



Draft Environmental Impact Report

Citizens Imperial Solar, LLC Project

SCH No. 2018041058

Imperial County, California

August 2018

Prepared for

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Acronyms

°	degrees
AB	Assembly Bill
ABPP	avian and bat protection plan
AC	alternating current
AF	acre-feet
AFY	acre-feet per year
ALUCP	Airport Land Use Compatibility Plan
AP	Alquist-Priolo
APLIC	Avian Powerline Interaction Committee
APN	assessor parcel number
AQAP	air quality attainment plan
AQMP	air quality management plan
AQUA	aquaculture
AST	aboveground storage tank
BAU	business as usual
BMP	best management practice
BP	Before present
BTR	Biological Technical Report
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal EPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CH ₄	methane
CHRIS	California Historical Resources Information System
CMP	congestion management program
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
County	Imperial County
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Program
CUP	conditional use permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DC	direct current
DDE	Dichlorodiphenylethylene
DDT	Dichlorodiphenyltrichloroethane
DOC	Department of Conservation
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act



FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	farmland mapping and monitoring program
FRSH	freshwater replenishment
FTA	Federal Transit Administration
GHG	greenhouse gas
GWP	global warming potential
H	High
HCP	habitat conservation plan
HFC	hydrofluorocarbon
HSC	Health and Safety Code
HU	hydrological unit
Hz	hertz
ICAPCD	Imperial County Air Pollution Control District
ICFD	Imperial County Fire Department
ICPDS	Imperial County Planning and Development Services Department
IGR	Intergovernmental Review
IID	Imperial Irrigation District
IND	industrial service supply
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
IVAG	Imperial Valley Association of Governments
IVC	Imperial Valley College
IVT	Imperial Valley Transit
IWSP	Interim Water Supply Policy
KOP	key observation point
kV	kilovolt
L	low
LCFS	low carbon fuel standard
L_{dn}	day-night average sound level
LE	land evaluation
L_{eq}	equivalent sound level
LESA	land evaluation site assessment
L_{max}	maximum noise level
LOS	level of service
M	moderate
MBTA	Migratory Bird Treaty Act
MH	moderately high
MHMP	Multi-Hazard Mitigation Plan
ML	moderately low
MLD	most likely descendant
MMT	million metric tons
MMTCO _{2e}	million metric tons of CO ₂ equivalent
MS4	Municipal Separate Storm Sewer System
MT	metric tons
MW	megawatt
MW-h	megawatt hours
N/A	not applicable
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	natural community conservation plan
NFIP	National Flood Insurance Program

NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
No.	Number
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollution Discharge Elimination System
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
O&M	operations and maintenance
O ₃	ozone
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyls
PFC	perfluorocarbon
Phase I ESA	Phase I Environmental Site Assessment
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
POW	hydropower generation
PPA	power purchase agreement
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PV	photovoltaic
RARE	Preservation of Rare, Threatened, or Endangered Species
RCP	Regional Comprehensive Plan
RE	renewable energy
REC	Renewable-Energy Credits
REC I	water contact recreation
REC II	non-contact water recreation
RECUP	Renewable Energy Conditional Use Permit
ROG	reactive organic gas
ROW	right-of-way
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SA	site assessment
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SIP	State Implementation Plan
SLF	sacred lands file
SO ₂	sulfur dioxide
SO _x	sulfur oxide
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SSAB	Salton Sea Air Basin



SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
tCO ₂ e	tonnes of carbon dioxide equivalents
TMDL	total maximum daily load
TSS	total suspended solids
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
V/C	volume to capacity
VOC	volatile organic compound
WARM	warm freshwater habitat
WILD	wildlife habitat
WSA	Water Supply Assessment
µg/m ³	microgram per cubic meter

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Executive Summary

This environmental impact report (EIR) has been prepared in compliance with the California Environmental Quality Act (CEQA) Public Resources Code [PRC] Section 21000 et seq., the CEQA Guidelines (Section 15000 et seq.) as promulgated by the California Resources Agency and the Governor's Office of Planning and Research (OPR). The purpose of this environmental document is to assess the potential environmental effects associated with the Citizens Imperial Solar, LLC Project and to propose mitigation measures, where required, to reduce significant impacts.

