to a few associated species. Creosote bush scrub is typically a widely spaced and often diverse shrub community, with creosote bush characteristically present within the shrub layer, and no shrubs with cover greater than creosote bush except for the following exceptions: rayless goldenhead (*Acamptopappus sphaerocephalus*), sweet bush, green rabbitbrush (*Ericameria teretifolia*), rhatany (*Krameria* spp.) Mormon tea (*Ephedra nevadensis*) or buckhorn cholla (*Cylindropuntia acanthocarpa*), which may have higher cover, but no more than two times the cover of creosote bush (ICF, 2023). Additionally, Joshua trees are scattered throughout portions of the creosote bush scrub communities within the project site.

Rubber rabbitbrush scrub covers approximately 42.9 acres in the BSA, whereas disturbed Rubber rabbitbrush scrub consists of approximately 318.8 acres in the BSA. Shrub canopy is open to continuous and typically less than 10 feet tall; emergent trees are present, including Joshua tree, juniper, and pine. Rabbitbrush scrub within the project site is dominated by rubber rabbitbrush with associated shrubs. Large tracks of rubber rabbitbrush scrub occur regularly throughout the project site and often occur within previously disturbed areas where ground disturbance, heavy grazing, as well as adjacent to roadsides.

Inactive agriculture includes fields that were recently in planted fields or row crops, which are no longer being farmed (i.e., fallow). These areas are generally low in vegetated cover and are dominated by nonnative forb species. The project site consists of approximately 538.9 acres of fallow fields.

Other types of vegetation and land cover include, but are not limited to, Joshua Tree Woodland, Mulefat Thicket, Creosote Bush - White Bursage Scrub, Allscale Scrub, disturbed Allscale Scrub, Cheesebush – Sweet Bush Scrub, California Buckwheat Scrub, Tamarisk Grove, ruderal desert forb patches, Snakeweed Scrub, active agriculture, and disturbed and developed land. Areas with vegetative cover in the project site could contribute fuel in the event of a wildfire.

## Climate, Weather, and Wind

As described in **Section 4.3**, *Air Quality*, the project site is located within the Mojave Desert Air Basin (MDAB). During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, because these frontal systems are weak and diffuse when they reach the desert. The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, indicating at least 3 months have maximum average temperatures over 100.4 degrees Fahrenheit (°F). Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between 3 and 7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation) (ICF, 2023a). Prevailing winds in the MDAB are out of the west and southwest. Winds are strongest from approximately mid-November to early July with average wind speeds of 8.4 miles per hour (mph) (Wind Alert, 2023). The windiest month is April with an average hourly wind speed of 9.6 mph (Wind Alert, 2023). Wind gusts at the project site and surrounding areas can reach up to 50 mph during windier months (Wind Alert, 2023).

## Fire Protection Facilities and Services

As further described in **Section 4.13**, *Public Services*, the Kern County Fire Department (KCFD) provides primary fire protection services, fire prevention, emergency medical, and rescue services to more than 500,000 people in unincorporated areas of Kern County and nine incorporated cities (i.e., the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco). KCFD operates 47 full-time fire stations within 7 battalions. KCFD is staffed with 621 permanent employees, which includes 521 uniformed firefighters (KCFD, 2023).

The project site is located within Battalion 1, Central Mountains/Desert, which serves the southeastern portion of Kern County and is divided by State Route (SR) 58 that runs east/west and by SR-14 that runs north/south. Battalion 1 consists of eight stations and covers 951,600 acres of which 351,276 acres is SRA land area, which CAL FIRE has a legal responsibility to provide fire protection for this SRA land area (KCFD, 2022). The SRA land area is bounded by the Mojave Desert on the east, the Tehachapi Mountains in the center, and the Central Valley to the west (KCFD, 2009).

Fire Station No. 15 (Rosamond), located at 3219 35th Street West, is approximately six miles to the southeast of the project site and would be the primary responder to a fire or emergency at the project site. In the event of a major fire or when short-staffed, other stations would be called on to respond, as necessary, including Fire Station No. 14 (Mojave), located at 1953 State Highway 58, Fire Station No. 12 (Tehachapi), located at 800 South Curry Street, and Fire Station No. 13 (Tehachapi), located at 21415 Reeves Street. Information on the closest fire stations to the project site is included in Table 4.13-1, List of Nearby Fire Stations, of Section 4.13, Public Services. In remote County areas like the project site, the average response time is approximately 21 minutes (CPSM, 2017).

Kern County has 14 mutual-aid agreements with neighboring fire suppression organizations to further strengthen the emergency services (KCFD, 2022). The KFCF has a mutual aid agreement with the Los Angeles County Fire Department (LACFD) in the event that KCFD is unable to be the primary responder to an emergency. The LACFD has 177 fire stations throughout Los Angeles County. The LACFD is divided into 22 battalions with nearly 3,000 fire series personnel (LACFD, 2022). The nearest LACFD fire station

to the project site is Station No. 130, located at 44558 Newgrove Street in Lancaster, approximately 17 miles southeast of the project site.

## 4.17.3 Regulatory Setting

### Federal

There are no applicable federal regulations for this issue area.

### State

#### California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, as well as protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of nearly 6,000 wildland fires each year. The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities (CAL FIRE, 2019).

The CAL FIRE Director's responsibilities include identifying FHSZs, transmitting that information to local agencies, and periodically reviewing the recommendations. CAL FIRE is required by California Public Resources Code Sections 4201–4204, and California Government Code Sections 51175–51189 to map these areas of significant fire hazards based on vegetative fuels, terrain, weather, and other relevant factors. Areas at risk of wildland fire losses are referred to as FHSZs and fall into three categories: Moderate, High, and Very High. FHSZs reflect variations in fire behavior and exposure and are used to develop permanent engineering mitigations associated with development in fire hazard areas (CAL FIRE, 2023d).

#### 2022 California Fire Code

The 2022 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. Chapter 6 (Building Services and Systems) of the Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed and include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the Code outlines general fire safety precautions to maintain required

levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems (for inhabited structures), fire service features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

## 2022 California Building Code, Chapter 7A

Chapter 7 of the 2022 California Building Code details the materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a Wildland-Urban Interface Fire Area. A Wildland-Urban Interface Area is defined in Section 702A as a geographical area identified by the state as a “Fire Hazard Severity Zone” in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. The building code details the materials, systems and assemblies used for structural fire resistance and fire-resistance-rated construction separation of adjacent spaces to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings.

## Public Resources Code 4291–4299

California Public Resources Code Section 4291-4299 et seq. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be maintained. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability, may be maintained; as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure. Additionally, the Public Resources Code outlines infraction fees, certification, and compliance procedures applicable with state and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code.

## California Office of the Attorney General Wildfire and CEQA Guidance

In October 2022, the California Office of the Attorney General issued guidance (2022 AG Guidance) outlining best practices for analyzing and mitigating wildfire impacts of development projects under CEQA. The 2022 AG Guidance does not impose additional legal requirements on local governments, nor does it alter any applicable laws or regulations. It is intended to help local governments’ evaluation and approval considerations for development projects in fire-prone areas, and to help project design in a way that minimized wildfire ignition and incorporates emergency access and evacuation measures. The 2022 AG Guidance recommends the following:

- **Baseline Conditions** - An EIR’s discussion of existing environmental (baseline) conditions should include information about open space areas and habitats within the project area that may be fire prone, a discussion of fire history and fuels on the project site and existing available water supplies for firefighting.
- **Thresholds of Significance** - To identify when an increase in wildfire risk is considered a “significant impact” under CEQA, relevant factors include: (1) the project’s impacts on ignition risk; (2) the likelihood of fire spread; and (3) the extent of exposure for existing and new residents, based on various fire scenarios. The 2022 AG Guidance notes that “wildfire ignitions are primarily human-caused in California.”

- **Modeling** - Modeling fire scenarios means “quantifying” increased wildfire risks resulting from a project adding more people to wildfire prone areas and assessing risks according to the threshold of significance, including fires that start in, near or far from the project site and “extreme weather conditions that exacerbate fire spread”. The 2022 AG Guidance states that a conclusion that conversion of wildland vegetation into paved development “reduces or does not increase wildfire risk” is “contrary to existing evidence” and cannot be used to avoid analyzing and modeling wildfire risk.

To qualitatively assess a project’s impact on wildfire risk, the 2022 AG Guidance recommends considering the following relevant variables:

- **Project Density** – Project density influences how likely a fire is to start or spread and how likely it is that occupants will be in danger. The 2022 AG Guidance states that “Fire spread and structure loss is more likely to occur in low- to intermediate-density developments.”
- **Location in the Landscape** – Where a project’s structures are placed in the landscape relative to fire environment features (vegetation, topographical features, and wind alignments) also influences wildfire risk. Terrain including wind corridors or steep slopes may increase risk while flatter terrain and natural fire breaks may reduce risk if the project is “strategically located” should be considered.
- **Water Supply and Infrastructure** – In addition to analyzing the water supply and infrastructure needed to address firefighting within the project site, the potential loss of water pressure or power during a fire should also be considered.

For potential measures to reduce wildfire risk, the 2022 AG Guidance recommends that wildfire reduction measures be tailored to the specifics of the project, the surrounding landscape, and nearby existing uses. The 2022 AG Guidance recommends lead agencies consider:

- Increasing residential density and consolidated project design, relying on higher density infill developments “as much as possible.”
- Avoiding and minimizing low-density development patterns or “leapfrog-type” developments with undeveloped wildland between developed areas.
- Decreasing a project’s “edge” or wildland interface area and creating buffer zones and defensible space measures within and adjacent to the project.
- Siting projects to maximize the role of low-flammability landscape features and limiting development along steep slopes and amidst rugged terrain.
- Undergrounding power lines.
- Upgrading building materials and installation techniques beyond applicable building code requirements to increase a structure’s resistance to heat, flames and embers (i.e. “fire hardening”), and requiring fire-hardened communication facilities (including internet) to the project site.
- Requiring on-site water supply and/or storage to augment ordinary supplies that may be lost during a wildfire.
- Parking limitations to ensure access roads are not clogged with parked vehicles.
- Placement of development close to adequate emergency services, existing or planned ingress/egress, and designated evacuation routes.

In addition to evaluating the potential increased risk of ignition, the 2022 AG Guidance recommends, for a project located in a fire-prone area, the lead agency should analyze the project’s impact on evacuation and emergency access. This analysis is relative to the project’s particular impacts and risks (e.g., higher density

infill projects within developed areas would require less detailed analysis than a new low-density development within a high wildfire risk area and/or surrounded by open space). Additionally, the 2022 AG Guidance recommends that evacuation modeling and planning should be required for all projects located in fire-prone areas that present an increased risk of ignition and/or evacuation impacts. Lead agencies should require evacuation modeling and planning to be developed prior to project approval in order to provide maximum flexibility in design modifications necessary to address wildfire risks and impacts. The 2022 AG Guidance recommends evacuation modeling and analysis augment existing information when necessary:

- Evaluation of the capacity of roadways to accommodate project and community evacuation and simultaneous emergency access.
- Assessment of the timing for evacuation.
- Identification of alternative plans for evacuation.
- Evaluation of the project's impacts on existing evacuation plans.
- Consideration of the adequacy of emergency access, including the project's proximity to existing fire services and the capacity of existing services.
- Traffic monitoring to quantify travel times under various likely scenarios.

## Local

### Kern County General Plan

#### *Chapter 4: Safety Element*

##### 4.1 Introduction

Goal 1: Minimize injuries and loss of life and reduce property damage.

##### 4.6 Wildland and Urban Fire

###### *Policies*

Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.

Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.

Policy 6: All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

###### *Implementation Measure*

Measure A: Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

## **Willow Springs Specific Plan**

The project site is subject to the provisions of the Willow Springs Specific Plan. The Willow Springs Specific Plan was adopted in 1992 and amended in April 2008 and contains goals, policies, and standards that are compatible with those in the Kern County General Plan, but are unique to the specific needs of the Willow Springs Area. The wildfire-related policy contained in the Willow Springs Specific Plan that is applicable to the proposed project is listed below (Kern County Department of Planning and Development Services, 2008).

### **General Provision**

- (1) Fire flow provisions and on-site fire protection standards (i.e., sprinklers/water storage) shall be in compliance with minimum standards provided by the Kern County Fire Department.

## **Kern County Fire Code**

Chapter 17.32 of the County Municipal Code details the Kern County Fire Code, which is an adoption of the California Code of Regulations, Title 24, Part 9, 2022 edition of the California Fire Code with some amendments. The purpose of the Kern County Fire Code is to regulate the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release and/or explosion due to handling of dangerous and hazardous materials, conditions hazardous to life or property in the occupancy and use of buildings and premises, the operation, installation, construction, and location of attendant equipment, the installation and maintenance of adequate means of egress, and providing for the issuance of permits and collection of fees therefore (Kern County, 2023).

## **Kern County Fire Department Wildland Fire Management Plan**

The Kern County Fire Department (KCFD) Wildland Fire Management Plan adopted in 2009 assesses the wildland fire situation throughout the SRA within the County. The Plan includes stakeholder contributions and priorities and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan systematically assesses the existing levels of wildland protection services and identifies high-risk and high-value areas, which are potential locations for costly and damaging wildfires. The plan also ranks the areas in terms of priority needs and prescribes what can be done to reduce future costs and losses. The project site is located within a moderate fire hazard severity zone under the KCFD Wildland Fire Management Plan (KCFD, 2009).

## **Kern County Fire Department Unit Strategic Fire Plan**

The KCFD Unit Strategic Fire Plan, adopted in April 2022, is the most current document that assesses the wildland fire situation throughout the SRA within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local area. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. The plan gives an overview of KCFD Battalions and ranks these areas in terms of priority needs as well as identifies the areas of SRA. According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas, Tehachapi,



Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 1 (Tehachapi) which is within a moderate fire hazard severity zone within the Tehachapi fire plan management area and not within a SRA (KCFD, 2022).

## Fire Prevention Standard No. 503-507 Solar Panels

The Kern County Fire Department Fire Prevention Division adopted Standard No. 503-507 Solar Panels (Ground Mounted, Commercial & Residential) on April 8, 2021. The standard is implemented in accordance with the 2019 CFC and Kern County Ordinance and is an official interpretation of the Kern County Fire Marshal's Office. The standard outlines installation requirements for photovoltaic ground-mounted and roof-mounted solar panels. The proposed project would mount systems for the modules on steel support posts that would be pile driven into the ground and would therefore comply with the ground mounted requirements of this fire prevention standard. Ground mounted solar panel requirements of this standard include water supply, clearance and combustibles, stationary storage battery/energy storage systems, clean agent system permits, fire extinguisher placement, and emergency vehicle access (KCFD, 2021).

### 4.17.4 Impacts and Mitigation Measures

#### Methodology

Wildfire impacts are considered on the basis of: 1) offsite wildland fires that could result due to the proposed project, and 2) onsite generated combustion that could affect surrounding areas. The project's potential impacts associated with wildfires have been evaluated using a variety of resources, including CAL FIRE maps showing FHSZs, FRAP, and fire history, vegetation data from the Biological Resources Technical Report (ICF, 2023b), Hydrology Assessment Technical Report (ICF, 2023f), project location maps, and project characteristics. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

#### 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 impact with respect to Wildfires.

A project would have a significant impact with respect to wildfires if it would be located in or near state responsibility areas or lands classified as very high fire hazard severity zones, and if the project would:

- a. Substantially impair an adopted emergency response plan or emergency evacuation plan;
- b. Due to slope, prevailing winds, or other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;

- d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

## Project Impacts

### **Impact 4.17-1: The project would substantially impair an adopted emergency response plan or emergency evacuation plan.**

The project site is not classified as being within a high fire hazard severity zone and is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The project site is in a rural, sparsely developed area with a limited population. The project site is not located along an identified emergency evacuation route and is not identified in any adopted emergency evacuation plan. Also, in compliance with applicable Fire Code and Building Code requirements, construction managers and personnel would be trained in fire prevention and emergency response. Fire suppression equipment specific to construction would be maintained on site. Additionally, project construction 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. Therefore, the proposed project would not conflict with the implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Impacts would be considered less than significant.

#### ***Mitigation Measures***

No mitigation measures would be required.

#### ***Level of Significance***

Impacts would be less than significant

### **Impact 4.17-2: The project would, 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.**

The project site is classified as LRA Moderate and LRA Unzoned (see **Figure 4.17-1**). A portion of Gen-Tie Option 4 is classified as SRA Moderate. The project site is outside of areas identified by CAL FIRE as having high or very high risk such as a Very High FHSZ and is approximately seven miles southeast of the nearest High or Very High FHSZ (CAL FIRE 2023a). Thus, the potential for wildfire on the project site is considered low. Additionally, the area surrounding the project site is sparsely populated. As described in **Chapter 3, Project Description**, of the EIR, across the greater project area, which includes the gen-tie line options and access roads, the elevation ranges from approximately 3,400 feet above mean sea level (msl) at the highest gen-tie line point to 2,400 feet msl. The topography within the solar array area is flat, ranging from 2,600 above mean sea level (msl) in the northwest portion of the project site to approximately 2,760 feet msl in the southeast portion of the project site. Areas surrounding the project site include undeveloped lands, rural residential, active and fallow agricultural lands, access roadways, the California aqueduct, high-voltage transmission line corridors, and solar and wind development uses to the north, south, east, and west of the project site.

Construction activities would temporarily introduce ignition sources due to the use of vehicles, heavy machinery. Machinery and tools could result in sparks and heat-generating. To minimize the risk of fire during construction, the proposed project would adhere to the Kern County Fire Code, the 2022 California Fire Code (CFC), and would adhere to Chapter 33 of the CFC, which outlines standards for fire safety during construction activities. If a wildfire occurs in the area either onsite or offsite, pollutants may be released. However, it is anticipated that any employees onsite would be rapidly evacuated at the time of the event, and/or evacuated well in advance of an approaching wildfire in conformance with applicable County evacuation directives put in place. Such measures would ensure that the exposure of project occupants and nearest residents, though few, are not exposed to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire to the extent feasible.

During the operational phase, the proposed project would be operated on an unstaffed basis and monitored remotely. Periodically, personnel would visit the site for inspection, security, maintenance, and system monitoring proposes. Approximately up to 15 part-time and/or full-time staff from the adjacent BigBeau Solar O&M building would operate and maintain the facility. The proposed project staff would use the O&M facility west and immediately adjacent to the project site at the BigBeau Solar Project. The nearby BigBeau O&M building would house the proposed project's electronic controls and communications systems; provide storage for tools, maintenance supplies, and spare parts; and provide on-site office, kitchen, and bathroom facilities for operations staff.

Conditions within the proposed gen-tie line options and access road are similar to the overall project area. They are sparsely populated within a LRA moderate zone or SRA moderate for Option 4. Therefore, implementation of the gen-tie line corridors and access roads would not exacerbate wildfire risk due to slope, prevailing winds, and other factors.

The proposed project is not anticipated to expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire due to slope, prevailing winds and other factors. Impacts would be less than significant.

### ***Mitigation Measures***

No mitigation would be required.

### ***Level of Significance***

Impacts would be less than significant.

### **Impact 4.17-3: The project would 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.**

The proposed project includes several options for gen-tie routes as described in **Chapter 3, Project Description**, of this EIR, although only one route would be constructed. The selected gen-tie would be constructed within a 150-foot-wide corridor and would consist of utility poles, cabling, trenches, and a corresponding dirt maintenance road. An underground/overhead 34.5 kV collector system would connect to the inverters of each array. Power generated by the solar array would be collected at an onsite substation

and converted to 220 kV of power for transmission in overhead lines via new and existing electrical poles to the Rosamond or Whirlwind Substations options. Proposed underground transmission lines (if necessary) and fiber optic lines would be co-located with roads. All utility poles, cabling, trenches, and corresponding dirt maintenance road associated with the gen-tie line would be erected inside the 150-foot-wide corridor, which would be maintained during operations.

New 20-foot-wide-minimum internal maintenance roads would be installed between the solar arrays as well as a 20-foot-wide-minimum perimeter road around the solar arrays. Roads would be cleared and compacted for equipment and emergency vehicle travel and access to the solar array blocks. These internal project site access roads would remain in place for ongoing operations and maintenance activities after construction is completed. The proposed project would require improved unpaved roads to serve as access roads from the existing road network to the project. All new roads would comply with development requirements for emergency access. Final service road alignments would depend on the final placement of the solar panels, topography, and other site-specific details to be incorporated into the final design. Where access roads are required to cross streambed areas under the jurisdiction of the California Department of Fish and Wildlife, the Project Proponent would install appropriate crossings in order to minimize impacts on these jurisdictional areas and comply with all California Fish and Game Code requirements, including authorization through a Streambed Alteration Agreement, as appropriate (see **Section 4.4**, *Biological Resources*). Therefore, the proposed project would not exacerbate fire risk or result in temporary or ongoing impacts to the environment.

The proposed project would install new photovoltaic (PV) panels or modules, a battery energy storage system (BESS), power conversion stations (PCS), inverter and transformers, and transmission lines to connect to a proposed and existing substation. All new infrastructure would be installed and operated in accordance with safety standards that would reduce the risk of potential fires. AC-coupled BESS design standards typically include lighting, monitoring equipment, cooling units, active exhaust venting, multiple fire detection units including gas/heat/smoke detectors, and fire suppression systems, which adequately address fire risk associated with the unit. A water storage tank would be installed to provide water supply needed for fire protection and operations, based on consultation with Kern County Fire Department. Each battery container includes both inverters and batteries. The containers would be equipped with access doors on each end and include fire detection and fire suppression systems. Cables and cooling pipes would pass through the container floor. The containers would be equipped with insulation panels on the walls and roof. The thermal regulation system of the power conversion system and battery containers would be managed through a combination of forced-air ventilation, individual battery module fans, and heating, ventilation, and air conditioning (HVAC) units to maintain the battery cells and other components in their optimal operating range (68–77 degrees Fahrenheit). The thermal regulation system would be designed to optimize the temperature uniformity among batteries and to limit the auxiliary power consumption. All data associated with thermal regulation (e.g., individual module temperatures, internal container temperature) would be communicated to the control system. The system would be required to have a fire rating in conformance with Kern County standards.

The proposed improvements, including the new gen-tie route and interior roads would be installed in an area that has a moderate potential to experience wildfire. In addition, as part of the proposed project, these areas would undergo maintenance to ensure there is no fuel buildup that would exacerbate fire risk either onsite or offsite. The project site is not adjacent to areas designated as a substantial risk of wildfire, and vegetative cover (fuel load) is generally low and sparse. Construction, operation, and maintenance associated with the

above-mentioned infrastructure would adhere with all federal, state, and local laws, regulations, codes, and safety standards.

The installation of the gen-tie and electrical collector system and internal/perimeter dirt maintenance roads would not be placed within a high fire hazard zone. Vegetation would be cleared; therefore, the proposed project would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. Additionally, as discussed in **Section 4.13, *Public Services***, as required by Mitigation Measure MM 4.13-1, the Project Proponent shall develop and implement a Fire Safety Plan that contains notification procedures and emergency fire precautions consistent with the 2022 California Fire Code and Kern County Fire Code for use during construction, operation and decommissioning. Implementation of this plan would ensure that potential impacts related to installation or maintenance of associated infrastructure is reduced. Impacts would be less than significant.

### ***Mitigation Measures***

No mitigation measures are required, however, implementation of Mitigation Measure MM 4.13-1 would be implemented (see **Section 4.13, *Public Services***, for full mitigation text).

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.13-1, (see **Section 4.13, *Public Services***, for full mitigation text) impacts would be less than significant.

### **Impact 4.17-4: The project would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.**

The project site is relatively flat land that gently slopes from the northwest toward the southeast. Based on the fire history immediately surrounding the project site, moderate zone designation, soil types, and surface hydrology, there is a low potential for the project site to be at risk of post-fire slope instability or drainage changes. In order to ensure that drainage changes are addressed, a storm water prevention plan would be required per Mitigation Measure MM 4.10-1. Therefore, impacts would be less than significant.

### ***Mitigation Measures***

Mitigation measures MM 4.10-1 would be required (see **Section 4.10, *Hydrology and Water Quality***, for full mitigation text).

### ***Level of Significance after Mitigation***

With implementation of Mitigation Measure MM 4.10-1, (see **Section 4.10, *Hydrology and Water Quality***, for full mitigation text) impacts would be less than significant.

## **Cumulative Setting, Impacts, and Mitigation Measures**

The geographic scope for wildfire impacts is the Antelope Valley. This geographic scope was selected because the land within the region possesses similar features and uses, including sparse desert vegetation,

rural access roads, scattered rural residences, producing and non-producing water wells, active and fallow agricultural lands, cattle ranching and maintenance facilities, mining, wind and solar energy uses. As shown in **Chapter 3**, *Project Description*, **Table 3-4**, *Cumulative Project List*, there are approximately 40 solar and non-solar projects proposed or approved throughout Antelope Valley in Kern County and in the desert portion of Kern County outside Antelope Valley. Of the approximately 40 total projects in Kern County, 36 would be located within 6 miles of the project site and 4 would be located within 1 mile of the project site. These projects have the potential to result in cumulative impacts to wildfire and exposure to wildfire when considered together with the proposed project.

With regard to impairment of an adopted emergency response plan or emergency evacuation plan, all of the related projects would be required to provide adequate emergency access in accordance with County Fire Code and Building Code requirements and prior to the issuance of a building permit. As previously mentioned, the project site is not classified as being within a high fire hazard severity zone, is located in rural, sparsely developed areas with limited population, is not located along an identified emergency evacuation route or within the Kern County EOP, and would be in compliance with Fire Code and Building Code requirements including fire prevention and emergency response training for site personnel. As concluded in the discussion of project impacts above, the proposed project would have no impact related to impairment of an adopted emergency response or evacuation plan. Similar to the project, related projects would be required to determine whether they are classified as being within a high fire hazard severity zone, identified within an emergency evacuation route or within an adopted emergency evacuation plan, and whether they meet the requirements of applicable Fire Code and Building Code.

With regard to cumulative impacts related to exposure of project occupants to pollutant concentrations from a wildfire, while a portion of the proposed project is within an SRA but not within a High or Very High FHSZ, some related projects may be within SRAs and/or High FHSZs. Similar to the proposed project, all related projects would be required to implement building and landscape design features in accordance with the Fire Code and Building Code to reduce wildfire risk and exposure of occupants to pollutant concentrations from a wildfire. Adherence to the Fire Code and Building Code requirements would minimize potential impacts related to exposure to and the uncontrolled spread of wildfire. As concluded in the discussion of project impacts above, the proposed project would have a less-than-significant impact related to exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Nevertheless, given the location is subject to high wind speeds, and is a rural area with limited infrastructure, the proposed project and related projects have the potential to result in a cumulative impact related to exposure of project occupants to pollutant concentrations from a wildfire and, thus, would result in a significant and unavoidable cumulative impact.

Related projects may require associated infrastructure such as roads, fuel breaks, and power lines that could exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. These projects would be reviewed by Kern County for land use and zoning consistency and compliance with applicable requirements and analyzed for environmental impacts. The placement of infrastructure would adhere to all fire codes to minimize the potential fire risk such as siting and design. The proposed project would involve the installation and maintenance of a collector line and access roads to support project construction and ongoing maintenance and operation. While the potential for fire is considered moderate, Mitigation Measure 4.13-1 would be implemented to ensure that a Fire Safety Plan is prepared that contains notification procedures and emergency fire precautions and submitted to the Kern County Fire Department for review and approval. Nevertheless, given the location is subject to high wind speeds, and is a rural area with limited infrastructure, the proposed project and related projects have the potential to result in a cumulative impact

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related to the installation or maintenance of associated infrastructure and, thus, would result in a significant and unavoidable cumulative impact.

Some related projects could be proposed in areas that could expose people or structures to risks from downslope or downstream flooding or landslides as a result of post-fire slope instability. Based on the recent fire events in California, all projects would be required to adhere to Kern County's zoning and land use designations and codes, State and local fire codes, and regulations associated with drainage and site stability. These regulations, policies, and codes would reduce the potential for exposing people or structures to risks from downslope or downstream flooding or landslides as a result of post-fire slope instability. Each project would require site-specific hydrology and drainage studies for effective drainage design. As concluded in the discussion of project impacts above, the proposed project would not expose people or structures to significant risks due to post-fire slope instability or drainage changes. Nevertheless, the proposed project and related projects have the potential to result in a cumulative impact related to exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes and, thus, would result in a significant and unavoidable cumulative impact.

### ***Mitigation Measures***

Implement Mitigation Measure MM 4.13-1 would be required (see Section 4.13, *Public Services*, for full mitigation text).

### ***Level of Significance after Mitigation***

Even with implementation of Mitigation Measure MM 4.13-1, cumulative impacts would remain significant and unavoidable.

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## **5.1 Environmental Effects Found to Be Less than Significant**

Section 15128 of the *CEQA Guidelines* requires that an Environmental Impact Report (EIR) “contain a statement briefly indicating the reasons that various possible significant effects of a proposed project were determined not to be significant and were therefore not discussed in detail in the EIR.”

Kern County has engaged the public in the scoping of the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The EIR’s contents were established based on the Notice of Preparation/Initial Study (NOP/IS) located in Appendix A of this EIR that was prepared in accordance with the *CEQA Guidelines* and in consideration of public and agency input received during the scoping process.

Issues that were found to have no impact or less-than-significant impacts do not need to be addressed further in this EIR. Based on the findings of the NOP/IS and the results of scoping, it was determined that the proposed project would have no impact with regard to the following impact thresholds:

- Mineral Resources
- Population and Housing
- Recreation

The NOP/IS determined that there are no mineral resources of regional or statewide significance or mining districts located within the project area. The project site is neither designated as a mineral recovery area nor within a mineral and petroleum resource site by neither the Kern County General Plan nor by the Willow Springs Specific Plan. Additionally, the project site is not identified as a mineral resource zone by the Department of Conservation’s State Mining and Geology Board, nor has it been designated by the California Geologic Energy Management Division (formerly known as the Department of Oil, Gas and Geothermal Resources (DOGGR)) as a recognized oil field. Construction and operation of the proposed project would not interfere with mineral extraction and processing and would not have significant impacts on future mineral development. Furthermore, 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 resources recovery site. The proposed project would have no impact on mineral resources, and no further analysis is warranted in the EIR.

The NOP/IS determined that the proposed project would require up to 627 workers per day during peak construction periods. The entire construction process is estimated to take 18 months. Construction workers are expected to travel to the project site from various local communities and locations throughout Southern California and few, if any, workers are expected to relocate to the surrounding area because of these temporary jobs. 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 Mojave, Rosamond, and Lancaster. Therefore, the proposed project is not anticipated to

directly or indirectly induce the development of any new housing or business within the local communities. Furthermore, the NOP/IS determined that during the operational phase, the proposed project would have up to 15 full- or part-time equivalent personnel who would commute to the project 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. Consequently, this would represent a minor increase in the number of users at local parks or recreational facilities. As a result, the proposed project would not directly or indirectly induce the development of any new housing or businesses, and there would not be a detectable increase in the use of parks or other recreational facilities. No impacts to population and housing or recreation would occur and no further analysis is warranted.

For all other resource areas, this EIR contains a comprehensive analysis of potential environmental impacts.

After further study and environmental review, as provided in this EIR, it was determined that project-level impacts in the following areas would be less than significant or could be reduced to less-than-significant levels with mitigation measures; however, these resource areas are evaluated in this EIR for their potential significance:

- Agriculture and Forest Resources;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Energy;
- Geology and Soils;
- Greenhouse Gas Emissions;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Public Services;
- Transportation and Traffic;
- Tribal Cultural Resources;
- Utilities and Service Systems; and
- Wildfires.

## 5.2 Significant Environmental Effects that Cannot Be Avoided

Section 15126.2(b) of the *CEQA Guidelines* requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the proposed project and proposed mitigation measures are discussed in detail in Chapter 4 of this EIR.

After further study and environmental review, as provided in this EIR, it was determined that project-level and cumulative impacts in the following areas would be significant and unavoidable for the proposed project, even with the incorporation of reasonable mitigation measures, which would attempt to reduce impacts to the greatest extent feasible.

As shown in **Table 5-1**, *Summary of Significant and Unavoidable Impacts of the Project*, impacts in the following areas would be significant and unavoidable, even with the incorporation of feasible mitigation measures that attempt to reduce impacts to the extent feasible.

**TABLE 5-1: SUMMARY OF SIGNIFICANT AND UNAVOIDABLE IMPACTS OF THE PROJECT**

<b>Resources</b>	<b>Project Impacts</b>	<b>Cumulative Impacts</b>
Aesthetics	Although implementation of mitigation measures would reduce the visual changes experienced at individual key observation point locations, there are no feasible mitigation measures that can be implemented to maintain the existing open and undeveloped desert landscape character of the project site; and the resultant visual impact is considered <b>significant and unavoidable</b> .	While other projects in the region would also be required to implement various mitigation measures to reduce impacts, the conversion of thousands of acres in a presently rural desert area to solar energy production uses cannot be mitigated to a degree that impacts are no longer significant. Therefore, even with implementation of Mitigation Measures MM 4.1-1 through MM 4.1-6, the proposed project's contribution to significant impacts associated with visual character in the Antelope Valley would be cumulatively <b>significant and unavoidable</b> .
Air Quality	It is anticipated that there would be times during the proposed project's construction activities that would result in significant temporary levels of NO <sub>x</sub> and PM <sub>10</sub> emissions that would conflict with regulations or delay the attainment of applicable EKAPCD standards, even with adherence to EKAPCD's Ozone Attainment Plan during project operation and implementation of mitigation measures. Because the proposed project would result in perceptible temporary levels of NO <sub>x</sub> and PM <sub>10</sub> emissions during construction, these temporary impacts would be considered <b>significant and unavoidable</b> . Operational impacts are considered less than significant.	Assuming on a worst-case basis that the construction schedules for all cumulative projects would overlap with each other and with the proposed project, and despite implementation of Mitigation Measures MM 4.3-1 through MM 4.3-4, construction emissions generated by the proposed project and related projects could cumulatively combine and result in a temporary significant and unavoidable cumulative impact. Cumulative operational impacts would be less than significant. Cumulative temporary construction impacts are considered <b>significant and unavoidable</b> .
Biological Resources	There would be no significant and unavoidable project impacts.	As large-scale energy projects and urbanization pressures increase within Kern County, impacts to biological resources within the region are increasing on a cumulative level. When considered with the number of present and reasonably foreseeable future development projects in the Antelope Valley, the proposed project would result in a significant and unavoidable cumulative loss of habitat for special-status species and transient wildlife species, even with the implementation of project-specific Mitigation Measures MM 4.1-4 through MM 4.1-6, MM 4.4-1 through MM 4.4-20, and MM 4.9-2. The loss of such habitat for special-status species that may utilize habitat on the project site would result in a <b>significant and unavoidable</b> cumulative impact.

**TABLE 5-1: SUMMARY OF SIGNIFICANT AND UNAVOIDABLE IMPACTS OF THE PROJECT**

<b>Resources</b>	<b>Project Impacts</b>	<b>Cumulative Impacts</b>
Wildfire	There would be no significant and unavoidable project impacts.	Given the location in a high wind rural area with limited infrastructure, the proposed project and related projects would have the potential to result in cumulatively <b>significant and unavoidable</b> wildfire impacts related to: the exposure of project occupants to pollutant concentrations from a wildfire; the installation or maintenance of associated infrastructure; and the exposure of people or structure to significant risks as a result of runoff, post-fire slope instability, or drainage changes, even after implementation of mitigation measures.

### 5.3 Irreversible Impacts

Section 15126.2(c) of the *CEQA Guidelines* defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the proposed project. Irreversible impacts can also result from damage caused by environmental accidents associated with the proposed project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified.

Build-out of the proposed project would commit nonrenewable resources during project construction. During project operations, oil, gas, and other fossil fuels and nonrenewable resources would be consumed, primarily in the form of transportation fuel for project employees. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Kern County General Plan and the Willow Springs Specific Plan, as a matter of public policy, those commitments have been determined to be acceptable. The Kern County General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

### 5.4 Growth Inducement

The Kern County General Plan recognizes that certain forms of growth are beneficial, both economically and socially. Section 15126.2(d) of the *CEQA Guidelines* provides the following guidance on growth-inducing impacts:

*“A project is identified as growth-inducing if it “would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.”*

Growth inducement can be a result of new development that requires an increase in employment levels, removes barriers to development, or provides resources that lead to secondary growth. With respect to employment, the proposed project would not induce substantial growth. Construction staff not drawn from the local labor pool would stay in available accommodations (i.e. extended stay hotels, apartments, RV parks, homes for rent or sale) in the nearby communities of Rosamond, Mojave, and Lancaster. During the

operational phase, the proposed project would have up to 15 full- or part-time equivalent personnel who would commute to the project site for operational and maintenance activities. It is anticipated that the construction and operational workforce would commute to the sites each day from local communities, and the majority would likely come from the existing labor pool as construction workers travel from site to site as needed.

Although the proposed project would contribute to the energy supply, which supports growth, the development of power infrastructure is a response to increased market demand and does not induce new growth. Kern County planning documents already permit and anticipate a certain level of growth in the area of the proposed project and in the State as a whole, along with attendant growth in energy demand. It is this anticipated growth that drives energy-production projects, not vice versa. The proposed project would supply energy to accommodate and support existing demand and projected growth, but it would not foster any new growth. Therefore, any link between the proposed project and growth in Kern County would be speculative.

In *Kerncrest Audubon Society v. Los Angeles Department of Water and Power*, the analysis of growth-inducing effects contained in the EIR for the Pine Tree Wind Development Project was challenged. Plaintiffs argued that the discussion was too cursory to provide adequate information about how additional electricity generated by the project would sustain further growth in the Los Angeles area. The court held that the additional electricity that the project would produce was intended to meet the current forecast of growth in the Los Angeles area. As such, the wind development project would not cause growth, and so it was not reasonable to require a detailed analysis of growth-inducing impacts. In addition, EIRs for similar energy projects have contained similarly detailed analyses of growth-inducing impacts. Their conclusions that increasing the energy supply would not create growth has been upheld, because: (1) the additional energy would be used to ease the burdens of meeting existing energy demands within and beyond the area of the proposed project; (2) the energy would be used to support already-projected growth; or (3) the factors affecting growth are so multifarious that any potential connection between additional energy production and growth would necessarily be too speculative and tenuous to merit extensive analysis. Thus, as has been upheld in the courts, this level of analysis provided in this EIR is adequate to inform the public and decision makers of the growth-inducing impacts of the proposed project.

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## 6.1 Introduction

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a range of reasonable alternatives to the proposed project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts of the project while attaining most of the project's basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. This chapter describes alternatives considered but eliminated from further consideration (including the reasons for elimination), and compares the environmental impacts of several alternatives retained with those of the proposed project.

The following are key provisions of the *CEQA Guidelines* (Section 15126.6):

- The discussion of alternatives shall focus on alternatives to the project or its site that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede, to some degree, the attainment of the project objectives, or would be more costly.
- The No Project Alternative shall be evaluated, along with its impacts. The no-project analysis shall discuss the existing conditions at the time the notice of preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a “rule of reason.” Therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner that fosters meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in *CEQA Guidelines* Section 15126.6(f)(1)) are environmental impacts, site suitability, economic viability, social and political acceptability, technological capacity, availability of infrastructure, General Plan consistency, specific plan consistency, regulatory limitations, jurisdictional boundaries, and whether the Project Proponent could reasonably acquire, control, or otherwise have access to an alternative site. If an alternative has effects that cannot be reasonably identified, if its implementation is remote or speculative, and if it would not achieve the basic project objectives, it need not be considered in the EIR.

## 6.1.1 Significant Impacts of the Project after Mitigation

Implementation of the proposed project has the potential to have significant adverse effects on:

- Aesthetics (Project and Cumulative)
- Air Quality (Project and Cumulative)
- Biological Resources (Cumulative)
- Wildfire (Cumulative)

Even with the mitigation measures described in **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, of this EIR, impacts in these issue areas would be significant and unavoidable. Therefore, per the *CEQA Guidelines*, this section discusses alternatives that are capable of avoiding or substantially lessening effects on these resources. The significant and unavoidable impacts of the proposed project are discussed below.

### Aesthetics

Implementation of the proposed project would result in potentially significant visual impacts to the existing visual quality or character of the project site and surrounding area. As shown in the visual simulations in Section 4.1, *Aesthetics*, the visual change associated with project development would be somewhat muted when viewed from a distance greater than 0.5 miles. With distance, the effects associated with removal of vegetation from the project site would be masked by dense groupings of solar arrays. Similarly, thousands of solar arrays viewed from distance would begin to appear similar to other dark tones associated with distant terrain in the landscape and similar to the other solar arrays in the immediate vicinity. Substantial visual change would be evident from Champagne Avenue (KOP-1). Even with distance and diminished visibility, the visual change associated with the introduction of approximately 1,343 acres of solar development on currently undeveloped desert terrain would substantially alter the visual character of the area. Other solar and renewable energy developments are nearby and generally concentrated to the west of SR-14 where they do not currently dominate the landscape, but the proposed project would introduce additional manufactured elements, resulting in significant aesthetic impacts.

Mitigation Measures MM 4.1-1 through MM 4.1-3 would reduce visual impacts associated with the proposed project by limiting vegetation removal, planting native vegetation, providing privacy fencing, reducing the visibility of project features, and ensuring that the site is kept free of debris and trash. Native vegetation would be left in place around the proposed project area where feasible, allowing for a natural screening of project components. Furthermore, the color treatment of buildings would help these components to better blend in with the natural landscape. However, because there are no feasible mitigation measures that can be implemented to maintain the existing open and undeveloped desert landscape character of the project site, impacts to visual resources would remain significant and unavoidable.