Project Overview

The Citizens Imperial Solar, LLC Project involves the construction of a 30 megawatt (MW) alternating current (AC) solar photovoltaic (PV) energy generating facility on approximately 223 acres of land owned by IID. Of the total 223 acres, approximately 159 acres (area within the fence line) would be developed with a ground mounted PV solar power generating system, supporting structures, on-site substation, access driveways, and transmission structures. Approximately 12.02 acres is currently developed with the Midway Substation.

The proposed project would connect to the electric grid at the Imperial Irrigation District's (IID) Midway Substation, located on the northern parcel of the project site. The project has a Power Purchase Agreement (PPA) with IID for the sale of power from the project. The lifespan of the project is expected to be 25 years. The project would provide lower-cost energy to low-income customers through the eGreen program administered by IID.

Purpose of an EIR

The purpose of an EIR is to analyze the potential environmental impacts associated with a project. CEQA (Section 15002) states that the purpose of CEQA is to: (1) inform the public and governmental decision makers of the potential, significant environmental impacts of a project; (2) identify the ways that environmental damage can be avoided or significantly reduced; (3) prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and (4) disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Eliminated from Further Review in Notice of Preparation

Based on the Initial Study and Notice of Preparation (IS/NOP) prepared for the proposed project (Appendix A of this EIR), Imperial County (County) has determined that the proposed project would not have the potential to cause significant adverse effects associated with the topics identified below. Therefore, these topics are not addressed in this EIR; however, the rationale for eliminating these topics is briefly discussed below.

Forestry Resources

The project site is located on privately owned, undeveloped agricultural land. No portion of the project site or the immediate vicinity is zoned or designated as forest lands, timberlands, or Timberland Production. As such, the proposed project would not result in a conflict with existing zoning or cause rezoning. Therefore, implementation of the proposed project would not impact forestry resources.

Mineral Resources

The project site is not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to the Conservation and Open Space Element of the General Plan, no known mineral resources occur within the project site nor does the project site contain mapped mineral resources. As such, the proposed project would not adversely affect the availability of any known mineral resources within the project site. No impact is identified.

Based on a review of the Department of Conservation's (DOC) Division of Oil, Gas, and Geothermal Resources Well Finder, there is one plugged and abandoned geothermal well (Well Number [No.] 02590318) located immediately east of the southern parcel of the project site. This geothermal well is not located within the project's construction limit and, therefore, would be avoided by the proposed project. Implementation of the proposed project would not impact geothermal wells.

Recreation

The proposed project would not generate new employment on a long-term basis. As such, the project would not significantly increase the use or accelerate the deterioration of regional parks or other recreational facilities. The temporary increase of population during construction that might be caused by an influx of workers would be minimal and not cause a detectable increase in the use of parks. Additionally, the project does not include or require the expansion of recreational facilities. Therefore, no impact is identified for recreation.

Population/Housing

Development of housing is not proposed as part of the project. Once construction is completed, the facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Security personnel may conduct unscheduled security rounds, and would be dispatched to the project site in response to a fence breach or other alarm. A part-time operations and maintenance staff of two to three people would be responsible for performing all routine and emergency operational and maintenance activities. The proposed project would not result in substantial population growth, as the number of employees required to operate and maintain the facility is minimal. Therefore, no impact is identified for population and housing.

Public Services (Schools, Parks, and Other Facilities)

The proposed project does not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed project would not result in an increase in student population within the School District's that would service the area since it is anticipated that construction workers would commute in during construction operations.

Additionally, operation of the proposed project would require minimal part-time staff for maintenance. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities (such as post offices) are not expected.



Utilities (Wastewater, Stormwater, and Solid Waste)

The project would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No habitable structures are proposed on the project site (such as Operations and Maintenance [O&M] buildings); therefore, there would be no wastewater generation from the proposed project. The proposed project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. The proposed project is not anticipated to generate a significant increase in the amount of runoff water from water use involving solar panel washing. Water will continue to percolate through the ground, as a majority of the surfaces on the project site will remain pervious. The proposed project would not substantially alter the existing drainage pattern of the site, substantially increase the rate of runoff, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. A less than significant impact is identified for these issue areas.

Solid waste generation would be minor for the construction and operation of the project. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. Trash would likely be hauled to the Niland Solid Waste Site (13-AA-0009) located in Niland. The Niland Solid Waste Site has approximately 318,669 cubic yards of remaining capacity and is estimated to remain in operation through 2056 (California Department of Resources Recycling and Recovery [CalRecycle] n.d.). Therefore, there is ample landfill capacity in the County to receive the minor amount of solid waste generated by construction and operation of the project.