### Air Quality

The construction emissions generated by the proposed project individually would exceed Eastern Kern Air Pollution Control District (EKAPCD) thresholds. With regard to project level construction emissions, Mitigation Measures MM 4.3-1 through MM 4.3-5 would reduce impacts related to NO<sub>x</sub> and PM<sub>10</sub> from diesel emissions, reduce dust generation, and address potential Valley Fever risk by implementing fugitive



dust control measures, establishing a public complaint protocol for excessive dust generation, and requiring Valley Fever–related training for construction workers. However, assuming a worst-case basis—that the construction schedules for all cumulative projects would overlap with each other and with the proposed project—cumulative impacts during construction could remain significant and unavoidable related to NO<sub>x</sub> and PM<sub>10</sub> emissions.

Operation of the proposed project would result in an overall net reduction of emissions by providing electricity that would replace energy produced from fossil fuels. Additionally, other cumulative projects within a 1- and 6-mile radius of the project site would not exceed EKAPCD’s significance thresholds for PM<sub>10</sub> because the California High Speed Rail Bakersfield to Palmdale Project would help drastically reduce criteria pollutant emissions within EKAPCD’s jurisdiction. Operation of the proposed project would not exceed the project-level regulatory thresholds and, therefore, would not contribute to a long-term cumulative increase in criteria pollutants. The proposed project’s incremental contribution to operational impacts would not be cumulatively considerable.

## Biological Resources

As large-scale energy projects and urbanization pressures increase within Kern County, impacts to biological resources in the region are expanding on a cumulative level. The Cumulative Projects List in **Chapter 3, Project Description**, of this EIR, lists other projects with similar effects on species that have been completed in the Antelope Valley—including the BigBeau Solar Project, Raceway Solar Project, Gem Energy Storage Project, and Bakersfield to Palmdale Section of the California High Speed Rail Authority—which are all within 6 miles of the project site. In general, bioregions are defined by physical and environmental features, including watershed boundaries and soil and terrain characteristics. Areas to the north and west of the Tehachapi Mountains and to the south of the San Gabriel Mountains are in a different bioregion and are separated from the project site by the mountain ranges. SR-14 at the eastern end of the western Antelope Valley also acts as a barrier to wildlife movement.

There are several special-status species, both plants and wildlife, that are currently within the project site and surrounding vicinity. Implementation of the proposed project and related projects has the potential to impact transient wildlife species—including burrowing owls, Swainson’s hawk, loggerhead shrike, golden eagle, yellow-headed blackbird, Vaux’s swift, peregrine falcon, northern harrier, mountain plover, other raptors, migratory birds, American badger, and desert kit fox—that may utilize habitat on the project site. The project site contains habitat that support plants, insects, rodents, and small birds that provide a prey base for raptors and terrestrial wildlife. In addition, based on the literature review and database search completed for the proposed project in the Biological Resources Technical Report (BRTR), the region is known to support a diversity of special-status species, most of which are not expected to utilize the project site on a transient basis, if at all. The project-specific impacts of the proposed project would be less than significant with implementation of Mitigation Measures MM 4.1-4 through MM 4.1-6, MM 4.4-1 through MM 4.4-20, and MM 4.9-2.

However, given the number of present and reasonably foreseeable future development projects in the Antelope Valley, the proposed project, when combined with other projects, would contribute to cumulative loss of habitat for special-status species. While implementation of mitigation measures would reduce impacts to habitat to less than significant for the proposed project, the proposed project, when combined with other related development projects proposed throughout the county, would cumulatively impact

foraging and nesting habitat for special-status species. Thus, cumulative impacts would be significant and unavoidable.

Common raven numbers have grown substantially in the past few decades in the western Mojave Desert. Ravens are predators of the desert tortoise and burrowing owl, and they compete with as well as prey on many special-status raptors and birds. The growth of the common raven population is directly attributed to human development and the subsidies it creates that support this adaptable species. When considered in the cumulative context of related projects, the proposed project's contribution to maintaining artificially high common raven populations, when combined with other related projects that threaten other desert wildlife, including special-status species, is potentially significant. However, with mitigation incorporated, the contribution of the proposed project would not be cumulatively considerable because project impacts to special-status wildlife would be reduced.

When considered in combination with other existing and reasonably foreseeable projects in the surrounding flat, open portions of Antelope Valley from SR-14 to the Tehachapi foothills, the proposed project has the potential to further reduce local wildlife movement. However, wildlife movement within the project site and area is likely diffuse, and flat, undeveloped lands would remain available to facilitate wildlife movement within the valley. Therefore, impacts concerning wildlife movement would be less than significant.

## Wildfire

The proposed project would not result in individual impacts related to wildfire, because it would not result in the impairment of an adopted emergency response plan; the exposure of project occupants to pollutant concentrations from a wildfire; require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or the exposure of people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. Mitigation Measure 4.13-1 would be implemented requiring a fire safety plan. However, given the proposed project's location in a high-wind rural area with limited infrastructure in the vicinity of the project site, the proposed project, when considered cumulatively with past, present, and reasonably foreseeable future projects in the vicinity, would have a significant and unavoidable cumulative impact related to wildfire.

## 6.2 Project Objectives

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (*CEQA Guidelines* Section 15126.6(c)). As described in **Chapter 3, Project Description**, of this EIR the following objectives have been established by the Project Proponent for the project and will aid decision makers in the review of the proposed project and associated environmental impacts:

- The project would establish solar PV power-generating facilities that are of a sufficient size and configuration to provide electricity to the California Independent System Operator (CAISO) grid and help to meet the increasing demand of the State of California for clean, renewable electrical power at a competitive cost.

- The project would enhance existing electrical distribution infrastructure and provide greater support to existing and future customer loads to ensure Southern California Edison can provide power to all customers.
- Support California’s efforts to reduce greenhouse gas (GHG) emissions consistent with the timeline established in 2006 under California Assembly Bill 32, the Global Warming Solutions Act of 2006, which requires the California Air Resources Board to reduce statewide emissions of GHGs to at least the 1990 emissions level by 2020. This timeline was updated in 2016 under Senate Bill (SB) 32, which requires that statewide GHG emissions are reduced to at least 40 percent below the statewide GHG emissions limit by 2030.
- Support California’s aggressive Renewable Portfolio Standard (RPS) Program consistent with the timeline established by SB 100 (“California Renewables Portfolio Standard Program: emissions of greenhouse gases”), as approved by the California legislature and signed by Governor Brown in September 2018, which increases the RPS in 2030 from 50 percent to 60 percent and establishes a goal of 100 percent RPS by 2045.
- Develop an economically feasible and commercially financeable solar and battery storage energy project.
- Expand the reach of renewable energy development through the creation of high-capacity battery energy storage systems (BESS), making solar more effective by storing energy after sunset and placing it on the grid.
- Provide green jobs to Kern County residents and the state of California.
- Site and design the project in an environmentally responsible manner which includes:
  - Locating generation facilities in areas which receive intense solar radiation;
  - Using existing electrical transmission facilities, rights-of-way, roads, and other existing infrastructure where practical;
  - Minimizing water use; and,
  - Reducing greenhouse gas emissions.

### 6.3 Overview of the Proposed Project

The proposed project would include the development of a 1,343 site with a solar facility and associated infrastructure that would generate up to 270 megawatts (MW) of renewable electrical energy, including a BESS capable of storing approximately 270 MW, or 1,080 megawatt-hours (MWh) of storage capacity. The proposed project includes PV panels, inverters, converters, generators, foundations, transformers, and preferred and optional gen-tie routes to the Rosamond or Whirlwind Substations, only one of which would be constructed. The proposed project also includes laydown yards, a meteorological station, a microwave/communication tower, and a substation. The proposed project site would develop modules using either fixed tilt or tracker technology.

The proposed project would include the following permanent components: PV solar modules and trackers, power conversion stations (inverters), BESS, substation, gen-tie routes and electrical collection system, supervisory control and data acquisition system, microwave/radio tower, lighting, stormwater management, water and wastewater, access and internal roads, security, and fencing. See **Chapter 3, Project Description**, of this EIR for a detailed project description.

## 6.4 Overview of Alternatives to the Project

Under CEQA, in California Public Resources Code Section 21002.1(a), the identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process and is required to ensure the consideration of ways to mitigate or avoid the significant environmental effects of a project. Based on the significant environmental impacts of the proposed project, the aforementioned objectives established for the proposed project, and the feasibility of the alternatives considered, four alternatives, including the No Project Alternative as required by CEQA, are considered in this chapter and summarized in **Table 6-1, Summary of Development Alternatives**. The Environmentally Superior Alternative, as required by CEQA, is described in Section 6.8, *Environmentally Superior Alternative*.

### 6.4.1 Alternative 1: No Project Alternative

The *CEQA Guidelines* require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the proposed project versus a No Project Alternative. Accordingly, Alternative 1, the No Project Alternative, assumes that the development of the 270 MW PV solar facility and associated facilities on the 1,343-acre site would not occur. No collection lines would be constructed. The No Project Alternative would not require a conditional use permit (CUP) for construction and operation of a 270 MW solar project and associated facilities. Amendments to the Willow Springs Specific Plan land use map and circulation element and public easement vacations would not be required. The No Project Alternative would maintain the current zoning, land use classifications, and existing land uses, which consist mostly of undeveloped desert vegetation. No physical changes would be made to the project site.

### 6.4.2 Alternative 2: Specific Plan and Zoning Buildout Alternative

Alternative 2, the Specific Plan and Zoning Buildout Alternative, would develop the project site to the maximum intensity allowed under the existing Kern County General Plan and Willow Springs Specific Plan land use and zoning classifications, and the proposed project would not be permitted or constructed. Approximately 500 acres of the project site (approximately 37 percent) is within the Willow Springs Specific Plan (WSSP).

According to the Kern County General Plan, the Intensive Agriculture (minimum 20-acre parcel size) land use designation applies to areas devoted to the production of irrigated crops or having a potential for such use. Typical uses include irrigated cropland; orchards; vineyards; horse ranches; growing nursery stock, ornamental flowers, and Christmas trees; fish farms; beekeeping; ranch and farm facilities and related uses; one single-family dwelling unit; cattle feed yards; dairies; dry land farming; livestock grazing; water storage; groundwater recharge areas; mineral, aggregate, and petroleum exploration and extraction; hunting clubs; wildlife preserves; farm labor housing; public utility uses; and agricultural industries. The minimum allowable parcel size in the Intensive Agriculture category is 20 acres gross. Approximately 542 acres of the project site have the Intensive Agriculture land use designation.

The Extensive Agriculture (minimum 20-acre parcel size) land use designation applies to agricultural uses involving large amounts of land with relatively low value-per-acre yields. Typical uses include livestock grazing, farming, and woodlands. The minimum allowable parcel size in the Extensive Agriculture category

is 20 acres gross. Approximately 300 acres of the project site have the Extensive Agriculture land use designation.

The Flood Hazard land use designation is for land identified on the FIRM of the FEMA and floodplain delineating maps that have been approved by the Kern County Public Works Department: Floodplain Management Section as Special Flood Hazard Areas (Zone A). Approximately 158 acres of the project site have the Zone A land use designation. Solar facilities are an allowable use within each of the General Plan designations listed above.

The zoning districts are defined in Title 19 of the Zoning Ordinance of Kern County. The identified 22 parcels that make up the project site have a mix of zone classifications. Approximately 843 acres contain the Exclusive Agriculture (A) zoning designation. The purpose of the 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. Solar facilities are allowed on land zoned for agricultural use with approval of a CUP in accordance with Section 19.12.030 of the Kern County Zoning Ordinance. Additionally, approximately 500 acres of the project site are zoned Estate (E). The purpose of the E District is to designate areas suitable for larger lot residential living environments. Uses are limited to those typical of and compatible with quiet residential neighborhoods.

The WSSP land use designations in the project site include Map Code 5.3 (10 Dwelling Units per Gross Acre) (468 acres of the project site), Map Code 5.6 (2.5 Gross Acres per Dwelling Unit) (17 acres of the project site), and Map Code 6.2 (General Commercial) (15 acres of the project site). The Other Facilities land use designation applies to existing facilities used for public or semipublic services. According to WSSP Map Codes 5.1 through 5.8, land use designation distributes residential uses according to density designations. Each density category indicates the maximum density within the designation. The Map Code 5.3 (10 Units per Gross Acre) land use designation applies to residential uses where the minimum allowable development is 10 dwelling units per gross acre. The Map Code 5.6 (2.5 Gross Acres per Dwelling Unit) land use designation applies to residential uses where the minimum allowable parcel size is 2.5 gross acres per dwelling unit. The Map Code 6.2 (General Commercial) land use designation is for areas devoted to retail and service facilities of less intensity than regional facilities, providing a broad range of goods and services that serve the day-to-day needs of nearby residents and neighborhoods. No solar facilities would be developed under this alternative.

### **6.4.3 Alternative 3: Reduced Acreage Alternative**

Under Alternative 3, the Reduced Acreage Alternative, the project site would be reduced by approximately 50 percent. This alternative would reduce the proposed project's footprint from 1,343 acres to 672 acres. Solar panels and associated infrastructure would be located in the reduced project site. The reduced project acreage under this alternative is expected to contain enough land to construct a solar array field and related infrastructure capable of generating approximately 135 MW of renewable energy and storing 540 MWh of energy due to the proportional reduction in project size. This would result in the corresponding reduction in renewable energy output and storage capacity from the proposed project by 50 percent. Similar to the proposed project, this alternative would still require the approval of a CUP application (to allow for the construction and operation of 135 MW photovoltaic electrical generating facility [Section 19.12.030.G] with associated facilities in an A District and to allow a communication tower [Section 19.12.030.F] in the A Zone District), a Specific Plan Amendment application (to allow changes to land use classification and

to eliminate future road reservations), and one Nonsummary Vacation application (vacation of public access easements).

#### **6.4.4 Alternative 4: No Ground-Mounted Utility-Solar Development Alternative: Distributed Commercial and Industrial Rooftop Solar Only**

Alternative 4, the No Ground-Mounted Utility-Solar Development Alternative, would involve the development of a number of geographically distributed small to medium solar PV systems (100 kWh to 1 MW) within existing developed areas, typically on the rooftops of commercial and industrial facilities throughout the Antelope Valley. Under this alternative, no new land would be developed or altered. However, depending on the type of solar modules installed and the type of tracking equipment used (if any), a similar or greater amount of acreage (i.e., greater than 1,343 acres of total rooftop area) may be required to attain the proposed project's capacity of 270 MW of solar PV generating capacity. Because of space or capital cost constraints, many rooftop solar PV systems would be fixed-axis systems or would not include the same type of sun-tracking equipment that would be installed in a freestanding utility-scale solar PV project and, therefore, would not attain the same level of efficiency with respect to solar PV generation. Alternative 4 would generate 270 MW of electricity, but it would be for on-site use only. This alternative assumes that rooftop development would occur primarily on commercial and industrial structures due to the greater availability of large, flat roof areas necessary for efficient solar installations. Similar to the proposed project, this alternative would be designed to operate year-round using PV panels to convert solar energy directly to electrical power. Power generated by such distributed solar PV systems would typically be consumed on site by the commercial or industrial facility without requiring the construction of new electrical substation or transmission facilities.

**Table 6-1**, *Summary of Development Alternatives*, provides a summary of the relative impacts and feasibility of each alternative. A complete discussion of each alternative is also provided below.

**TABLE 6-1: SUMMARY OF DEVELOPMENT ALTERNATIVES**

Alternative	Description	Basis for Selection and Summary of Analysis
Project	Construction and operation of a solar facility on approximately 1,343 acres would generate up to 270 MW of electricity with the capacity to store up to 1,080 MWh of energy. The proposed project includes PV panels, inverters, converters, generators, foundations, transformers, and preferred and optional gen-tie routes to the Rosamond or Whirlwind Substations, only one of which would be constructed. The project also includes laydown yards, a meteorological station, a microwave/communication tower, and a substation. The proposed project site would develop modules using either fixed tilt or tracker technology.	N/A
Alternative 1: No Project Alternative	No development would occur on the project site. The project site would remain unchanged.	<ul style="list-style-type: none"> <li>• Required by CEQA</li> <li>• Avoids need for CUPs, SPAs, ZCCs, and requests to vacate public access easements</li> <li>• Avoids all significant and unavoidable impacts with the exception of cumulative wildfire impacts</li> <li>• Greater impacts to GHGs</li> <li>• Less impact in all remaining environmental issue areas</li> <li>• Does not meet any of the project objectives</li> </ul>
Alternative 2: Specific Plan and Zoning Buildout Alternative	Project site would be developed to the maximum intensity allowed under the Kern County General Plan land use designations and zoning classifications and other existing applicable restrictions.	<ul style="list-style-type: none"> <li>• Avoids need for CUPs and SPAs, ZCCs, and requests to vacate public access easements</li> <li>• Similar impacts to biological resources, hazards and hazardous materials</li> <li>• Less impact to aesthetics, agricultural and forestry resources, and land use and planning</li> <li>• Greater overall impacts in all remaining environmental issue areas</li> <li>• Does not meet any of the project objectives</li> </ul>

Alternative 3: Reduced Acreage Alternative	Construction and operation of one solar facility on approximately 672 acres. This alternative would construct a solar array field capable of generating approximately 135 MW of electricity and storing 540 MWh of electricity, thereby reducing the project's renewable energy output by 50 percent. The project site would require approval of two CUPs, SPAs, ZCCs, and one request to vacate public access easements.	<ul style="list-style-type: none"> <li>• Similar impacts to greenhouse gas emissions, hazards and hazardous materials, land use and planning, noise, public services, transportation and traffic, and utilities and service systems</li> <li>• Decreased GHG offset benefits to meet project objectives</li> <li>• Less impact in all remaining environmental issue areas</li> <li>• Does not meet all the project objectives</li> </ul>
Alternative 4: No Ground-Mounted Utility-Solar Development Alternative: Distributed Commercial and Industrial Rooftop Solar Only	The construction of 270 MW of PV solar distributed on rooftops throughout the Antelope Valley. Electricity generated would be for on-site use only.	<ul style="list-style-type: none"> <li>• Avoids need for solar facility CUPs, telecommunication tower CUPs, SPAs, ZCCs, and requests to vacate public access easements at the project site but may require other entitlements (such as a CUP or variance) on other sites</li> <li>• Avoids significant and unavoidable impacts associated with aesthetics, air quality, and biological resources</li> <li>• Wildfire impacts would still be a cumulatively significant</li> <li>• Greater impacts to GHG emissions land use and planning, and noise</li> <li>• Similar impacts energy</li> <li>• Less impact in all remaining issue areas</li> <li>• Does not meet all the project objectives</li> </ul>

## 6.5 Alternatives Considered and Rejected

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (*CEQA Guidelines* Section 15126.6(c)). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (*CEQA Guidelines* Section 15126(f)(2)). Kern County considered several alternatives to reduce impacts to aesthetics (project and cumulative), air quality (project and cumulative), biological resources (cumulative), and wildfire (cumulative). Per CEQA, the lead agency may make an initial determination as to which alternatives are feasible and warrant further consideration, and which are infeasible. The following alternatives were initially considered but were eliminated from further consideration in this EIR because they do not meet project objectives or were infeasible:

- Wind Energy Project Alternative
- Industrial Power Plant Alternative
- Alternative Site Alternative



## 6.5.1 Wind Energy Project Alternative

The Wind Energy Project Alternative would involve the use of wind energy as an alternative to development of a solar site. Similar to solar power, energy production from wind is an alternative to energy production from coal, oil, or nuclear sources. Wind energy provides the following benefits:

- It is a renewable and infinite resource.
- It is free of any emissions, after installation, including carbon dioxide (GHG).
- It is a free resource after the capital cost of installation (excluding maintenance).

In addition, energy production from wind power would not require the significant water usage associated with coal, nuclear, and combined-cycle sources. Turbines used in wind farms for commercial production of electric power are usually three-bladed units that are pointed into the wind by computer-controlled motors. The wind farm would consist of a group of wind turbines placed where electrical power is produced. The individual turbines would be interconnected with a medium-voltage power collection system and a communications network. At a substation, the medium-voltage electrical current would be increased through a transformer before connection to the high-voltage transmission system. Compared with traditional energy sources, the environmental effects of wind power are relatively minor. However, wind farms would not decrease short-term construction-related air emissions. Wind turbines would also have the potential to affect avian species in the local area. In addition, in order for wind turbines to produce an equivalent 270 MW of power that the proposed project would produce, the alternative would require more space than what the project site current accommodates and, consequently, the project site would need to be expanded.

As noted above, some of the project objectives are to develop a solar project that will help meet the increasing demand for clean, renewable electrical power, as well as help California meet its statutory and regulatory goals of generating more renewable power with minimum potential for environmental effects by using proven and established PV technology that is efficient, requires low maintenance and is recyclable. Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce significant environmental effects. Therefore, this alternative was eliminated from further consideration because:

- It would substantially increase the significant aesthetic impacts associated with the project because wind turbines would be much taller than solar panels, require FAA lighting, and are more visible from many viewpoints.
- It may result in additional/greater biological resources impacts to avian species than the project.
- It may generate long-term noise impacts to nearby sensitive receptors from rotating turbine blades.
- It may result in increased land use and planning impacts associated with the project due to the need for an increased project site.

## 6.5.2 Industrial Power Plant Alternative

This alternative would involve the development of a natural gas-fired power plant or plants (equivalent to 270 MW) in Kern County. Fossil fuel-powered plants are designed on a large scale for continuous operation. However, byproducts of industrial power plant operation need to be considered in both design and operation. When waste heat that results from the finite efficiency of the power cycle is not recovered

and used as steam or hot water, it must be released to the atmosphere, and often uses a cooling tower as a cooling medium (especially for condensing steam). The flue gas from combustion of the fossil fuels is discharged to the air and contains carbon dioxide and water vapor as well as other substances, such as nitrogen, nitrogen oxides, and sulfur oxides. Furthermore, unlike the proposed project, fossil-fuel-powered plants are major emitters of GHGs. In addition, industrial power plants generally involve the construction of large structures, such as cooling towers and gas stacks, as well as a large number of employees to operate the facility on a 24/7 basis 365 days a year. Accordingly, the development of an industrial power plant would typically result in greater adverse impacts related to: (1) aesthetics and the local visual setting of the project area; (2) air quality and GHG emissions; (3) land use and planning conflicts with the rural development of the surrounding area; (4) noise from the plant operations; (5) traffic from increased employment at the facility; and (6) demand on public utilities, including water and waste disposal.

As noted above, some of the objectives for the proposed project are to develop a solar project that would help meet the increasing demand for clean, renewable electrical power as well as help California meet its statutory and regulatory goals of generating more renewable power with minimum potential for environmental effects. Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce significant environmental effects. Therefore, this alternative was eliminated from further consideration because:

- It would result in additional/greater impacts than the proposed project including aesthetics, air quality, GHG emissions, land use and planning, noise, transportation and traffic, and public utilities, including water use and disposal.
- Depending on siting, it may also result in greater biological resources impacts than the project.
- It would not contribute to the statewide renewable energy and GHG reduction objectives as this alternative would use non-renewable energy to produce electricity.

### 6.5.3 Alternative Site

This alternative would involve the development of the proposed project on another site located within Kern County, other than constructing rooftop distributed generation systems. Although undetermined at this time, the alternative project site would likely be located in the Antelope Valley desert region of the County. This alternative is assumed to involve construction of a 270 MW PV solar facility and 1,080 MWh BESS on a site totaling 1,343 acres. *CEQA Guidelines* Section 15126.6(f)(2)(a) states that the key and initial step in considering an alternative site is whether “any of the significant effects of the project would be avoided or substantially lessened” in relocating the project, while remaining consistent with the same basic objectives of the proposed project.

The Antelope Valley has attracted renewable energy development applications that are being proposed for vacant land or land with a history of agricultural uses. The availability of alternative sites is constrained by the renewable energy market itself. While other sites with similar size, configuration, and use history may exist in the Antelope Valley, alternative project sites in the area are likely to have similar project and cumulatively significant impacts after mitigation, including cumulatively significant impacts to aesthetics, air quality, wildfire, and biological resources. This is based on the known general conditions in the area and the magnitude of the proposed project.

In addition, alternative sites for the proposed project are not considered “potentially feasible” because there are no suitable sites within the control of the Project Proponent that would reduce project impacts. The

potential amount of available, similar sites is further reduced because, unlike the proposed project, alternative sites may not include sites with close proximity to transmission infrastructure. As noted above, alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce significant environmental effects. Therefore, this alternative was eliminated because it would not avoid or substantially reduce the significant environmental effects of the proposed project.

## 6.6 Analysis Format

In accordance with *CEQA Guidelines* Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the proposed project. Furthermore, each alternative is evaluated to determine whether the project objectives identified in **Chapter 3, Project Description**, of this EIR would be mostly attained by the alternative. The project's impacts that form the basis of comparison in the alternatives analysis are those impacts which represent a conservative assessment of project impacts. The evaluation of each of the alternatives follows the process described below.

- a) The net environmental impacts of the alternative after implementation of reasonable mitigation measures are determined for each environmental issue area analyzed in this EIR.
- b) Post-mitigation significant and less than significant environmental impacts of the alternative and the project are compared for each environmental issue area as follows:
  - Less: Where the impact of the alternative after feasible mitigation would be clearly less adverse than the impact of the project, the comparative impact is said to be “less.”
  - Greater: Where the impact of the alternative after feasible mitigation would be clearly more adverse than the impact of the project, the comparative impact is said to be “greater.”
  - Similar: Where the impacts of the alternative after feasible mitigation and the project would be roughly equivalent, the comparative impact is said to be “similar.”
- c) The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose for the project, as well as the project's basic objectives would be substantially attained by the alternative.

**Table 6-2, Comparison of Alternatives**, provides a summary and side-by-side comparison of the proposed project with the impacts of each of the alternatives analyzed. Please note that in Alternatives 1 through 4 in the table, the references to “less, similar, or greater,” refer to the impact of the alternative compared to the proposed project, and the impacts “no impact (NI), less than significant (LTS), or significant and unavoidable (SU),” in the parentheses refer to the significant impact of the specific alternative.

**TABLE 6-2: COMPARISON OF ALTERNATIVES**

<b>Environmental Resource</b>	<b>Proposed Project</b>	<b>Alternative 1: No Project Alternative</b>	<b>Alternative 2: Specific Plan and Zoning Buildout Alternative</b>	<b>Alternative 3: Reduced Acreage Alternative</b>	<b>Alternative 4: No Ground-Mounted Utility-Solar Alternative: Distributed Commercial and Industrial Rooftop Solar Only</b>
Aesthetics	Significant and Unavoidable (project and cumulative)	Less (NI)	Less (LTS)	Less (SU)	Less (LTS)
Agricultural and Forestry Resources	Less Than Significant	Less (NI)	Less (NI)	Less (LTS)	Less (NI)
Air Quality	Less Than Significant with Mitigation (project); Significant and Unavoidable (cumulative construction)	Less (NI)	Greater (SU)	Less (SU)	Less (LTS)
Biological Resources	Less Than Significant with Mitigation (project); Significant and Unavoidable (cumulative)	Less (NI)	Similar (SU)	Less (SU)	Less (LTS)
Cultural Resources	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Less (LTS)	Less (LTS)
Energy	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Less (LTS)	Similar (LTS)
Geology and Soils	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Less (LTS)	Less (LTS)
Greenhouse Gas Emissions	Less Than Significant	Greater (LTS)	Greater (LTS)	Greater (LTS)	Greater (LTS)
Hazards and Hazardous Materials	Less Than Significant with Mitigation	Less (NI)	Similar (LTS)	Similar (LTS)	Less (LTS)
Hydrology and Water Quality	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Less (LTS)	Less (LTS)
Land Use and Planning	Less Than Significant with Mitigation	Less (NI)	Less (NI)	Similar (LTS)	Greater (LTS)
Noise	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Similar (LTS)	Similar (LTS)

**TABLE 6-2: COMPARISON OF ALTERNATIVES**

<b>Environmental Resource</b>	<b>Proposed Project</b>	<b>Alternative 1: No Project Alternative</b>	<b>Alternative 2: Specific Plan and Zoning Buildout Alternative</b>	<b>Alternative 3: Reduced Acreage Alternative</b>	<b>Alternative 4: No Ground-Mounted Utility-Solar Alternative: Distributed Commercial and Industrial Rooftop Solar Only</b>
Public Services	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Similar (LTS)	Less (LTS)
Transportation and Traffic	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Similar (LTS)	Less (LTS)
Tribal Cultural Resources	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Less (LTS)	Less (NI)
Utilities and Service Systems	Less Than Significant with Mitigation	Less (NI)	Greater (LTS)	Similar (LTS)	Less (LTS)
Wildfire	Less Than Significant with Mitigation (project); Significant and Unavoidable (cumulative)	Less (SU)	Greater (SU)	Less (SU)	Less (SU)
Meet Project Objectives?	All	None	None	Partially	Partially
Reduce Significant and Unavoidable Impacts?	N/A	All	Some	None	All

NI = No Impact  
 LTS = Less Than Significant  
 SU = Significant and Unavoidable

## 6.7 Impact Analysis

### 6.7.1 Alternative 1: No Project Alternative

#### Environmental Impact Analysis

##### *Aesthetics*

Under the No Project Alternative, no development would take place on the project site. The project site would remain in its current state as undeveloped land and no change to the scenic vistas or existing visual character of the site would occur. Impacts to scenic resource and daytime and nighttime views in the area would not occur. Therefore, there would be no impact, and the No Project Alternative would result in less impact to aesthetics compared to the proposed project.

##### *Agricultural and Forestry Resources*

Under the No Project Alternative, the project site would remain undeveloped and solar panels would not be installed. The project site would remain in its current state, as undeveloped land containing desert vegetation. As such, the No Project Alternative would not involve changes to the existing environment which could result in the conversion of Farmland or forest land to non-agricultural or non-forest uses. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to agricultural and forestry resources compared to the proposed project.

##### *Air Quality*

Under the No Project Alternative, the project site would remain undeveloped and there would be no construction activities or operational activities that would generate air emissions. The No Project Alternative would not contribute to a cumulative net increase of criteria pollutant in the projects' region. Therefore, there would be no impact to air quality, and the No Project Alternative would result in less impact related to air quality compared to the proposed project.

##### *Biological Resources*

Under the No Project Alternative, the project site would remain undeveloped and existing biological resources on the project site, including special-status plant and wildlife species, would remain undisturbed since no construction or operation would occur. The project site would remain in its current state, as undeveloped land containing desert vegetation, and would not contribute to a cumulative loss of transient wildlife species—including burrowing owls, Swainson's hawk, loggerhead shrike, golden eagle, yellow-headed blackbird, Vaux's swift, peregrine falcon, northern harrier, mountain plover, other raptors, migratory birds, Crotch bumblebee, American badger, and desert kit fox—that may utilize habitat on the project site. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to biological resources compared to the proposed project.

### ***Cultural Resources***

Under the No Project Alternative, the project site would remain undeveloped and no ground disturbing activities would occur. Therefore, disturbance to potential historical resources, archeological resources, or human remains located on site would not occur and this alternative would not require mitigation. There would be no impact, and the No Project Alternative would result in less impact related to cultural resources compared to the proposed project.

### ***Energy***

Under the No Project Alternative, the project site would remain undeveloped and no energy consumption activities would occur. As such, the No Project Alternative would not result in wasteful, inefficient, or unnecessary consumption of energy resources and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to energy compared to the proposed project.

### ***Geology and Soils***

Under the No Project Alternative, the project site would remain undeveloped and no ground disturbance would occur. As such, the No Project Alternative would not directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault or strong seismic ground shaking; result in substantial soil erosion or loss of topsoil; or directly or indirectly destroy a unique paleontological resource or unique geologic feature. Therefore, there would be no impact, and the No Project Alternative would result in fewer impacts related to geology and soils compared to the proposed project.

### ***Greenhouse Gas Emissions***

Under the No Project Alternative, emissions associated with construction and operation of a solar energy facility would not occur. Therefore, those emissions that contribute to GHGs would be eliminated and no impacts would occur related to generating emissions that may have a significant impact on the environment or consistency with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. However, the potential offset of GHG emissions resulting from operation of the solar power generating facility would not be realized. Impacts would be less than significant under this alternative; however, impacts from implementation of this alternative would be greater than those of the proposed project because it would not offset GHG emissions.

### ***Hazards and Hazardous Materials***

Under the No Project Alternative, the project site would remain undeveloped, and no construction or operational activities would occur. The project site would remain in its current condition. As such, this alternative would not involve use, transport, and disposal of hazardous materials associated with the project site; 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; or expose people or structures to significant risk of loss, injury, or death involving wildland fires. Therefore, there would no impact, and the No Project Alternative would result in less impact related to hazards and hazardous materials compared to the proposed project.

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### ***Hydrology and Water Quality***

Under the No Project Alternative, the project site's existing hydrology and water quality would remain unchanged as no development or ground disturbance would occur on the project site. As such, this alternative would not violate water quality standards or waste discharge requirements; substantially alter the existing drainage pattern of the site or area in a manner that would substantially increase the rate or amount of surface runoff which would result in flooding on site or off site; create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage system; contribute to inundation by a flood hazards, tsunami, or seiche; or conflict with or obstruct implementation of a water quality control plan or groundwater management plan. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to hydrology and water quality compared to the proposed project.

### ***Land Use and Planning***

The No Project Alternative would not develop any new uses at the project site, and would thus not require any of the submitted land use applications (CUP, SPA, ZCC, and requests to vacate public access easements). Current land uses on the site are consistent with the zoning and Willow Springs Specific Plan land use classifications. As such, the No Project Alternative would not cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to land use and planning compared to the proposed project.

### ***Noise***

Under the No Project Alternative, the project site would remain undeveloped. Noise sources from construction and operation would not be present on site, and existing noise conditions would remain the same. As such, the No Project Alternative would not result in generation of a substantial temporary or permanent increase in ambient noise levels or generate excessive groundborne vibration. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to noise compared to the proposed project.

### ***Public Services***

Under the No Project Alternative, the project site would remain undeveloped and no new demand for fire or police protection services would occur. Furthermore, no new demand for schools, parks, or other government facilities would occur. As such, the No Project Alternative would not result in the need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, or other government facilities. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to public services compared to the proposed project.

### ***Transportation and Traffic***

Under the No Project Alternative, the solar facilities would not be constructed and this alternative would not introduce construction and operational-related trips. Existing traffic patterns and volumes on nearby roadways would remain unchanged. As such, the No Project Alternative would not conflict with a program, ordinance, or policy addressing the circulation system, including transit, roadway, or bicycle and pedestrian



facilities and would not conflict or be inconsistent with *CEQA Guidelines* Section 15064.3(b). In addition, the No Project Alternative would not substantially increase hazards due to a geometric design feature or result in inadequate emergency access. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to transportation and traffic than the proposed project.

### ***Tribal Cultural Resources***

Under the No Project Alternative, the project site would remain undeveloped and no ground-disturbing activities would occur. According to record searches and tribal resource consultations, San Manuel Band of Mission Indians (San Manuel) identified sensitivity for potential tribal cultural resources near the project site. The No Project Alternative would not involve construction in the vicinity of the San Manuel tribal cultural resource, and the No Project Alternative would not cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe that is 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 as a resource determined by the lead agency. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to tribal cultural resource compared to the proposed project.

### ***Utilities and Service Systems***

Under the No Project Alternative, the solar facilities would not be constructed and there would be no new demand for utilities and service systems on the project site. As such, the No Project Alternative would not 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; impact water supplies; generate solid waste in excess of State or local standards; or conflict with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, there would be no impact, and the No Project Alternative would result in less impact related to utilities and service systems compared to the proposed project.

### ***Wildfire***

Under the No Project Alternative, the solar facilities would not be constructed. As such, the No Project Alternative would not expose occupants to pollutant concentrations from a wildfire; require the installation or maintenance of associated infrastructure; or expose people or structures to significant risks, in each case related to the proposed project. However, under the No Project Alternative, the development of other past, present, or reasonably foreseeable future projects in the vicinity would result in a cumulatively significant and unavoidable impact to the risks associated with wildfire. Therefore, there would be no impact for the No Project Alternative on an individual basis, but on a cumulative basis with other past, present, or reasonably foreseeable projects, the No Project Alternative (as well as the proposed project) would result in significant and unavoidable impact to risks associated with wildfire.

## **Comparison of Impacts**

The No Project Alternative would avoid creating nearly all of the significant and unavoidable impacts associated with the proposed project. This alternative would result in less impact to all remaining environmental issue areas with the exception of wildfire and GHGs; since this alternative would not offset

GHGs through the operation of a solar energy facility, impacts to GHGs would be greater under this alternative.

## Relationship to Project Objectives

The No Project Alternative would not achieve any of the project objectives listed above in Section 6.2, *Project Objectives*, including assisting California in reducing GHG emissions. Although this alternative would create less environmental impacts overall, the objectives that shape the proposed project would not be realized under this alternative.

## 6.7.2 Alternative 2: Specific Plan and Zoning Buildout Alternative

### Environmental Impact Analysis

#### *Aesthetics*

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed, and solar energy would not be generated on the site. Development of the project site with agricultural uses and residential uses at the density permitted by the Kern County General Plan and Willow Springs Specific Plan and Zoning Districts would be visually similar to the types of uses that are in the project area, and thus potential impacts to visual character would be reduced under this alternative. Development of residential uses would alter existing views of the project area; however, these single-family dwellings would be spread out in the project area. Furthermore, the development of single-family dwellings would generally cause less visual quality impacts than the development of uniform, large-scale solar facilities, which would remove large areas of natural vegetation. Single-family housing may be able to avoid such areas and build in areas that are less impactful, and significant and unavoidable impacts related to visual resources would be eliminated under this alternative. Therefore, impacts would be less than significant under the General Plan/Specific Plan and Zoning Buildout Alternative, and this alternative would result in less aesthetic impact compared to the proposed project.

#### *Agriculture and Forestry Resources*

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site. Under this alternative, there would be no zoning change, and approximately 843 acres of land would be developed for agricultural uses, increasing the total amount of active agricultural land in Kern County. Development of a portion of the project site with residential uses would not result in the conversion of designated Farmland to nonagricultural uses because it would be consistent with the existing zoning. As noted in Section 4.2, *Agricultural Resources*, the project site is not under a Williamson Act contract, so development under this alternative would not conflict with a Williamson Act contract. Furthermore, development under Alternative 2 would be consistent with the existing zoning,

and the portions of the project site designated as A (Exclusive Agriculture) would remain. Therefore, there would be no impact under the Specific Plan and Zoning Buildout Alternative, and this alternative would result in less impact to agricultural resources than the proposed project.

### **Air Quality**

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site. Both the proposed project and the General Plan and Zoning Buildout Alternative would result in short-term construction emissions and would require implementation of mitigation measures to reduce the severity of construction-related emissions. The conversion of the project site to agricultural uses would require heavy equipment similar to the proposed project. Thus, similar to the proposed project, this alternative would require implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2 to reduce the severity of construction-related emissions. However, similar to the proposed project, impacts would remain significant and unavoidable for cumulative construction impacts. Operational emissions associated with the proposed agricultural uses under the Specific Plan and Zoning Buildout Alternative would be greater due to routine emissions associated with agricultural vehicles, livestock emissions, residential uses, etc. Given this increase, this alternative would result in greater air quality impacts in the air basin than the proposed project.

As it relates to impacts on implementation of the applicable air quality plan, project cumulative construction impacts would be significant and unavoidable. Similarly, the Specific Plan and Zoning Buildout Alternative would result in construction emissions of a magnitude that would obstruct the EKAPCD's air quality planning goals. Therefore, similar to the proposed project, cumulative impacts would be significant and unavoidable.

Implementation of this alternative would expose sensitive receptors to substantial pollutant concentrations. In particular, during construction of this alternative, it is possible that on-site workers could be exposed to *Coccidioides immitis*, the fungal spore that has potential to cause Valley Fever, as fugitive dust is generated during construction. However, dust-minimizing techniques implemented through Mitigation Measure MM 4.3-3 would reduce these impacts to less than significant. As with the proposed project, the Specific Plan and Zoning Buildout Alternative would result in less than significant impacts related to toxic air contaminants, localized pollutant concentrations, and asbestos.

Overall, even with implementation of similar mitigation proposed for the project, impacts to air quality under the Specific Plan and Zoning Buildout Alternative would likely remain significant and unavoidable for cumulative construction impacts and result in greater overall impacts to air quality than the proposed project due to the greater operational emissions associated with agricultural uses.

### **Biological Resources**

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site.

Due to the residential component of the Specific Plan and Zoning Buildout Alternative, similar to the proposed project, development would occur under this alternative and, as such, there is the potential to impact biological resources. Like the proposed project, Alternative 2 would be required to implement mitigation measures to avoid such impacts. However, development under this alternative would be less given that portions of the project site would remain zoned as A (Exclusive Agriculture). Conversion of the undeveloped site to agricultural uses would affect biological resources on the project site as this alternative would replace all native vegetation with agricultural crops or grazing areas for these areas of the project site. Agricultural uses would also result in increased human presence as opposed to the unmanned solar facility that is only visited occasionally for maintenance and panel washing.