Additionally, because the proposed project would generate solid waste during construction and operation, the project will be required to comply with state and local requirements for waste reduction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the CUP will contain provisions for recycling and diversion of Imperial County construction waste policies.

Further, when the proposed project reaches the end of its operational life, the components will be decommissioned and deconstructed. When the project concludes operations, much of the wire, steel, and modules of which the system is comprised would be recycled to the extent feasible. The project components would be deconstructed and recycled or disposed of safely, and the site could be converted to other uses in accordance with applicable land use regulations in effect at the time of closure. Commercially reasonable efforts will be used to recycle or reuse materials from the decommissioning. All other materials will be disposed of at a licensed facility. A less than significant impact is identified for this issue.

Summary of Significant Impacts and Mitigation Measures that Reduce or Avoid the Significant Impacts

Based on the analysis presented in the IS/NOP and the information provided in the comments to the IS/NOP, the following environmental topics are analyzed in this EIR:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- GHG Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use and Planning
- Noise and Vibration
- Public Services
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities/Service Systems

Table ES-1 summarizes existing environmental impacts that were determined to be potentially significant, mitigation measures, and level of significance after mitigation associated with the project.

Areas of Controversy and Issues to be Resolved

Areas of Concern

Section 15123(b)(2) of the CEQA Guidelines requires that an EIR identify areas of controversy as well as issues to be resolved known to the Lead Agency, including issues raised by other agencies and the public. A primary issue associated with solar farm projects, and other solar facility projects that are proposed in the County, is the conversion of agricultural lands to solar farm use and the corresponding land use compatibility and fiscal/economic impacts to the County. Through the course of the environmental review process for these projects, other areas of concern and issues to be resolved include potential impacts related to aesthetics, biological resources, and water supply.

Detailed analyses of these topics are included within each corresponding section contained within this document.



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Agricultural Resources			
Impact 4.2-1: Conversion of Important Farmlands to non-agricultural use.	Potentially Significant	<p>AG-1a. Payment of Agricultural and Other Benefit Fees. One of the following options included below is to be implemented prior to the issuance of a grading permit or building permit (whichever is issued first) for the project:</p> <p>A. Mitigation for Non-Prime Farmland.</p> <p>Option 1: Provide Agricultural Conservation Easement(s). The Permittee shall procure Agricultural Conservation Easements on a “1 to 1” basis on land of equal size, of equal quality farmland, outside the path of development. The conservation easement shall meet DOC regulations and shall be recorded prior to issuance of any grading or building permits.</p> <p>Option 2: Pay Agricultural In-Lieu Mitigation Fee. The Permittee shall pay an “Agricultural In-Lieu Mitigation Fee” in the amount of 20 percent of the fair market value per acre for the total acres of the proposed site based on five comparable sales of land used for agricultural purposes as of the effective date of the permit, including programs costs on a cost recovery/time and material basis. The Agricultural In-Lieu Mitigation Fee, will be placed in a trust account administered by the Imperial County Agricultural Commissioner’s office and will be used for such purposes as the acquisition, stewardship, preservation and enhancement of agricultural lands within Imperial County; or,</p>	Less than Significant

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>Option 3: Public Benefit Agreement. The Permittee and County voluntarily enter into an enforceable Public Benefit Agreement or Development Agreement that includes an Agricultural Benefit Fee payment that is (1) consistent with Board Resolution 2012-005; (2) the Agricultural Benefit Fee must be held by the County in a restricted account to be used by the County only for such purposes as the stewardship, preservation and enhancement of agricultural lands within Imperial County and to implement the goals and objectives of the Agricultural Benefit program, as specified in the Development Agreement, including addressing the mitigation of agricultural job loss on the local economy.</p> <p>AG-1b. Site Reclamation Plan. The DOC has clarified the goal of a reclamation and decommissioning plan: the land must be restored to land which can be farmed. In addition to Mitigation Measure AG-1a for Prime Farmland and Non-Prime Farmland, the Applicant shall submit to Imperial County a reclamation plan prior to issuance of a grading permit. The reclamation plan shall document the procedures by which the CUP will be returned to its current agricultural condition/LESA score of 50.38. Permittee also shall provide financial assurance/bonding in the amount equal to a cost estimate prepared by a California-licensed general contractor or civil engineer for implementation of the reclamation plan in the event Permittee fails to perform the reclamation plan.</p>	



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Impact 4.2-3: Result in other effects that could contribute to the conversion of active farmlands to non-agricultural use.	Potentially Significant	Implement Mitigation Measure AG-1b.	Less Than Significant
Impact 4.2-4: Adversely affect agricultural productivity.	Potentially Significant	<p>AG-2 Prior to the issuance of a grading permit or building permit (whichever occurs first), a Pest Management Plan shall be developed by the project applicant and approved by the County of Imperial Agricultural Commissioner. The project applicant shall maintain a Pest Management Plan until reclamation is complete. The plan shall provide the following:</p> <ol style="list-style-type: none"> 1. Monitoring, preventative, and management strategies for weed and pest control during construction activities at any portion of the project (e.g., transmission line); 2. Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows: <ul style="list-style-type: none"> • Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner’s office that a pest problem is present on the project site. The assistance of a licensed pest control advisor is recommended. All treatments must be performed by a qualified applicator or a licensed pest control business; • All treatments must be performed by a qualified applicator or a licensed pest control operator; • “Control” means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods 	Less Than Significant

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>after infestation. Effective control methods may include physical/mechanical removal, bio control, cultural control, or chemical treatments;</p> <ul style="list-style-type: none"> • Use of “permanent” soil sterilants to control weeds or other pests is prohibited because this would interfere with reclamation; • Notify the Agricultural Commissioner’s office immediately regarding any suspected exotic/invasive pest species as defined by the California Department of Food Agriculture and the U.S. Department of Agriculture. Request a sample be taken by the Agricultural Commissioner’s Office of a suspected invasive species. Eradication of exotic pests shall be done under the direction of the Agricultural Commissioner’s Office and/or California Department of Food and Agriculture; • Obey all pesticide use laws, regulations, and permit conditions; • Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties; • Ensure all project employees that handle pest control issues are appropriately trained and certified, all required records are maintained and made available for inspection, and all required permits and other required legal documents are current; • Maintain records of pests found and treatments or pest management methods used. Records should 	



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>include the date, location/block, project name (current and previous if changed), and methods used. For pesticides include the chemical(s) used, EPA Registration numbers, application rates, etc. A pesticide use report may be used for this;</p> <ul style="list-style-type: none"> • Submit a report of monitoring, pest finds, and treatments, or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report is required even if no pests were found or treatment occurred. It may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request. <p>3. A long-term strategy for weed and pest control and management during the operation of the proposed projects. Such strategies may include, but are not limited to:</p> <ul style="list-style-type: none"> • Use of specific types of herbicides and pesticides on a scheduled basis. <p>4. Maintenance and management of project site conditions to reduce the potential for a significant increase in pest-related nuisance conditions on surrounding agricultural lands.</p> <p>The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources.</p>	

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Air Quality			
Impact 4.3-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.	Less than Significant	<p>AQ-1 Construction Equipment. Construction equipment shall be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). A list of the construction equipment, including all off-road equipment utilized at each of the projects by make, model, year, horsepower and expected/actual hours of use, and the associated EPA Tier shall be submitted to the County Planning and Development Services Department and ICAPCD prior to the issuance of a grading permit. ICAPCD shall utilize this list to calculate air emissions to verify that equipment use does not exceed significance thresholds. The Planning and Development Services Department and ICAPCD shall verify implementation of this measure.</p> <p>AQ-2 Fugitive Dust Control. Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. Whereas these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the ICAPCD CEQA Handbook’s required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. The County Department of Public Works will verify implementation and compliance with these measures as part of the grading permit review/approval process.</p> <p>ICAPCD Standard Measures for Fugitive Dust (PM₁₀) Control</p> <ul style="list-style-type: none"> ▪ All disturbed areas, including bulk material storage, which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative 	Less than Significant



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>ground cover.</p> <ul style="list-style-type: none"> ▪ All on-site and offsite unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. ▪ All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. ▪ The transport of bulk materials shall be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material. ▪ All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area. ▪ Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line. ▪ The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved 	

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants, and/or watering.</p> <p><i>ICAPCD “Discretionary” Measures for Fugitive Dust (PM₁₀) Control</i></p> <ul style="list-style-type: none"> ▪ Water exposed soil with adequate frequency for continued moist soil. ▪ Replace ground cover in disturbed areas as quickly as possible. ▪ Automatic sprinkler system installed on all soil piles. ▪ Vehicle speed for all construction vehicles shall not exceed 15 miles per hour on any unpaved surface at the construction site. ▪ Develop a trip reduction plan to achieve a 1.5 average vehicle ridership for construction employees. ▪ Implement a shuttle service to and from retail services and food establishments during lunch hours. <p><i>Standard Mitigation Measures for Construction Combustion Equipment</i></p> <ul style="list-style-type: none"> ▪ Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment. ▪ Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum. ▪ Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use. 	