Furthermore, the single-family dwellings would be distributed across the project site. Given this space, it is likely that impacts to biological resources, particularly the Joshua trees that would be affected by the project, would be less than the proposed project. In particular, with regard to candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, as with the proposed project, the Specific Plan and Zoning Buildout Alternative would have an impact to transient wildlife species—including burrowing owls, Swainson’s hawk, loggerhead shrike, golden eagle, yellow-headed blackbird, Vaux’s swift, peregrine falcon, northern harrier, mountain plover, other raptors, migratory birds, American badger, and desert kit fox—that may utilize habitat on the project site. With implementation of Mitigation Measures MM 4.4-1 through MM 4.4-14, impacts would be reduced to less than significant.

With regard to impacts on any riparian habitat or other sensitive natural community, or jurisdictional waters, identified in local or regional plans, policies, or regulations or by CDFW or USFWS, construction activities could result in significant impacts related to potential jurisdictional features to ephemeral drainages within the project site. However, as with the proposed project, implementation of Mitigation Measures MM 4.4-14 through MM 4.4-19 and MM 4.9-2, would reduce impacts to less than significant under the Specific Plan and Zoning Buildout Alternative.

Implementation of the above Mitigation Measure 4.4-20 would also reduce potential impacts related to the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, and consistency with local policies and ordinances protecting biological resources. The Specific Plan and Zoning Buildout Alternative, as with the proposed project, would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Based on the above, project-level impacts under the Specific Plan and Zoning Buildout Alternative would be less than significant with implementation of mitigation and similar to those of the proposed project. However, cumulatively, this alternative would still result in significant and unavoidable impacts to biological resources; regardless of the type of development, biological resources are being impacted throughout the Antelope Valley. Therefore, the Specific Plan and Zoning Buildout Alternative would result in similar impacts related to biological resources when compared to the proposed project.

### ***Cultural Resources***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site.

To convert portions of the project site to agricultural uses, this alternative would involve greater ground disturbance as opposed to the proposed project that would have some no build areas. Ground-disturbing activities associated with the proposed project have the potential to encounter undocumented archaeological resources that could qualify as historical resources. Similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measures MM 4.5-1 through MM 4.5-4. However, in the unlikely event that human remains are inadvertently discovered during project construction activities, implementation of Mitigation Measure MM 4.5-5 would ensure that any human remains encountered are appropriately addressed and impacts would be less than significant.

Based on the above, although both the proposed project and this alternative would result in less than significant impacts with mitigation related to historical resources, archaeological resources, and human remains, the Specific Plan and Zoning Buildout Alternative would result in greater cultural resource impacts compared to the proposed project because greater ground disturbance is required under this alternative and could affect undocumented subsurface cultural resources.

### ***Energy***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site.

The portions of the project site that would be developed with agricultural uses would require less-intensive construction activities related to the consumption transportation-related energy (petroleum-based fuels). However, greater operational electricity usage associated with the greater consumption of water associated with the proposed agricultural uses would occur. The portions of the project site that would be developed with single-family residences would require similar construction activities and more-intensive operational activities related to the consumption of electricity, natural gas, and transportation-related energy. Overall, the residential uses would require greater energy consumption.

Similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measure MM 4.3-1, which would require the use of energy-efficient and alternatively fueled equipment and ensure compliance with Title 13, California Code of Regulations, Section 2449 et seq., which imposes construction equipment idling restrictions. As such, the wasteful, inefficient, or unnecessary consumption of energy resources would be similar to the proposed project. In addition, similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Based on the above, impacts under the Specific Plan and Zoning Buildout Alternative related to energy would be less than significant but greater than those of the proposed project because the alternative would not generate renewable energy, and would therefore not assist the state in meeting its renewable energy generation goals to the same extent as the proposed project.

### ***Geology and Soils***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would

be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site.

Compared to the proposed project, the Specific Plan and Zoning Buildout Alternative would have a greater potential to expose people to seismic hazards because this alternative would establish a permanent residential population on site.

Similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would not directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault. With regard to seismic ground shaking, similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would be subject to all applicable ordinances of the Kern County Building Code (Chapter 17.08). Kern County has adopted the CBC 2019 Edition (CCR Title 24). Adherence to all applicable regulations, as well as implementation of Mitigation Measure MM 4.7-1 would ensure that effects from strong seismic ground shaking would be minimized. Related to unique paleontological resource or site or unique geologic feature, similar to the proposed project, under the Specific Plan and Zoning Buildout Alternative any ground disturbance within the project site could result in a potentially significant impact to paleontological resources. As such, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measure MM 4.7-2 through MM 4.7-4 to reduce impacts to paleontological resources.

As discussed above, with implementation of mitigation similar to that required for the proposed project, impacts to geology and soils would likely be less than significant. However, impacts to geology and soils would be slightly greater under this alternative compared to the proposed project because the Specific Plan and Zoning Buildout Alternative would result in greater initial soil disturbance during construction and would place a permanent residential population in the vicinity of seismic hazards.

### ***Greenhouse Gas Emissions***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site.

Portions of the Specific Plan and Zoning Buildout Alternative would develop land uses that would emit GHG emissions throughout their life (e.g., increased water usage, traffic, operation of agricultural equipment, and livestock emissions), which would result in a net gain of GHG emissions within California. Unlike the proposed project, the Specific Plan and Zoning Buildout Alternative would not assist an offtaker in reducing its GHG emissions as consistent with the California Global Warming Solutions Act. An “offtaker” is a purchaser of renewable energy in a solar power purchase agreement. Impacts from the Specific Plan and Zoning Buildout Alternative would be greater compared to the proposed project since the proposed project’s beneficial reduction in GHG emissions would not occur.

### ***Hazards and Hazardous Materials***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site.

There are no known hazardous materials in the soil that would be disturbed during construction of either the agricultural uses or residential uses. Agricultural uses on the project site could require the use of hazardous materials during operation including herbicides and pesticides. In addition, because the Specific Plan and Zoning Buildout Alternative has the potential for development of residential units, there is an increased potential for the use of household chemicals as well as chemical use similar to the proposed project, including fuels, solvents, paint, lubricants, and other potentially hazardous materials. However, similar to the proposed project, standard best management practices (BMP) would ensure that exposure to potentially hazardous materials used or found on-site would be reduced or minimized. Similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measures MM 4.9-1 and MM 4.9-2, and MM 4.16-1 to avoid spills and minimize impacts in the event of a spill; regulate the use of hazardous materials during construction and operation, including the use of pesticides and herbicides; and ensure that wastes requiring special disposal are handled according to state and county regulations that are in effect at the time of disposal. Implementation of these mitigation measures would reduce impacts related to a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Related to wildland fires, the project site is not in an area of high or very high fire hazard. However, similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measure MM 4.13-1, which includes the development and implementation of a Fire Safety Plan for construction and operation of the proposed project in the event of a fire on the project site.

Impacts under the Specific Plan and Zoning Buildout Alternative and the project would result in less than significant impacts after implementation of mitigation measures, and the potential impacts from hazards and hazardous materials would be similar to those of the proposed project.

### ***Hydrology and Water Quality***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Solar panels would not be installed and solar energy would not be generated on the site. Similar to the proposed project, the agricultural development would not substantially increase impervious surfaces. Conversion of the project site to agricultural uses and installation of the proposed solar panels would likely result in similar ground disturbance and erosion potential. However, operation of the agricultural uses proposed under this alternative would likely involve continued ground disturbance from activities such as grazing and plowing, posing a greater threat to water quality than the proposed project's operation. Operation of agricultural uses could also affect groundwater quality through the application of pesticides or herbicides.

The residential component of the Specific Plan and Zoning Buildout Alternative would result in larger areas of change to the landscape and drainage patterns of the project site. Construction of the Specific Plan and Zoning Buildout Alternative would also result in an increase in wastewater and urban runoff generated from development of residential uses. Such development would increase impervious surfaces compared to the proposed project and result in a potentially greater impact on water quality. Once operational, a conservative estimated demand for water is 1 acre-foot of water per year per residence, which would result in greater demand under the Specific Plan and Zoning Buildout Alternative than under the proposed project.

The agricultural component of the Specific Plan and Zoning Buildout Alternative would likely require a greater amount of operational water than the proposed project for irrigation of approximately 843 acres of

crops or livestock operations. With regard to operation, the agricultural and residential uses would substantially increase water demand compared to the proposed project.

Similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would include completion of a NPDES form as well as implementation of Mitigation Measure MM 4.10-1 and MM 4.1-2 to reduce potential impacts related to violating water quality standards or degradation of surface or groundwater quality during construction and operation of the Specific Plan and Zoning Buildout Alternative. Related to groundwater supplies, water requirements under the Specific Plan and Zoning Buildout Alternative, similar to the proposed project, would be relatively small and would represent a small portion of the established safe yield of the basin, and would not substantially deplete groundwater levels in comparison to existing conditions. As such, impacts would be less than significant.

With regard to existing drainage patterns, installation of the facilities required under the Specific Plan and Zoning Buildout Alternative would alter existing on-site drainage patterns and flowpaths to some degree, and could alter the way that stormwater from upgradient flows across the project site during major events. Similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would: (1) ensure that the retention basins and other stormwater management features are consistent with existing regulatory requirements and can minimize any erosion or sedimentation to less than significant levels; (2) ensure that flooding on- or off-site is reduced to less than significant levels; and (3) minimize potential increases in stormwater flow and other project-induced changes to drainage patterns to less than significant levels.

The project site is well inland and far from the ocean or any enclosed or semi enclosed water body such that there would be no potential threat from tsunami or seiche hazards, and impacts would be less than significant. In addition, water for construction and operation phases under the Specific Plan and Zoning Buildout Alternative would be obtained from a nearby well or trucked onto the site from a local purveyor and would be subject to the requirements of the adjudicated basin management. Therefore, the proposed project would not conflict with the groundwater management of the area, and the potential impacts would be less than significant.

Overall, although both the proposed project and this alternative would result in less than significant impacts with the implementation of mitigation, the Specific Plan and Zoning Buildout Alternative would result in greater impacts to hydrology and water quality compared with the proposed project, because operation of the agricultural uses proposed under this alternative would likely involve continued ground disturbance from activities such as grazing and plowing, and both agricultural activities and residential uses would require greater operational water use.

### ***Land Use and Planning***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Unlike the proposed project, the Specific Plan and Zoning Buildout Alternative would not conflict with the existing land use at the project site because the site would be developed with the current Specific Plan land uses and zoning designations. This alternative would be consistent with current zoning as well as existing land use plans, policies, and regulations, and no CUP, public vacations, or Specific Plan / Specific Plan Circulation Element Amendment would be required. Therefore, there would be no impact, and the Specific Plan and Zoning Buildout Alternative would result in less impact related to land use and planning compared to the proposed project.



## **Noise**

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). During construction, impacts under this alternative would be similar to the impacts of the proposed project, as the conversion of the project site to agricultural and residential uses would require similar heavy equipment as required for the construction of the proposed project. In addition, for development of the residential uses, the use of construction vehicles, heavy equipment operation, and worker carpool trips would also be similar to the proposed project. During operation, with regard to the proposed agricultural and residential uses, this alternative would generate greater noise than the proposed project associated with the daily operation of agricultural equipment, worker vehicles, and residential activities.

Under this alternative, similar to the proposed project, construction activities have the potential to result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards. However, implementation of Mitigation Measures MM 4.12-1 through MM 4.12-3 are designed to reduce impacts to the extent feasible during construction activities and, thus, impacts would be less than significant. During operation, there would be an increase in daily traffic to the project site due to agricultural and residential uses. Additionally, continuous human presence on the project site would also be a source of permanent onsite noise. However, the operation of solar trackers, new electrical collection lines, inverters, medium voltage transformers, substation, and BESS would not generate permanent noise levels in excess of noise standards or create a substantial increase in ambient noise levels within the project site. In addition, operational maintenance activities would generate minimal noise.

Based on the vibration levels associated with the types of construction equipment that would be used during project construction, the range of vibration levels that could occur at the analyzed sensitive receptors near the project site were estimated. The table also compares the calculated PPV with the human perceptibility criteria to assess the potential for human annoyance. The estimated PPV values at all locations are well below the applicable 0.25 in/sec threshold for potential building damage. Therefore, as each of these values are below the 0.2 in/sec PPV significance threshold for nonengineered timber and masonry buildings and the 0.4 in/sec PPV human annoyance criteria, no sources of groundborne vibration would be expected to affect receptors outside of the work areas, and there would not be any potential for excessive exposure of persons to or generation of groundborne vibration levels during project construction. Operation of the Specific Plan and Zoning Buildout Alternative would involve mostly regular maintenance trucks accessing the project site, residential traffic, and agricultural equipment use that would be a sufficient distance from structures (i.e., over 100 feet away from structures). A such, vibration impacts would be minimal and are not expected to have any measurable effect on the adjacent offsite sensitive receivers.

Both the proposed project and this alternative would result in less than significant construction impacts with mitigation. However, the Specific Plan and Zoning Buildout Alternative would result in greater permanent noise impacts during operation than the proposed project due to the development of agricultural and residential uses, which involve the use of agricultural equipment and residential traffic.

## **Public Services**

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). The proposed agricultural and

residential uses would increase the need for public services, including fire and police protection, in an area that is not currently serviced.

In particular, similar to the proposed project, construction of the Specific Plan and Zoning Buildout Alternative would result in a similar number of construction workers on the project site and increased fire service demands would occur during construction of this alternative. However, similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measure MM 4.13-1, which would require the implementation of a Fire Safety Plan. During operation, the portion of the project site that would be developed with agricultural uses would not result in a change in population, as agricultural employees would likely come from the surrounding area, and the portions of the project site developed with residential uses would establish a permanent population. Similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measures MM 4.13-2 through MM 4.13-5, which would require the project operator to pay Kern County development impact fees to compensate for any permanent impacts to fire protection services and facilities resulting from the operation of this alternative; require payment assessed taxes if the proposed project is sold to a city, county, or utility company; and encourage the project operator to hire at least 50 percent of their workers from local Kern County communities. Implementation of Mitigation Measure MM 4.13-1 would also reduce fire risks on-site during operation of this alternative. Impacts related to fire protection would be less than significant with mitigation.

With regard to police protection, while the project site is located in an area that is unlikely to attract attention, construction activities related to installation of new structures would increase traffic volumes along SR-58 and SR-14, similar to the proposed project. The increase in traffic related to development of agricultural and residential uses during construction would be temporary and, thus, would not have a significant adverse effect on the Kern County Sheriff's Office's (KCSO) protective service provision or the California Highway Patrol's (CHP) ability to patrol the highways. During operation of this alternative, agricultural uses would increase operational traffic due to the increase employees travelling to the project site, and residential uses would increase daily traffic due to residential activity. However, the increase is not likely to have a significant adverse effect on the KCSO protective service provision or CHP's ability to patrol the highways. Impacts would be less than significant.

With regard to schools, parks, and other government facilities, similar to the proposed project, under the Specific Plan and Zoning Buildout Alternative, construction workers would likely come from an existing local and/or regional construction labor force and would not likely relocate their households as a consequence of working on the proposed project. Therefore, the short-term increased employment of construction workers on the project site would not result in a notable increase in the residential population of the area surrounding the project site. Accordingly, there would not be a corresponding demand or use of the local schools, parks, or public facilities. During operations under the Specific Plan and Zoning Buildout Alternative, agricultural and residential uses would establish a larger permanent local population than under the proposed project. However, similar to the proposed project, agricultural staff would likely come from an existing local and/or regional labor force and would not likely relocate their households as a consequence of working on the proposed project. Therefore, the increase of on-site staff at the project site would not result in a notable increase in the residential population of the area surrounding the project site under the Specific Plan and Zoning Buildout Alternative. However, the development of 354 acres of new single-family residential units would be expected to result in an increased demand for or use of the local schools, parks, or public facilities.

Although both this alternative and the proposed project would result in less than significant impacts with implementation of mitigation, the Specific Plan and Zoning Buildout Alternative would result in greater impacts to public services compared to the proposed project due to proposed agricultural and residential uses, which would result in an increase in long-term population.

### ***Transportation and Traffic***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). With regard to the agricultural uses, construction-related traffic for the conversion of the project site to agricultural uses would be similar to the proposed project. Once operational, the Specific Plan and Zoning Build Out Alternative for the portion of the project site zoned as A would involve more routine vehicle trips associated with agricultural uses. Due to the residential component of this alternative, construction-related traffic would be similar to the proposed project because development of residential units would likely require similar numbers of construction-related workers and material transport trips. Additionally, like the proposed project, construction of residences could occur within the same time frame as other projects in the area, thereby contributing to cumulative traffic increases. However, once operational, vehicle trips associated with agricultural uses would be limited to the employees that would work on the site. Conversely, with the Specific Plan and Zoning Buildout Alternative, operational vehicle trips associated with the numerous residences would be significantly greater than the proposed project due to the increased residential population.

Similar to the proposed project, during construction of the Specific Plan and Zoning Buildout Alternative, which would require similar construction trips for installation of the residential uses, which could result in hazardous traffic conditions. Mitigation Measure MM 4.14-1 requiring a Construction Traffic Control Plan would also be required and would reduce construction impacts to less than significant.

With regard to consistency with *CEQA Guidelines* Section 15064.3(b), regulations for SB 743 have not been finalized or adopted by the County, so automobile delay remains the measure used to determine the significance of a transportation impact. Therefore, impacts related to *CEQA Guidelines* Section 15064.3(b) would be less than significant under the Specific Plan and Zoning Buildout Alternative, as with the proposed project.

Therefore, although both this alternative and the proposed project would result in less than significant impacts, impacts to transportation and traffic from the Specific Plan Buildout Alternative would be greater when compared to those of the proposed project because operational agricultural uses and residential would increase the amount of trips to the project site compared to the project.

### ***Tribal Cultural Resources***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). San Manuel identified sensitivity regarding potential tribal cultural resources near the project site. The Specific Plan and Zoning Buildout Alternative is expected to result in greater tribal cultural resource impacts as greater ground disturbance (i.e., more acreage subjected to grading/tilling as compared to the proposed project) would be required under this alternative, which could affect undocumented subsurface tribal cultural resources.

## ***Utilities and Service Systems***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres).

As with the proposed project, conversion of the project site to agricultural and residential uses would require water usage for dust suppression as well as generation of wastewater, usage of electrical power, and telecommunications. The proposed project would not use natural gas, however conversion of the project site to agricultural and residential uses would require natural gas. In addition, construction of the Specific Plan and Zoning Buildout Alternative would not substantially alter stormwater drainage. With regard to operation, the agricultural and residential uses would substantially increase water demand compared to the proposed project. Wastewater and solid waste generation associated with this alternative would also increase compared to the proposed project due to the increase in the number of employees associated with the agricultural uses as well as the residential activities, and Mitigation Measure 4.16-1 would be required. Development of the residential component of the Specific Plan and Zoning Buildout Alternative would increase impervious surfaces compared to the proposed project. However, similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measures MM 4.10-1 and MM 4.10-2, which include measures to offset increases in stormwater runoff caused by the proposed project and would further reduce impacts.

Although both the proposed project and this alternative would result in less than significant impacts, the Specific Plan and Zoning Buildout Alternative would result in greater impacts to utilities and service systems compared to the proposed project as this alternative would have an increased demand on the water supply and local landfills compared to the proposed project due to the proposed agricultural and residential uses.

## ***Wildfire***

Under the Specific Plan and Zoning Buildout Alternative, portions of the project site zoned as A would be developed for agricultural uses (approximately 843 acres), and portions of the project site zoned as E would be developed with single-family residential units (approximately 500 acres). Impacts related to wildfire for the portion of the project site that would be developed for residential uses would be greater than the impacts generated by the proposed project because the alternative proposes uses that add increased human presence and may introduce additional vegetation associated with the residential development. Furthermore, the proposed agricultural uses may introduce additional sources of vegetation, which may serve as fuel and exacerbate wildfire risks. Additionally, the use of the project site for agriculture would result in an increase of employees on the project site, which would further increase potential impacts from wildfire risks. Similar to the proposed project, the Specific Plan and Zoning Buildout Alternative would implement Mitigation Measure MM 4.13-1, which would require the development and implementation of a Fire Safety Plan for use during construction, operation, and decommissioning of the proposed project, which would further reduce the fire risks on-site. With regard to the installation or maintenance of associated infrastructure, agricultural uses would not require any installation of associated infrastructure; however, residential uses would require installation of electrical infrastructure, similar to the proposed project. The installation of electrical infrastructure would not be placed within a high fire hazard zone and the vegetation would be cleared; thus, development under this alternative would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. Similar to the proposed project, the Specific Plan and

Zoning Buildout Alternative would not include significant risks related to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes.

Based on the above, with implementation of similar mitigation as proposed for the proposed project, impacts would remain less than significant under this alternative as it relates to wildfire impacts. However, the Specific Plan and Zoning Buildout Alternative would have greater impacts from risks associated with wildfire than the proposed project due to the agricultural and residential uses proposed under this alternative.