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> ▪ Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). <p>Enhanced Mitigation Measures for Construction Equipment</p> <p>To help provide a greater degree of reduction of PM emissions from construction combustion equipment, ICAPCD recommends the following enhanced measures.</p> <ul style="list-style-type: none"> ▪ Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways. ▪ Implement activity management (e.g., rescheduling activities to reduce short-term impacts). <p>AQ-3 Dust Suppression. The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. The project applicant shall apply chemical stabilization as directed by the product manufacturer to control dust between the panels as approved by ICAPCD, and other non-used areas (exceptions will be the paved entrance and parking area, and Fire Department access/emergency entry/exit points as approved by Fire/Office of Emergency Services [OES] Department).</p> <p>AQ-4 Dust Suppression Management Plan. Prior to any earthmoving activity, the applicant shall submit a construction dust control plan and obtain ICAPCD and ICPDS approval.</p> <p>AQ-5 Operational Dust Control Plan. Prior to issuance of a Certificate of Occupancy, the applicant shall submit an operations dust control plan and obtain ICAPCD and ICPDS approval..</p>	

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed project, ICAPCD shall review the project to determine if Rule 310 fees are applicable to the project.	
Biological Resources			
Impact 4.4-1: Possible habitat modification.	Potentially Significant	BIO-1 Wildlife Impact Avoidance and Minimization Measures. The following measures will be applicable throughout the life of the project: <ul style="list-style-type: none"> • To the extent feasible, initial site clearing will be conducted outside the nesting season to avoid potential take of nesting birds or eggs. • No more than 7 days prior to initial site clearing, a project biologist will survey the development area to determine if burrowing owls, nesting birds, black-tailed gnatcatcher, or any other special-status species are present. If special-status species or active bird nests are present, then the additional avoidance and minimization measures for burrowing owl and other special-status species identified below in Mitigation Measures BIO-2 and BIO-3 will be implemented. During the pre-construction survey, the project biologist will also clearly mark arrow weed thickets and bush seepweed scrub that are outside the disturbance area for avoidance. The flagging must be clearly visible and construction crews must be clearly instructed to ensure that these areas are not directly impacted. • Avoid or minimize night lighting by using shielded directional lighting pointed downward and towards the interior of the project site, thereby avoiding illumination of adjacent natural areas and the night sky. 	Less Than Significant



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • The boundaries of all areas to be newly disturbed (including solar facility areas, staging areas, access roads, and sites for temporary placement of construction materials and spoils) will be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment will be confined to the flagged areas. • No potential wildlife entrapments (e.g., trenches, bores) will be left uncovered overnight. Any uncovered pitfalls will be excavated to 3:1 slopes at the ends to provide wildlife escape ramps. Covered pitfalls will be covered completely to prevent access by small mammals or reptiles. • To avoid wildlife entrapment (including birds), all pipes or other construction materials or supplies will be covered or capped in storage or laydown area, and at the end of each work day in construction, quarrying and processing/handling areas. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently. • No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the project site, on off-site project facilities and activities, or in support of any other project activities. • Avoid wildlife attractants. All trash and food-related waste shall be placed in self-closing containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater or floodwater 	

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>within quarries will be removed to avoid attracting wildlife to the active work areas.</p> <ul style="list-style-type: none"> Any injured or dead wildlife encountered during project-related activities shall be reported to the project biologist, biological monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the best course of action. For special-status species, the Project Biologist shall notify the Bureau of Land Management, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery. <p>BIO-2 Burrowing Owl Mitigation. If one or more burrowing owls are present on the project site outside of the nesting season (September 1 to January 31) and construction activities are planned at the same location as the occupied burrow, then the CDFW will be consulted and the project biologist may be authorized to exclude the burrowing owl(s) from the site using passive exclusion methods described in the most recent CDFW staff report on burrowing owl mitigation (CDFW 2012). If burrowing owls are present on the project site during nesting season (February 1 through August 31), then project activities will either be postponed until nesting is completed, or the project biologist will monitor activities in the vicinity of the burrowing owl and will establish a buffer as needed to avoid direct impacts to the burrowing owls or occupied burrows.</p> <p>BIO-3 Nesting Birds. Project activities that would disturb soil or vegetation will be completed outside the breeding season (i.e., no removal of potential nesting habitat from February 1 through August 31), or after a pre-construction nesting bird survey has been completed. The project biologist will determine if birds are nesting in or adjacent to areas to be disturbed. If native birds are nesting on the site, then construction will be postponed until nesting is completed or the project biologist will designate appropriate avoidance buffers around nests to protect nesting</p>	