With regard to cumulative wildfire impacts, given the location in a rural area and limited infrastructure, the Specific Plan and Zoning Buildout Alternative and related projects have the potential to result in a cumulative impact related to conflict with an adopted emergency response plan or emergency evacuation plan, exposing people to pollutant concentrations from a wildfire, the installation or maintenance of associated infrastructure, exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes and, thus, would result in a significant and unavoidable cumulative impact.

## Comparison of Impacts

The Specific Plan and Zoning Buildout Alternative would result in less impacts to aesthetics, agricultural and forestry resources, and land use and planning. The alternative would result in similar impacts to biological resources and hazards and hazardous materials. This alternative would result in greater impacts in all remaining environmental issue areas. Greater impacts to air quality would result from emissions from the proposed agricultural uses on site, such as agricultural vehicles and livestock emissions. Given the ground disturbance required, greater impacts would occur to potentially undiscovered cultural resources. This alternative would result in greater energy impacts as the project site would not generate renewable energy compared to the proposed project, and would therefore not assist the state in meeting its renewable energy generation goals. Greater impacts to geology and soils would result from greater initial soil disturbance during construction and greater potential to expose people to seismic hazards resulting from permanent human presence on site from the proposed agricultural uses. This alternative would result in greater GHG emission impacts than the proposed project because the potential offset or displacement of GHG emissions from operation of the solar power generating facility, compared with traditional gas- or coal-fired power plants, would not be realized. Greater impacts to hydrology and water quality would result from continued ground disturbance from activities such as grazing and plowing and the application of pesticides or herbicides from the proposed agricultural uses. Greater impacts to noise would occur under this alternative during operation, through the noise associated with the daily operation of agricultural equipment and worker vehicles, as well as residential traffic. The increase in human population on-site is also responsible for greater impacts to public services, transportation and traffic, utilities and service systems, and wildfire. This alternative would not eliminate significant and unavoidable impacts associated with air quality (project and cumulative), and biological resources (cumulative).

## Relationship to Project Objectives

The Specific Plan and Zoning Buildout Alternative would not achieve any of the project objectives listed above in Section 6.2, including the project's objective related to developing solar facilities to produce clean electricity to help achieve California's renewable energy goals.

## 6.7.3 Alternative 3: Reduced Acreage Alternative

### Environmental Impact Analysis

#### *Aesthetics*

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres.

With regard to impacts related to scenic vistas, there are no local areas that are designated as scenic vistas within the vicinity of the project. However, the project site is located approximately 6 miles east of the Pacific Crest Trail (PCT), which is designated as a National Scenic Trail by the U.S. Forest Service. The PCT is a public recreational facility recognized as offering views that can be considered scenic. However, given the 6-mile distance, views of the project site are likely nonexistent, and if there is a view, it would not be a predominant subject of views from the PCT. Impacts would be less than significant.

With regard to scenic resources, the project would not be visible from any Officially Designated State or County Scenic Highway, and impacts would remain less than significant under the Reduced Acreage Alternative.

While this alternative would avoid development of a portion of the project section, this alternative would also include the installation of solar panels and other facilities. Similar to the proposed project, the Reduced Acreage Alternative would similarly implement Mitigation Measures MM 4.1-1 through MM 4.1-3, which would reduce impacts to visual character and quality to the maximum extent feasible by requiring the preparation of a Maintenance, Trash Abatement, and Pest Management Program, requiring color-treating all the solar facilities, including gen-tie poles, array facilities, etc. to blend in with the colors found in the natural landscape to reduce color disharmony, and requiring preparation of a revegetation plan during construction and decommissioning. Nevertheless, similar to the proposed project, impacts would be significant and unavoidable. In addition, in combination with other projects, particularly the wind turbines and other solar development that exist near the project site, the Reduced Acreage Alternative would contribute to added cultural modifications in the project area. While Mitigation Measures MM 4.1-1 through MM 4.1-3 would be implemented to reduce aesthetics impacts, and other projects in the region would be required to implement similar mitigation measures to reduce impacts, the conversion of thousands of acres in a presently rural area to solar and wind energy production uses cannot be mitigated to a degree that impacts are no longer significant. As such, similar to the proposed project, cumulative impacts from the change to the visual character of the site would remain significant and unavoidable for the Reduced Acreage Alternative.

With regard to project impacts due to new sources of light or glare, this alternative would result in relatively less impact than the proposed project due to the reduced project footprint. Furthermore, per Mitigation Measures MM 4.1-4, any nighttime construction would use lighting designed to provide the minimum illumination needed, thereby minimizing adverse impacts on any nearby residents, and a lighting plan would be developed. Mitigation Measure MM 4.1-4 would also require the proposed project to comply with the Dark Skies Ordinance for all lighting to be directed downward and shielded. Regarding glare, this alternative would also have to implement Mitigation Measures MM 4.1-5 and MM 4.1-6, which require the use of nonreflective and nonglare materials when feasible. Impacts related to light and glare on the Reduced Acreage Alternative site would still be less than significant. However, due to the reduction in project site size, the Reduced Acreage Alternative would have less impact to aesthetics than the proposed project.

## ***Agriculture and Forestry Resources***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. The proposed project and the Reduced Acreage Alternative would be developed with a solar panels facility and associated infrastructure and, thus, would create changes in the existing environment and would convert land zoned for agriculture to non-agricultural use. Similar to the proposed project, the project would not directly or indirectly impact farmland, as the site has no agricultural production, past or present and is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the project area. Furthermore, according to available data, none of the parcels included as part of the proposed site or any property in the vicinity of the proposed project are subject to a Williamson Act contract.

Impacts to agriculture and forestry resources would still be less than significant. As the Reduced Acreage Alternative would include a slightly smaller footprint, impacts related to agriculture and forestry resources would be less than those of the proposed project.

## ***Air Quality***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres, thereby reducing the overall extent of construction-related impacts to air quality. The use of construction vehicles, heavy equipment operation, and worker carpool trips would be less compared to the proposed project. Similar to the proposed project, this alternative would require implementation of Mitigation Measures MM 4.3-1 and MM 4.3-2 in order to reduce the severity of construction-related emissions. Similar to the proposed project, impacts would remain significant and unavoidable for cumulative temporary construction impacts as the daily emissions under this alternative, since the construction schedule for cumulative projects could still overlap with the Reduced Acreage Alternative. Operational emissions would likely be reduced under this alternative as fewer maintenance trips would be required with the reduced project scale. As such, similar to the proposed project, operational impacts would be less than significant.

Related to impacts on implementation of the applicable air quality plan, since temporary cumulative construction impacts would be significant and unavoidable, the Reduced Acreage Alternative would result in temporary construction emissions of a magnitude that would obstruct the air quality planning goals by EKAPCD. Therefore, similar to the proposed project, impacts would be significant and unavoidable.

Implementation of this alternative would expose sensitive receptors to substantial pollutant concentrations. In particular, during construction of this alternative, it is possible that on-site workers could be exposed to *Coccidioides immitis*, the fungal spore that has potential to cause Valley Fever, as fugitive dust is generated during construction. However, dust-minimizing techniques implemented through Mitigation Measure MM 4.3-3 would reduce these impacts to less than significant. As with the proposed project, the Reduced Acreage Alternative would result in less than significant impacts related to toxic air contaminants, localized pollutant concentrations, and asbestos.

Overall, even with implementation of similar mitigation proposed for the project, impacts to air quality under this alternative would likely remain significant and unavoidable, despite resulting in a reduction in emissions due to reduced grading footprint under this alternative. The Reduced Acreage Alternative would result in less overall impacts related to air quality than the proposed project.

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## ***Biological Resources***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Related to candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS), as with the proposed project, the Reduced Acreage Alternative would have an impact to transient wildlife species that may utilize habitat on the project site—including burrowing owls, Swainson's hawk, loggerhead shrike, golden eagle, yellow-headed blackbird, Vaux's swift, peregrine falcon, northern harrier, mountain plover, other raptors, migratory birds, American badger, and desert kit fox. The project site contains habitat that support insects, rodents, and small birds that provide a prey base for raptors and terrestrial wildlife. In addition, based on the literature review and database search completed for the proposed project, the region is known to support a diversity of special-status species, most of which are expected to utilize the project site on at least a transient basis. With implementation of Mitigation Measures MM 4.4-1 through MM 4.4-14, impacts would be reduced to less than significant.

With regard to impacts on any riparian habitat or other sensitive natural community, or jurisdictional waters and wetlands, identified in local or regional plans, policies, or regulations or by CDFW or USFWS, construction activities could result in significant impacts related to jurisdictional features to ephemeral drainages within the project site. However, as with the proposed project, implementation of Mitigation Measures MM 4.4-15 through MM 4.4-19 would reduce impacts to less than significant under the Reduced Acreage Alternative.

Implementation of the above referenced mitigation measures would also reduce potential impacts to the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, and consistency with local policies and ordinances protecting biological resources. Mitigation Measure MM 4.4-20 would be required to reduce impacts related to wildlife movement. The Reduced Acreage Alternative, as with the proposed project, would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Based on the above, project-level impacts under the Reduced Acreage Alternative would be less than significant with implementation of mitigation and less to those of the proposed project. However, cumulatively, this alternative would still result in significant and unavoidable cumulative impacts to biological resources; regardless of the type of development, biological resources are being impacted throughout the Antelope Valley. All other impacts related to biological resources would remain the same as the proposed project.

## ***Cultural Resources***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres.

Ground-disturbing activities associated with the project have the potential to encounter undocumented archaeological resources that could qualify as historical resources. Similar to the proposed project, the Reduced Acreage Alternative would implement Mitigation Measures MM 4.5-1 through MM 4.5-4. However, in the unlikely event that human remains are inadvertently discovered during project construction



activities, implementation of Mitigation Measure MM 4.5-5 would ensure that any human remains encountered are appropriately addressed and impacts would be less than significant.

Based on the above, implementing mitigation similar to the mitigation proposed for the project, impacts to cultural resources under this alternative would be less than significant. However, the Reduced Acreage Alternative would result in less impacts related to cultural resources compared to the proposed project due to the reduction in ground disturbance required under this alternative.

### ***Energy***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Eliminating 774 acres from project development would result in reduced energy use, as the Reduced Acreage Alternative would generate approximately 135 MW, due to the proportional reduction in project size. Therefore, all construction and operational methods, workforce, and timing for the Reduced Acreage Alternative would be reduced as compared with the proposed project. Similar to the proposed project, the Reduced Acreage Alternative would implement Mitigation Measure MM 4.3-1, which would require the use of energy-efficient and alternatively fueled equipment and ensure compliance with Title 13, California Code of Regulations, Section 2449 et seq., which imposes construction equipment idling restrictions. As such, the wasteful, inefficient, or unnecessary consumption of energy resources would be reduced in comparison with the proposed project. Similar to the proposed project, this alternative would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, impacts would be less than significant. The Reduced Acreage Alternative would result in fewer energy impacts compared to the proposed project.

### ***Geology and Soils***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres, and thus there would be less potential for erosion and exposure to geologic hazards.

Similar to the proposed project, the Reduced Acreage Alternative would not directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault, seismic-related ground failure including liquefaction, or unstable or expansive soils. Adherence to all applicable regulations, as well as implementation of Mitigation Measures MM 4.7-1 would ensure that effects from rupture of a known earthquake fault, seismic-related ground failure including liquefaction, or unstable or expansive soils, would be minimized.

With regard to soils incapable of adequately supporting the use of septic tanks or alternative wastewater systems, similar to the proposed project, the Reduced Acreage Alternative would require the construction of a septic wastewater treatment system. However, the on-site soils have been characterized as well drained and moderate to highly permeable. In addition, similar to the proposed project, the Reduced Acreage Alternative's septic system would be required to be permitted through the Kern County Public Health Services Department, which would ensure adequate drainage of wastewater. Related to a unique paleontological resource or site or unique geologic feature, similar to the proposed project, under the Reduced Acreage Alternative, any ground disturbance within the project site could result in a potentially significant impact to paleontological resources. As such, the Reduced Acreage Alternative would

implement Mitigation Measures MM 4.7-2 through MM 4.7-4 to reduce impacts to paleontological resources. Therefore, impacts would be less than significant.

As discussed above, with implementation of mitigation similar to that required for the proposed project, impacts to geology and soils would likely be less than significant. However, impacts to geology and soils would result in less impact to geology and soils compared to the proposed project due to the reduction in ground disturbance required under this alternative.

### ***Greenhouse Gas Emissions***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Given a smaller project footprint than the proposed project, the construction and operational impacts from the Reduced Alternative would remain less than the proposed project. Therefore, the Reduced Acreage Alternative would result in fewer GHG emissions during construction and operations when compared with the proposed project. Eliminating 672 acres from project development would result in reduced energy generation by a factor of 50 percent, as the Reduced Acreage Alternative would generate approximately 135 MW due to the proportional reduction in project size. While project-related GHG impacts would remain less than significant, the 50 percent reduction in the production of renewable energy from this alternative would result in greater GHG impacts in comparison to the project due to the corresponding loss in GHG offsets.

### ***Hazards and Hazardous Materials***

Under the Reduced Acreage Alternative, the project reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Similar to the proposed project, the Reduced Acreage Alternative would implement Mitigation Measures MM 4.9-1 and MM 4.9-2, and MM 4.16-1 in order to avoid spills and minimize impacts in the event of a spill; regulate the use of hazardous materials during construction and operation, including the use of pesticides and herbicides; and ensure that wastes requiring special disposal are handled according to state and county regulations that are in effect at the time of disposal, respectively. Implementation of these mitigation measures would reduce impacts related to a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. With regard to hazardous emissions within 0.25 miles of a school, the nearest school to the project site is located approximately 4.5 miles west of the site; therefore, the project would result in no impact related to hazardous emissions within 0.25 miles of a school.

Related to wildland fires, the project site is not within an area of high or very high fire hazard. However, similar to the project, the Reduced Acreage Alternative would include a BESS component that, while they generally burn with difficulty, can in fact burn or become damaged by fire and generate fumes and gases that are extremely corrosive. Mitigation Measure MM 4.13-1 would be implemented, which includes the development and implementation of a Fire Safety Plan for construction and operation of the project in the event of a fire on the project site.

Impacts under the Reduced Acreage Alternative and the proposed project would result in less than significant impacts after implementation of mitigation measures, and the potential impacts from hazards and hazardous materials under the Reduced Acreage Alternative would be similar to those of the proposed project.

## ***Hydrology and Water Quality***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. The reduced footprint would result in slightly reduced grading activities and would reduce the amount of impervious surfaces compared to the proposed project.

Similar to the proposed project, the Reduced Acreage Alternative would include completion of a NPDES form as well as implementation of Mitigation Measure MM 4.10-1 to reduce potential impacts related to violating water quality standards or degradation of surface or groundwater quality during construction and operation of the Reduced Acreage Alternative. Related to groundwater supplies, water requirements under the Reduced Acreage Alternative, similar to the proposed project, would be relatively small and would represent a small portion of the established safe yield of the basin, and would not substantially deplete groundwater levels in comparison to existing conditions. As such, impacts would be less than significant.

With regard to existing drainage patterns, installation of the facilities required under the Reduced Acreage Alternative would alter existing on-site drainage patterns and flowpaths to some degree, and could alter the way that stormwater from upgradient flows across the project site during major events. Similar to the proposed project, the Reduced Acreage Alternative would implement Mitigation Measure MM 4.10-2, which requires the project to: (1) ensure that the retention basins and other stormwater management features are consistent with existing regulatory requirements and can minimize any erosion or sedimentation to less than significant levels; (2) ensure that flooding on- or off-site is reduced to less than significant levels; and (3) minimize potential increases in stormwater flow and other project-induced changes to drainage patterns to less than significant levels.

The project site is located well inland and far from the ocean or any enclosed or semi enclosed water body such that there would be no potential threat from tsunami or seiche hazards, and impacts would be less than significant. In addition, water for construction and operation phases under the Reduced Acreage Alternative would be obtained from a nearby well or trucked onto the site from a local purveyor and would be subject to the requirements of the adjudicated basin management. Therefore, the project would not conflict with the groundwater management of the area and the potential impacts would be less than significant.

Overall, impacts related to hydrology and water quality would be less than significant. However, the Reduced Acreage Alternative would have less impact related to hydrology and water quality compared to the proposed project due to the reduced footprint, which would result in reduced grading activities and would reduce the amount of impervious surfaces compared to the proposed project.

## ***Land Use and Planning***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Nevertheless, development of the Reduced Acreage Alternative alone would still require two CUPs (one for the solar facility and one for the communication tower), two Specific Plan Amendments (one for land use designation and one for elimination of future road reservations), a zone change, and nonsummary vacation request to vacate public access easements. Impacts would be less than significant under this alternative. Land use and planning impacts would similar under the Reduced Acreage Alternative when compared to the proposed project.

## **Noise**

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Under the Reduced Acreage Alternative all construction and operational methods, workforce, and timing would be reduced when compared with the proposed project.

Under this alternative, similar to the proposed project, construction activities have the potential to result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards. However, Mitigation Measures MM 4.12-1 through MM 4.12-3 are designed to reduce impacts to the extent feasible during construction activities and, thus, impacts would be less than significant. The operation of solar trackers, new electrical collection lines, inverters, medium voltage transformers, substation, and BESS would not generate permanent noise levels in excess of noise standards or create a substantial increase in ambient noise levels within the project site. In addition, operational maintenance activities would generate minimal noise. Thus, operational impacts would be less than significant. In addition, the nearest off-site structure to the project site construction area is the residence (Receptor #3) approximately 120 feet east along Rosamond Boulevard/100th Street West. At this distance, vibration velocities would range from approximately 0.00 to 0.061 in/sec PPV. The nearest off-site structures to the Rabbitbrush Solar Facility construction area are the residences (Receptor #17) approximately 170 feet to the west of the Rabbitbrush Facility's western boundary and the residence (Receptor #19) approximately 170 feet east along Rosamond Boulevard. At this distance, vibration velocities would range from approximately 0.00 to 0.044 in/sec PPV. Therefore, as each of these values are below the 0.2 in/sec PPV significance threshold for nonengineered timber and masonry buildings and the 0.4 in/sec PPV human annoyance criteria, no sources of groundborne vibration would be expected to affect receptors outside of the work areas, and there would not be any potential for excessive exposure of persons to or generation of groundborne vibration levels. As such, the vibration levels at the nearest residences would not reach the vibration level threshold for older residential structures. Operation of the Reduced Acreage Alternative would involve mostly regular maintenance trucks accessing the project site and panel washing activities, similar to the proposed project, that would be a sufficient distance from structures (i.e., over 100 feet away from structures). As such, vibration impacts would be minimal and are not expected to have any measurable effect on the adjacent off-site sensitive receivers.

This alternative is expected to result in less than significant noise impacts during construction and decommissioning activities, and impacts related to noise would be similar to those of the proposed project. This alternative is expected to result in less than significant with mitigation noise impacts during operational activities, and impacts related to noise would be less than those of the proposed project given the reduced footprint and similar time period of temporary noise impacts.

## **Public Services**

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Under the Reduced Acreage Alternative all construction and operational methods, workforce, and timing would be reduced when compared with the proposed project.

Similar to the proposed project, construction of the Reduced Acreage Alternative would result in a number of construction workers on the project site and increased fire service demands would occur during construction of this alternative. However, the Reduced Acreage Alternative would implement Mitigation

Measure MM 4.13-1, which would require the implementation of a Fire Safety Plan. During operation, the reduced acreage alternative project site would require up to 10 full-time equivalent personnel. Implementation of Mitigation Measure MM 4.13-1 would also reduce fire risks on-site during operation of this alternative. Similar to the proposed project, the Reduced Acreage Alternative would implement Mitigation Measures MM 4.13-2 through MM 4.13-5, which would require the Project Proponent/operator to pay Kern County development impact fees to compensate for any permanent impacts to fire protection services and facilities resulting from the operation of this alternative, require payment of assessed taxes if the proposed project is sold to a city, county, or utility company, and encourage the Project Proponent/operator to hire at least 50 percent of their workers from local Kern County communities. Impacts related to fire protection would be less than significant with mitigation.

With regard to police protection, while the project site is located in an area that is unlikely to attract attention, construction activities would increase traffic volumes along SR-58 and SR-14, similar to the proposed project. The increase in traffic would be temporary and, thus, would not have a significant adverse effect on the KCSO protective service provision or CHP's ability to patrol the highways. In addition, chain-link security fencing would be installed around the site perimeter and other areas requiring controlled access during construction. During operation of this alternative, the additional volume of vehicles associated with workers commuting to the project site during routine maintenance would be minor and is not expected to adversely affect traffic. Therefore, the increase is not likely to have a significant adverse effect on the KCSO protective service provision or CHP's ability to patrol the highways. Impacts would be less than significant.

With regard to schools, parks, and other government facilities, similar to the proposed project, under the Reduced Acreage Alternative, construction workers would likely come from an existing local and/or regional construction labor force and would not likely relocate their households as a consequence of working on the proposed project. Therefore, the short-term increased employment of construction workers on the project site would not result in a notable increase in the residential population of the area surrounding the project site. Accordingly, there would not be a corresponding demand or use of the local schools, parks, or public facilities. During operations under the Reduced Acreage Alternative, fewer staff would be required to operate the O&M facility than under the proposed project (which proposes two O&M facilities, one for each solar facility). However, similar to the proposed project, this staff would likely come from an existing local and/or regional labor force and would not likely relocate their households as a consequence of working on the project. Therefore, the increase of on-site staff at the project site would not result in a notable increase in the residential population of the area surrounding the project site under the Reduced Acreage Alternative. Accordingly, there would not be a corresponding demand or use of the local schools, parks, or public facilities, and, similar to the proposed project, there would be no impact.

Based on the above, impacts would be less than significant under this alternative following implementation of similar mitigation measures proposed for the project and impacts related to public services would be similar to those of the proposed project.

### ***Transportation and Traffic***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Under the Reduced Acreage Alternative all construction and operational methods, workforce, and timing would be reduced when compared with the proposed project.

Similar to the proposed project, during construction of the Reduced Acreage Alternative, which would require similar construction trips for installation of the solar panels, all study roadway segments are forecasted to operate at Caltrans- or County-defined acceptable LOS D conditions or better. During operation of this alternative, day-to-day operations and maintenance trips would be reduced in comparison with those of the proposed project. Similar to the proposed project, the total number of daily trips for maintenance of the solar panels are estimated to be less than the number of trips generated during construction. As construction impacts would be less than significant, operation of this alternative would also have a less than significant impact on area roadways.

With regard to consistency with *CEQA Guidelines* Section 15064.3(b), regulations of SB 743 have not been finalized or adopted by the County, so automobile delay remains the measure used to determine the significance of a transportation impact. Therefore, impacts related to *CEQA Guidelines* Section 15064.3(b) would be less than significant under the Reduced Acreage Alternative, as with the proposed project.

Based on the above, impacts would be less than significant. Given the similarity between this alternative's and the proposed project's construction and operational vehicle and truck trips, the Reduced Acreage Alternative would result in similar impacts related to transportation and traffic as the proposed project.

### ***Tribal Cultural Resources***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. According to record searches, tribal resource consultations, San Manuel identified the potential for tribal cultural resources near the project site. Because identified tribal cultural resources on the project site will be avoided, impacts to tribal cultural resources would be similar to the proposed project, and impacts to tribal cultural resources would be less than significant under the Reduced Acreage Alternative.

### ***Utilities and Service Systems***

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Eliminating 50 percent from project development would result in reduced demand for utilities and service systems, as the Reduced Acreage Alternative would generate approximately 135 MW due to the proportional reduction in project size, and therefore, all construction and operational methods, workforce, and timing for the Reduced Acreage Alternative would be reduced in comparison with the proposed project.

As with the proposed project, project construction and operations under the Reduced Acreage Alternative would require water usage for dust suppression as well as minimal generation of wastewater, usage of electrical power, and telecommunications. In addition, construction of the Reduced Acreage Alternative would not substantially alter stormwater drainage. With regard to operation, the solar panels installed under the Reduced Acreage Alternative would require a reduced water demand in comparison with the proposed project. Wastewater and solid waste generation associated with this alternative would also be reduced compared to the proposed project due to the reduced number of employees required for maintenance of the solar panels. As the Reduced Acreage Alternative would develop the project site, impervious surfaces would be minimized as much as possible, as with the proposed project. Similar to the proposed project, the Reduced Acreage Alternative would implement Mitigation Measure MM 4.10-1, would include measures to offset increases in stormwater runoff caused by the project and would further reduce impacts.

This alternative is expected to result in less than significant impacts to utilities and service systems, and impacts would be similar to those of the proposed project.

### **Wildfire**

Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres.

Similar to the proposed project, the Reduced Acreage Alternative would implement Mitigation Measure MM 4.13-1, which would require the development and implementation of a Fire Safety Plan for use during construction, operation, and decommissioning of the project, which would further reduce the fire risks on site. With regard to the installation or maintenance of associated infrastructure, solar panels would require installation of the electrical collector line, similar to the proposed project. The installation of the electrical collector line would not be placed within a high fire hazard zone and the vegetation would be cleared to the extent necessary, and thus would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. Similar to the proposed project, the Reduced Acreage Alternative would not include significant risks related to downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

With implementation of similar mitigation proposed for the project, this alternative is expected to result in less than significant impacts to wildfire. The Reduced Acreage Alternative would likely result in slightly less impact than the proposed project due to the reduced footprint compared with the proposed project.

With regard to cumulative wildfire impacts, given the location in a rural area and limited infrastructure, the Reduced Acreage Alternative and past, present and reasonably foreseeable future projects have the potential to result in a cumulative impact related to conflict with an adopted emergency response plan or emergency evacuation plan, exposing people to pollutant concentrations from a wildfire, the installation or maintenance of associated infrastructure, exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes and, thus, would result in a significant and unavoidable cumulative impact.

## **Comparison of Impacts**

The Reduced Acreage Alternative would be reduced in size compared to the proposed project, and would generate approximately 135 MW due to the proportional reduction in project size and therefore, all construction and operational methods, workforce, and timing for the Reduced Acreage Alternative would be reduced in comparison with the proposed project. Due to the reduced footprint, the Reduced Acreage Alternative would result in less or similar impacts for all of the environmental issue areas, except greenhouse gas emissions. However, this alternative would not eliminate significant and unavoidable impacts associated with aesthetics (project and cumulative), air quality (project and cumulative), biological resources (cumulative), and wildfire (cumulative).

## **Relationship to Project Objectives**

The Reduced Acreage Alternative would meet most of the project objectives listed above in Section 6.2. Under the Reduced Acreage Alternative, the project would reduce the solar facility site by approximately 50 percent and would reduce the project's footprint from 1,343 acres to 672 acres. Therefore, this alternative

would create fewer environmental impacts; however, it would not reduce any identified significant and unavoidable impact to less than significant.

## **6.7.4 Alternative 4: No Ground-Mounted Utility-Solar Development Alternative: Distributed Commercial and Industrial Rooftop Solar Only**

### **Environmental Impact Analysis**

#### ***Aesthetics***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of commercial and industrial facilities situated throughout the Antelope Valley.

With regard to impacts related to scenic vistas, the quality of the existing scenic vista several KOPs are considered moderate to low given the existing visible solar facilities and wind turbines. Under the No Ground-Mounted Utility-Solar Development Alternative solar installation would occur on the roofs of the existing buildings. Thus, given the moderate to low visual quality and existing visual obstructions, the No Ground-Mounted Utility-Solar Development Alternative would not have a substantial adverse effect on a scenic vista. Impacts would be less than significant.

The installation of small to medium solar PV systems on large commercial and industrial rooftops would be visually unobtrusive or unnoticeable from receptors at ground level. However, from other vantage points, the installation of rooftop small to medium solar PV systems may be visible, but would not likely affect the visual character or quality of an area, because the character or quality of an area has already been altered as a result of the existing building's construction. The exceptions may be if rooftop solar were proposed on historic buildings, which could affect the historic character and integrity of the buildings. Implementation of this alternative would require historic surveys and investigations to evaluate the eligibility of potentially historic structures that are over 50 years old, and either avoidance of such buildings, or incorporation of design measures to minimize impacts on historic integrity of historically significant structures.

Based on the above, this alternative would avoid significant and unavoidable aesthetic impacts that would occur under the proposed project. With implementation of mitigation measures to address impacts related to historic buildings, impacts would be less than significant. The No Ground-Mounted Utility-Solar Development Alternative would result in less impacts related to aesthetics compared to the proposed project.

#### ***Agriculture and Forest Resources***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities. Since the solar PV systems proposed for this alternative would be constructed on existing structures, this alternative would not create any changes in the existing environment that would convert land that is designated Farmland to non-agricultural use. As such, no impacts to



agriculture or forestry resources would occur. Therefore, the No Ground-Mounted Utility-Solar Development Alternative would result in less impacts related to agricultural resource compared to the proposed project.

### ***Air Quality***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities. Under this alternative, no construction activities associated with ground disturbance would occur. Thus, this alternative would eliminate the significant and unavoidable cumulative construction impacts related to regional air quality emissions and implementation of applicable air quality plans. Emissions would be limited to trucks transporting the solar panels. The reduction in construction activities would also reduce the exposure of sensitive receptors to substantial pollutant concentrations, including exposure to *Coccidioides immitis*, the fungal spore that has potential to cause valley fever. Implementation of Mitigation Measures MM 4.3-3 and MM 4.3-4 would not be required. During operation, this alternative would have similar impacts on air quality as the proposed project related to occasional vehicular visits for maintenance. As such, operational impacts would be less than significant. Overall, air quality impacts under this alternative would be less than significant. The No Ground-Mounted Utility-Solar Development Alternative would result in less impacts related to air quality compared to the proposed project.

### ***Biological Resources***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of commercial and industrial facilities situated throughout the Antelope Valley. The project site would remain undeveloped and only developed areas, typically on the rooftops of commercial and industrial facilities, in the Antelope Valley would be modified. Given that rooftops of existing commercial and industrial facilities would be used for solar PV system installation, these areas would be unlikely to provide habitat for special-status species. Development of this alternative would not disturb any land or remove habitat for special-status plants and wildlife or have a substantial adverse effect on any riparian habitat. As such, Mitigation Measures MM 4.4-1 through MM 4.4-14 would not be required. Operation of the small to medium solar PV systems would continue to require implementation of Mitigation Measures MM 4.4-15 and MM 4.4-16. Therefore, this alternative would not contribute to a cumulative loss of foraging and nesting habitat for transient wildlife species, including burrowing owls, Swainson's hawk, loggerhead shrike, golden eagle, yellow-headed blackbird, Vaux's swift, peregrine falcon, northern harrier, mountain plover, other raptors, migratory birds, American badger, and desert kit fox that may utilize habitat on the project site. As such, significant and unavoidable cumulative impacts would be eliminated as well. The No Ground-Mounted Utility-Solar Development Alternative would result in less impacts related to biological resources compared to the proposed project.

### ***Cultural Resources***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of commercial and industrial facilities situated throughout the Antelope Valley. Given that development would occur on the rooftops of existing structures, there would be no potential for disturbance or damage to buried archaeological resources and human remains. If rooftop solar systems were proposed on historic buildings,

this alternative could affect the historic character and integrity of these buildings, as well as the character and views of adjacent historical resources. However, historic surveys and investigations would be conducted prior to project construction to identify known eligible historical resources and to evaluate the eligibility of potentially historic structures that are 50-years or older; historic structures would be either avoided or the alternative would be required to incorporate mitigation and design measures to minimize the impact on these structures. In the case of eligible historical resources, design measures must be in accordance with the Secretary of the Interior standards and the impact must not affect the eligibility of such resources or adjacent resources. Therefore, unanticipated impacts to unknown or known cultural resources would not occur under this alternative. Impacts would be less than significant. With the appropriate mitigation measures in place to reduce impacts to historical resources, the potential to disturb or discover unknown cultural resources within the project area would be less than significant. However, given the inability to impact archaeological resources under this alternative, the No Ground-Mounted Utility-Solar Development Alternative would result in fewer impacts related to cultural resources compared to the proposed project.

### ***Energy***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of commercial and industrial facilities situated throughout the Antelope Valley. As such, construction would be limited to trucks transporting the solar panels and installation of the solar panels on the rooftops of existing buildings. Implementation of Mitigation Measure MM 4.3-1 would still be required during construction as it requires implementation of energy-efficient and alternatively-fueled equipment during construction. Therefore, the No Ground-Mounted Utility-Solar Development Alternative would have a less than significant impact related to wasteful, inefficient, or unnecessary consumption of energy resources and this alternative would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. As similar energy generation capabilities would be provided, impacts would be similar to those of the proposed project.

### ***Geology and Soils***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of commercial and industrial facilities situated throughout the Antelope Valley. Given that only developed areas would be modified, there would be no potential for this alternative to directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault or strong seismic ground shaking; result in substantial soil erosion or loss of topsoil; or directly or indirectly destroy a unique paleontological resource or unique geologic feature. This alternative would not require implementation of Mitigation Measures MM 4.7-1 through MM 4.7-3. Development of rooftop solar would require adherence to all requirements of the Kern County Building Ordinance. Therefore, impacts would be less than significant. The No Ground-Mounted Utility-Solar Development Alternative would result in less impact related to geology and soils compared to the proposed project.

### ***Greenhouse Gas Emissions***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities. This alternative would not generate GHG emissions from heavy

equipment required for ground disturbing activities, but distributed systems on rooftops would lack tracking systems and be less efficient. As such, this alternative's overall GHG emission offset potential would be smaller to the proposed project. Therefore, this alternative would have less than significant impacts related to generating GHG emissions that may have a significant impact on the environment or consistency with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. However, impacts related to GHG emissions would be greater under this alternative due to the lower efficiency of the distributed systems, which would not include solar tracking technology.

### ***Hazards and Hazardous Materials***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley. The installation of rooftop solar equipment on existing structures would involve fewer hazardous materials (such as chemicals and fuels) than the proposed project construction on the undeveloped project site. Similar to the proposed project, the No Ground-Mounted Utility-Solar Development Alternative would implement Mitigation Measures MM 4.9-1 and MM 4.9-2, and MM 4.16-1 in order to avoid spills and minimize impacts in the event of a spill; regulate the use of hazardous materials during construction and operation; and ensure that wastes requiring special disposal are handled according to state and county regulations that are in effect at the time of disposal, respectively. Implementation of these mitigation measures would reduce impacts related to a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As it relates to wildland fires, as the small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley, it is expected that these areas where the solar PV systems would be installed would be in more urbanized areas that would not require a BESS component. However, due to the numerous power lines on each individual rooftop that would be required to harness the distributed solar panel energy, this alternative could exacerbate fire risks. As such, similar to the proposed project, Mitigation Measure MM 4.13-1 would be implemented to reduce wildfire risks under this alternative.

Based on the above, impacts under this alternative would be less than significant. The No Ground-Mounted Utility-Solar Development Alternative would result in less impact related to hazards and hazardous materials than the proposed project as this alternative would require usage of fewer hazardous materials.

### ***Hydrology and Water Quality***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley. No ground disturbance related to construction would be required under this alternative.

While completion of NPDES completion forms would not be required under the No Ground-Mounted Utility-Solar Development Alternative, similar to the proposed project, this alternative would require implementation of Mitigation Measure MM 4.10-1 in order to reduce potential impacts related to violating water quality standards or degradation of surface or groundwater quality during construction and operation of the No Ground-Mounted Utility-Solar Development Alternative.

As it relates to groundwater supplies, water requirements under the No Ground-Mounted Utility-Solar Development Alternative, similar to the proposed project, would be relatively small and would represent a small portion of the established safe yield of the basin, and would not substantially deplete groundwater levels in comparison to existing conditions. This alternative would also likely require minimal water as no dust suppression or concrete mixing would be required during construction and operational panel washing is expected to be less frequent given the location of panels on top of buildings throughout the Antelope Valley (rather than directly on sediment). As such, impacts would be less than significant.

With regard to existing drainage patterns, as small to medium solar PV systems would be developed on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley, drainage patterns and flow paths would not be altered. As such, impacts related to drainage patterns would be less than significant.

The Antelope Valley is located well inland and far from the ocean or any enclosed or semi-enclosed water body such that there would be no potential threat from tsunami or seiche hazards and impacts would be less than significant. In addition, water for construction and operation phases under the No Ground-Mounted Utility-Solar Development Alternative would be obtained from a nearby well or trucked to the solar panels from a local purveyor and would be subject to the requirements of the adjudicated basin management. Therefore, the No Ground-Mounted Utility-Solar Development Alternative would not conflict with the groundwater management of the area and the potential impacts would be less than significant.

Overall, impacts related to hydrology and water quality would be less than significant. However, the No Ground-Mounted Utility-Solar Development Alternative would result in less overall impacts related to hydrology and water quality materials compared to the proposed project as this alternative would not require ground disturbance, which could potentially introduce more pollutants to stormwater, and water requirements during construction and operation of the this alternative would be reduced as no dust suppression or concrete mixing would be required during construction and operational panel washing is expected to be less frequent.

### ***Land Use and Planning***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley. Under this alternative, there would be no CUPs, Zone Changes, Specific Plan Amendment (to land use designation or to eliminate future road reservations), or public access easement vacations required. Installation of rooftop solar would be consistent with current zoning as well as existing land use plans, policies, and regulations. The No Ground-Mounted Utility-Solar Development Alternative would also achieve the County's goals and policies relative to accommodating renewable energy facilities. However, the placement of solar panels on other structures throughout the region would result in unknown entitlement requirements, depending on the project location, zoning, land use, and potential environmental impacts on the site and surrounding areas. Nonetheless, to allow such development, the Project Proponent would be required to comply with the specific entitlements needed to construct solar PV systems consistent with this alternative. Impacts to land use and planning under the No Ground-Mounted Utility-Solar Development Alternative would be less than significant, but would be greater than the proposed project.

## **Noise**

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities. Rooftops of existing commercial and industrial buildings that would be developed under this alternative would be in developed areas. As a result, noise related to construction activities would likely impact sensitive receptors during construction. The operational noise generated from these solar PV systems would be similar to that of the proposed project and would result in less than significant impacts. With regard to vibration, construction of the No Ground-Mounted Utility-Solar Development Alternative would not require the use of vibratory rollers or other construction equipment with high groundborne vibration levels. Therefore, it is likely that construction vibration would have a less than significant construction vibration impact. Similar to the proposed project, operation of the No Ground-Mounted Utility-Solar Development Alternative would require regular maintenance trucks (0.076 in/sec PPV) and panel washing activities. Whether rooftop solar systems are proposed on historic buildings, which are more susceptible to vibration damage, or other types of newer buildings, this level of vibration would not exceed vibration thresholds and, as such, would result in less than significant impacts.

As discussed above, construction and operational vibration and noise impacts for the No Ground-Mounted Utility-Solar Development Alternative would be less than significant. Therefore, the No Ground-Mounted Utility-Solar Development Alternative would result in similar impacts related to construction noise than the proposed project.

## **Public Services**

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley and the project site would remain undeveloped. Unlike the proposed project, the No Ground-Mounted Utility-Solar Development Alternative would not introduce structures into a currently undeveloped area and is not expected to significantly increase the concentration of persons in an area, either temporarily or permanently.

With regard to fire protection, it is expected that the areas where the solar PV systems would be installed in more urbanized areas. In addition, this alternative would not require a BESS component. However, due to the numerous power lines on each individual rooftop that would be required to harness the distributed solar panel energy, this alternative could exacerbate fire risks. As such, similar to the proposed project, Mitigation Measure MM 4.13-1 would be implemented to reduce wildfire risks under this alternative. In addition, similar to the proposed project, in the event that a fire occurs during operation of the No Ground-Mounted Utility-Solar Development Alternative, this alternative would implement Mitigation Measure MM 4.13-2, which would require the Project Proponent/operator to pay Kern County development impact fees to compensate for any permanent impacts to fire protection services and facilities resulting from the operation of this alternative. Impacts related to fire protection would be less than significant with mitigation.

With regard to police protection, as the proposed small to medium solar PV systems would be installed in more urbanized areas on existing buildings, it is unlikely that construction and operation of the No Ground-Mounted Utility-Solar Development Alternative would attract attention. Similar to the proposed project, this alternative would increase traffic with truck trips during construction and routine maintenance during operation of this alternative. However, the additional volume of trips during construction and operation

would be minimal and would not likely have a significant and adverse effect on the KCSO protective service provision or CHP's ability to patrol the highways. Impacts would be less than significant.

Based on the above, impacts are expected to be less than significant with mitigation. The No Ground-Mounted Utility-Solar Development Alternative would result in less impact related to public services compared to the proposed project because the proposed small to medium solar PV systems would be developed in urbanized areas that are in closer proximity to existing fire and police protection services.

### ***Transportation and Traffic***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley.

Similar to the proposed project, this alternative would require vehicular trips during construction to transport and install the solar panels. However, the trips would be more dispersed than the proposed project given the location of the existing facilities, thereby reducing impacts on the roadways surrounding the project site. As such, roadway segments within the Antelope Valley are not expected to operate at levels that would trigger a significant transportation impact during construction of this alternative. During operation of this alternative, day to day operations and maintenance trips would be similar to those of those of the proposed project. However, as with construction, these maintenance trips would be more dispersed than the proposed project given the location of the existing facilities. It is also estimated that the total number of daily trips for maintenance of the solar panels are less than the number of trips generated during construction. As construction impacts would be less than significant, operation of this alternative would also have a less than significant impact on area roadways.

With regard to consistency with *CEQA Guidelines* Section 15064.3(b), as regulations of SB 743 have not been finalized or adopted by the County, automobile delay remains the measure used to determine the significance of a traffic impact. Therefore, impacts related to *CEQA Guidelines* Section 15064.3(b) would be less than significant under the No Ground-Mounted Utility-Solar Development Alternative, as with the proposed project.

Based on the above, impacts would be less than significant. The No Ground-Mounted Utility-Solar Development Alternative would result in less impact related to transportation and traffic compared to the proposed project.

### ***Tribal Cultural Resources***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of commercial and industrial facilities situated throughout the Antelope Valley. It is unlikely that the proposed rooftop solar systems would have an impact on tribal cultural resources. However, prior to construction of this alternative, the Native American Heritage Commission will be contacted for a search of the Sacred Land File for the No Ground-Mounted Utility-Solar Development Alternative construction area. In addition, the County will conduct additional consultation with California Native American tribes on the County's Master List for AB 52, apprising them of the alternative project description. Due to the nature of the No Ground-Mounted Utility-Solar Development Alternative, it is highly unlikely to have an impact on tribal cultural resources. It is anticipated that the Sacred Land File and consultation would not result in the identification of any tribal

cultural resources that could be impacted by the No Ground-Mounted Utility-Solar Development Alternative directly or indirectly, however should it be determined the potential exists, this alternative will avoid impacting any such resources through avoidance and re-design. As such, The No Ground-Mounted Utility-Solar Development Alternative would have no impact to tribal cultural resources and no mitigation would be required. Furthermore, the No Ground-Mounted Utility-Solar Development Alternative would result in fewer impacts related to tribal cultural resources compared to the proposed project.

### ***Utilities and Service Systems***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley.

With regard to water demand, this alternative would likely require minimal water as no dust suppression would be required during construction. This alternative would also require minimal generation of wastewater, usage of electrical power, and telecommunications. In addition, construction of the No Ground-Mounted Utility-Solar Development Alternative would not substantially alter stormwater drainage. With regard to operation, solar panel washing is expected to be less frequent, as compared to the proposed project, given the location of panels on top of buildings throughout the Antelope Valley (rather than directly on sediment). Wastewater and solid waste generation associated with this alternative would be similar to the proposed project due to the similar number of employees required for maintenance of the solar panels. As the No Ground-Mounted Utility-Solar Development Alternative would not develop the project site, this alternative would not result in impervious surfaces and implementation of Mitigation Measures MM 4.10-1 would not be required.

Based on the above, impacts to utilities and service systems would be less than significant. This alternative would result in less overall impacts related to utilities and service systems than the proposed project.

### ***Wildfire***

Under the No Ground-Mounted Utility-Solar Development Alternative, a number of geographically distributed small to medium solar PV systems would be developed, typically on the rooftops of existing commercial and industrial facilities situated throughout the Antelope Valley. Due to the numerous power lines that would be required to harness the distributed solar panel energy, this alternative could exacerbate fire risks above that of the proposed project. As such, similar to the proposed project, the No Ground-Mounted Utility-Solar Development Alternative would implement Mitigation Measure MM 4.13-1, which would require the development and implementation of a Fire Safety Plan for use during construction, operation, and decommissioning of the project, which would further reduce the fire risks. With regard to the installation or maintenance of associated infrastructure, solar panels would require installation of the electrical collector line, similar to the proposed project. The installation of the electrical collector line would not be placed within a high fire hazard zone and thus would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. Similar to the proposed project, the No Ground-Mounted Utility-Solar Development Alternative would not include significant risks related to downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

With implementation of similar mitigation, this alternative is expected to result in less than significant impacts to wildfire. The No Ground-Mounted Utility-Solar Development Alternative would likely result in slightly less impact than the proposed project as solar panels would be located in more urbanized areas.

With regard to cumulative wildfire impacts, given the location in a rural area and limited infrastructure, the No Ground-Mounted Utility-Solar Development Alternative and related projects have the potential to result in a cumulative impact related to conflict with an adopted emergency response plan or emergency evacuation plan, exposing people to pollutant concentrations from a wildfire, the installation or maintenance of associated infrastructure, exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes and, thus, would result in a significant and unavoidable cumulative impact.

## Comparison of Impacts

The No Ground-Mounted Utility-Solar Development Alternative would result in less impact related to aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, public services, transportation and traffic, tribal cultural resources, and utilities and service systems. Further, this alternative would avoid the significant and unavoidable impacts to aesthetics (project and cumulative), air quality (project and cumulative), and biological resources (cumulative) that would occur under the proposed project.

## Relationship to Project Objectives

This alternative would satisfy some of the project objective of assisting California in reducing GHG emissions. However, the BESS (a component of the proposed project) would not be constructed under this alternative. The alternative would not achieve other project objectives including utilizing existing transmission infrastructure to minimize costs. It is also unlikely the alternative would have an average insolation value similar to or greater than that of the project site given the lack of efficiency of rooftop solar compared to solar tracking technology. Additionally, there are some drawbacks to this alternative that include, but not limited to those listed below.

- The BESS is not included.
- The system would not likely be built out within a timeframe that would be similar to that of the proposed project.
- Given the distributed nature of such a network of facilities, construction, management, and maintenance would not be as efficient, and total capital costs would likely be higher.
- The project proponent does not have immediate control or access to potential urban sites that could accommodate facilities to generate 270 MW of solar power.
- A distributed system of the scale of the project would be cost-prohibitive.

This alternative theoretically has the potential to generate of up to 270 MW of electricity but it would be used on the sites generating the power, and would not achieve the project objective of assisting California load-serving entities in meeting their obligations under California's RPS Program. Additionally, this alternative does not include an BESS component. Given the size of the proposed project, the project objectives, and the need to arrange a suitable assemblage of participating commercial and industrial properties, it is impractical and infeasible to propose a distributed generation project of this type and still proceed within a reasonably similar timeframe.



## 6.8 Environmentally Superior Alternative

As presented in the comparative analysis above, and as shown in **Table 6-2**, *Comparison of Alternatives*, there are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. Alternative 1, the No Project Alternative, would be environmentally superior to the proposed project on the basis of its minimization or avoidance of physical environmental impacts. However, *CEQA Guidelines* Section 15126.6(e)(2) states:

*The “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.*

Because the No Project Alternative cannot be the Environmentally Superior Alternative under CEQA, the Environmentally Superior Alternative is considered to be the No Ground-Mounted Utility-Solar Development Alternative. This alternative would avoid significant and unavoidable impacts to aesthetics, air quality, and biological resources. Impacts related to GHG emissions would be greater under this alternative due to the assumed lower efficiency of the distributed systems, which would not include solar tracking technology and it would not include ESS. This alternative could potentially result in greater impacts to land use and wildfire risks due to the numerous power lines that would be required to harness the distributed solar panel energy. However, the No Ground-Mounted Utility-Solar Development Alternative would result in less impact to aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, public services, transportation and traffic, and utilities and service systems. Thus, for most environmental issue areas, this alternative would result in fewer environmental impacts, both short-term and long-term, when compared to the proposed project.

It is important to note that it is considered to be impracticable and infeasible to construct the No Ground-Mounted Utility-Solar Development Alternative within the same timeframe and/or with the same efficiency as the proposed project because the Project Proponent lacks control and access to the sites required to develop 270 MW of distributed solar generated electricity; additionally, doing so would be economically infeasible. In addition, this alternative would not achieve the project objective of assisting California load-serving entities in meeting their obligations under California’s RPS Program. Nonetheless, because this alternative reduces impacts to a greater degree than the Specific Plan and Zoning Buildout Alternative and Reduced Acreage Alternative, the No Ground-Mounted Utility-Solar Development Alternative is considered the Environmentally Superior Alternative.

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## Chapter 7 **Response to Comments**

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This chapter is being reserved for, and will be included with, the Final EIR.

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# Chapter 8

## Organizations and Persons Consulted

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### 8.1 Federal

China Lake Naval Weapons Center	U.S. Department of Agriculture
Edwards Air Force Base, Mission Sustainability Liaison	U.S. Environmental Protection Agency Region IX Office
Natural Resource Conservation Service	U.S. Fish and Wildlife Service
U.S. Air Force	U.S. Marine Corps
U.S. Army, Strategic Plans, S3, NTC	U.S. Navy
U.S. Army, Office of Strategic Integration	U.S. Postal Service, Address Management Systems
U.S. Army Corps of Engineers, Lake Isabella	
U.S. Army Corp of Engineers, Regulatory Division	
U.S. Bureau of Land Management	

### 8.2 State of California

California Air Resources Board	California State University Bakersfield - Library
California Department of Fish & Wildlife, Fresno Region	Caltrans District 6
California Department of Water Resources, San Joaquin District	Caltrans District 9
California Department of Water Resources, Division of Land & Right-of-Way	Department of Toxic Substances Control
California Energy Commission	State Department of Conservation, Director's Office
California Native American Heritage Commission	State Department of Conservation, Geologic Energy Management Division
California Public Utilities Commission, Energy Division	State Department of Conservation, Office of Land Conservation
California Regional Water Quality Control Board, Lahontan Region	State Department of Food and Agriculture
California State Clearinghouse	State Lands commission
	State Office of Historical Preservation
	State Water Resources Control Board Division of Drinking Water

### 8.3 Regional and Local

Adams, Broadwell, Joseph & Cardozo	Inyo County Planning Department	Los Angeles County Regional Planning Department
Antelope Valley-East Kern Water Agency	Kern County Fire Department, David Witt, Fire Chief	Lozeau Drury LLP
Antelope Valley Resource Conservation District	Kern County Fire Department, Cary Wright, Fire Marshall	Mojave Chamber of Commerce Mojave Town Council

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AT&T California OSP Engineering/Right-of-Way	Kern County Library Beale Branch, Andie Sullivan	Santa Barbara County Resource Management Department
Bakersfield City Planning Department	Kern Audubon Society	Sierra Club/Kern Kaweah Chapter
Bakersfield City Public Works Department	Kern County Council of Governments	Native American Heritage Council of Kern County
Beyond Coal Campaign/Sierra Club	Kern County Agriculture Department	Local Agency Formation Comm
California City Planning Department	Kern County Environmental Health Services Department	Southern Kern Unified School District
California Highway Patrol Planning & Analysis Division	Kern County Museum	South San Joaquin Valley Archaeological Information Center
Center for Biological Diversity	Kern County Public Works Department/Building and Development/Floodplain	Southern California Edison
Center on Race, Poverty & the Environment	Kern County Public Works Department/Building and Development/Survey	Southern California Edison Planning Department
Center on Race, Poverty and the Environmental/CA Rural Legal Assistance Foundation	Kern County Public Works Department/Building and Development/Development Review	Southern California Gas Company
City of Arvin	Kern County Public Works Department/Operations and Maintenance/Regulatory Monitoring and Reporting	Southern California Gas Company, Transportation Department
City of Maricopa	Kern County Public Works Department/Code Compliance	Terra-Gen Power, LLC
City of McFarland	Kern County Sheriff's Department	The Gorman Law Firm
City of Ridgecrest	Kern County Superintendent of Schools	Tulare County Planning and Development Department
City of Shafter	Kern County Water Agency	Ventura County Resource Management Agency, Planning Division
City of Taft	Kings County Planning Agency	
City of Tehachapi	Laborers' International Union of North America (LIUNA)	
City of Wasco	Los Angeles Audubon	
Delano City Planning Department	Kern County Library Rosamond Branch	
East Kern Air Pollution Control District	Rosamond Municipal Advisory Council	
Eastern Kern Resources Cons District	San Bernardino County Planning Department	
EDP Renewables Company	San Luis Obispo County Planning Department	
Eight Bar Ranch		
Fairmont Town Council		
Integrated Waste Management		
Kern County Library Beale Branch, Local History Room		
Kern County Library Mojave Branch		
Kern County Parks and Recreation		
Kelly Group		
Kern County Administrative Officer		

## 8.4 Other

Chumash Council of Bakersfield

David Laughing Horse Robinson

Jo Ellen Alexander

Joyce LoBasso

Kern Valley Indian Council

Kern Valley Indian Council Historic Preservation Office

San Manuel Band of Mission Indians

Kitanemuk & Yowlumne Tejon Indians

Leadership Counsel for Justice and Accountability

Mojave Foundation

Santa Rosa Rancheria

Tejon Indian Tribe

Tubatulabals of Kern County

Tule River Indian Tribe

Vestas

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## 9.1 Lead Agency

### ***Kern County Planning and Natural Resources Department***

Lorelei H. Oviatt, AICP – Director

Craig M. Murphy – Assistant Director

Katrina A. Slayton – Advanced Planning Division Chief

Terrance Smalls – Supervising Planner

Janice Mayes – Planner III

## 9.2 Technical Assistance

### ***PlaceWorks***

Addie Farrell – Project Director, Environmental

Arabesque Said-Abdelwahed – Project Manager

Alen Estrada-Rodas – Associate, Environmental

Alex Reyes – Associate, Visual Resources

Angel Castro – Project Planner

Julia Lok – Project Planner

Nicole Vermillion – Principal, Air Quality, Greenhouse Gas Emissions, Energy, and Noise Technical Services

Lexie Zimny – Project Planner, Air Quality/Greenhouse Gas, Energy Analyst

Abdul Khan – Noise and Vibration Analyst

Dina El Chammas Gass – Senior Engineer

Jared Bradford – Associate, Environmental

### ***South Environmental***

Matthew South, CWB, Principal Biologist

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## Chapter 10 Bibliography

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## Chapter 11

# Acronyms and Abbreviations

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AAQA	ambient air quality analysis
AB	Assembly Bill
AC	alternating current
ACHP	Advisory Council on Historic Preservation
ACOE	Army Corps of Engineers
AFB	Air Force Base
AF	acre-feet
AFY	acre-feet per year
ALUCP	Airport Land Use Compatibility Plan
ANSI	American National Standard Institute
APCD	Air Pollution Control District
APE	Area of Potential Effect
APLIC	Avian Power Line Interaction Committee's
APN	Assessor Parcel Number
AQAP	Air Quality Attainment Plan
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ARP	accidental release prevention
ARPA	Archeological Resources Protection Act
ASCE	American Society of Civil Engineers
ASF	age sensitivity factor
AVAQMD	Antelope Valley Air Quality Management District
AVEK	Antelope Valley-East Kern
BESS	Battery Energy Storage System
BLM	Bureau of Land Management
BMCM	bulk material control measures
BMPs	best management practices
BRTR	Biological Resources Technical Report
C&D	Construction and Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards

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CaCO <sub>3</sub>	calcium carbonate
CAFE	corporate average fuel economy
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	Clean Air Act of 1988
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CDC	Center for Disease Control
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CDOC	California Department of Conservation
CEC	California Energy Commission
CERS	California Environmental Reporting System
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CH <sub>4</sub>	methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CMA	Congestion Management Agency
CMP	Congestion Management Plan
CNDDDB	Fish and Game Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
COG	Council of Governments
CPUC	California Public Utility Commission



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CREC	controlled recognized environmental conditions
CRHR	California Register of Historical Resources
CRPC	California Rare Plant Rank
CSLC	California State Lands Commission
CSP	concentrated solar power
CUP	conditional use permit
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CWA	Clean Water Act
DAT	dual access tracker
dba	decibel
DC	direct current
DEIR	draft environmental impact report
DI	drilling island
DOC	Department of Conservation
DOGGR	Division of Oil, Gas, and Geothermal Resources
DNL	Day-Night Average Sound Level
DPM	diesel particulate matter
DRECP	Desert Renewable Energy Conservation Plan
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
ECCMP	Environmental and Construction Compliance Monitoring Plan
EIR	Environmental Impact Report
EKAPCD	Eastern Kern Air Pollution Control District
EMF	electromagnetic field
EMT	emergency medical technician
EO	Executive Order
EPA	Environmental Protection Agency
EPS	Emissions Performance Standard
ESA	Endangered Species Act
ESS	Energy Storage System
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act

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FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FR	Federal Register
FRA	Federal Responsibility Area
FRAP	Fire and Resource Assessment Program
FTA	Federal Transit Administration
FTE	full-time equivalent
FTIP	Federal Transportation Improvement Program
GDP	Gross Domestic Product
GHG	greenhouse gas
GIS	geographic information system
GO	general order
GPS	global positioning system
GSP	groundwater sustainability plan
GWP	Global Warming Potential
H2O	water
HAPs	total hazardous air pollutants
HCP	habitat conservation plan
HFC	hydrofluorocarbons
HHWE	Hazardous Waste Element
HM	habitat management
HMBP	Hazardous Materials Business Plan
HMMP	Hazardous Materials Management Plan
HRA	Health Risk Assessment
HREC	historical recognized environmental conditions
HSAT	horizontal single axis tracker
HSWA	Hazardous Solid Waste Act
HUD	Department of Housing and Urban Development
HVAC	heating/ventilation/air conditioning
HWMP	Hazardous Waste Management Plan
ICRMP	Integrated Cultural Resources Management Plan

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INRMP	Integrated Natural Resources Management Plan
IPCC	Intergovernmental Panel on Climate Change
IS/NOP	Initial Study/Notice of Preparation
IVIRWMP	Antelope Valley Integrated Regional Water Management Plan
KEDC	Kern Economic Development Cooperation
KCFD	Kern County Fire Department
KCGP	Kern County General Plan
KCOG	Kern Council of Governments
KCPD	Kern County Planning Department
KCSO	Kern County Sheriff's Department
KOP	Key Observation Point
LACM	Museum of Los Angeles County
LADWP	Los Angeles Department of Water and Power
LCFS	Low Carbon Fuel Standard
LID	low impact design
LLC	Limited Liability Corporation
LOS	Level of Service
LRA	local responsibility area
LUPA	Land Use Plan Amendment
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MDAB	Mojave Desert Air Basin
MM	mitigation measure
MMRCP	Monitoring, Reporting, and Compliance Program
MOUs	Memoranda of Understanding
MRZs	Mineral Resource Zones
MT	metric tons
MV	medium voltage
MW	megawatts
NO <sub>x</sub>	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCP	National Contingency Act
NCCP	Natural Communities Conservation Plan

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NDFE	Nondisposal Facility Element
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NF3	nitrogen trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NOx	nitric oxide
NO2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NOP/IS	Notice of Preparation and Initial Study
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NR	natural resources
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
O3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OHV	off-highway vehicle
OSHA	Occupational Safety and Health Administrations
OPR	California Governor's Office of Planning and Research
PCE	passenger car equivalent
PCS	power conversion station
PCT	Pacific Crest Trail
PE	petroleum extraction
PFC	perfluorocarbons
PHI	points of historic interest
PL	platted lands
PM	particulate matter
PM10	Respirable Particulate Matter

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PM2.5	Fine Particulate Matter
PPA	Power Purchase Agreement
PPV	peak particle velocity
PRC	Public Resources Code
PSD	Prevention of Significant Deterioration
PV	solar photovoltaic
PVC	polyvinyl chloride
PVSC	PV combining switchgear
R-2	Medium-density Residential
RACM	reasonably available control measures
RCRA	Resource Conservation and Recovery Act
RCSD	Rosamond Community Services District
RE	Recurrent Energy
REC	recognized environmental condition
RHNA	Regional Housing Needs Allocation
RMS	root mean square
ROGs	reactive organic gases
ROWs	Rights-of-Way
RPS	Renewable Portfolio Standard
RS	Residential Suburban
RTP	Regional Transportation Plan
RV	recreational vehicle
RWMG	Regional Water Management Group
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SBBM	San Bernardino Base and Meridian
SBCM	San Bernardino County Museum
SC	sectionalizing cabinets
SCC	site control centers
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCC	site control center
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SDC	seismic design category

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SDNHM	San Diego Natural History Museum
SF6	sulfur hexafluoride
SGHAT	Solar Glare Hazard Analysis Tool
SGMA	Sustainable Groundwater Management Agency
SHPO	State Historic Preservation Officer
SIPs	State Implementation Plans
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SKUSD	Southern Kern Unified School District
SLAMS	State and Local Air Monitoring Stations
SLF	sacred lands file
SMARA	Surface Mining and Reclamation Act of 1975
SO <sub>x</sub>	sulfur oxides
SO2	sulfur dioxide
SPA	specific plan amendment
SPCC	Prevention, Control, and Countermeasure
SR	State Route
SRAs	State Responsibility Areas
SRRE	Source Reduction and Recycling Element
SSC	Species of Special Concern
SSJVIC	San Joaquin Valley Archaeological Information Center
STIP	State Transportation Improvement Program
SVP	Society of Vertebrate Paleontology
SWANCC	Solid Waste Agency of Northern Cook County
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TAZ	Traffic Analysis Zones
UBC	Uniform Building Code
UL	Underwriters Laboratory
USC	United States Code
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

USPS	United States Postal Service
UST	underground storage tank
UV	ultraviolet
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VRM	Visual Resource Management
WEMO	West Mojave Plan
WRCC	Western Regional Climate Center
WSA	water supply assessment
WSSP	Willow Springs Specific Plan
ZCC	zone change
ZEV	zero-emissions vehicle

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