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>birds. No project related disturbance will be allowed within these buffers. The project biologist will remove the buffers and allow project activities to continue once the nestlings have fledged or once the nest is no longer active.</p> <p>BIO-4 Construction and O&M Mitigation Measures. To reduce the potential indirect impact on migratory birds, bats and raptors, the project will comply with the Avian Power Line Interaction Committee’s 2012 Guidelines. The project applicant will implement construction and O&M conservation measures that reduce potential impacts on bird populations as identified below and in conjunction with the County.</p> <p><i>Construction Conservation Measures:</i></p> <ol style="list-style-type: none"> 1. Minimizing disturbance to vegetation to the maximum extent practicable. 2. Clearing vegetation outside of the breeding season consistent with Mitigation Measure BIO-3 (Nesting Birds). 3. Minimize wildfire potential. 4. Minimize activities that attract prey and predators. 5. Control of non-native plants. <p><i>O&M Conservation Measures::</i></p> <ol style="list-style-type: none"> 1. Incorporate the APLIC’s guidelines for overhead utilities as appropriate to minimize avian collisions with transmission facilities (APLIC 2012). 2. Minimize noise. 3. Minimize use of outdoor lighting. 	

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Impact 4.4-2: Possible impact on riparian habitats or other sensitive natural communities.	Potentially Significant	BIO-5 Sensitive Natural Communities. Following the completion of project construction, mesquite thickets will be created or enhanced within the undeveloped portions of the project site at a ratio of 3:1 (i.e., 3 acres created or enhanced for each acre impacted by permanent or temporary project activities). Revegetation will include the installation of at least 40 screw bean mesquite container plants and appropriate seed (e.g., alkali goldenbush). The revegetation will be installed within 1 year of project construction. The plants will be irrigated and maintained (e.g., weeds will be controlled) until they become established to ensure that they develop adequate root systems. The vegetation will be protected and maintained for the life of the project.	Less Than Significant



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
Cultural Resources				
Impact 4.5-2: Impact on archaeological resources.	Potentially Significant	<p>CR-1</p> <p>CR-2</p>	<p>Pursuant to CEQA Guidelines §15064.5(f), in the event that previously unidentified unique archaeological resources are encountered during construction or operational repairs, archaeological monitors will be authorized to temporarily divert construction work within 100 feet of the area of discovery until significance and the appropriate mitigation measures are determined by a qualified archaeologist familiar with the resources of the region. Applicant shall notify the County within 24 hours. Applicant shall provide contingency funding sufficient to allow for implementation of avoidance measures or appropriate mitigation.</p> <p>In the event of the discovery of previously unidentified archaeological materials, the contractor shall immediately cease all work activities within approximately 100 feet of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, and scrapers) or tool making debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation, the contractor shall immediately contact the Imperial County Department of Planning and Development Services. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act, the discovery of any cultural resource within the project area shall not be grounds for a “stop work” notice or otherwise interfere with the project’s continuation except as set forth in this paragraph.</p> <p>In the event of an unanticipated discovery of archaeological</p>	Less Than Significant

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>materials during construction, the applicant shall retain the services of a qualified professional archaeologist, meeting the Secretary of the Interior's Standards for a Qualified Archaeologist, to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the applicant shall implement an archaeological data recovery program.</p>	
<p>Impact 4.5-3: Impact on paleontological resources.</p>	<p>Potentially Significant</p>	<p>CR-3 In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing activities, work must cease within 50 feet of the discovery and a paleontologist shall be hired to assess the scientific significance of the find. The consulting paleontologist shall have knowledge of local paleontology and the minimum levels of experience and expertise as defined by the Society of Vertebrate Paleontology's Standard Procedures (2010) for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. If any paleontological resources or unique geologic features are found within the project site, the consulting paleontologist shall prepare a paleontological Treatment and Monitoring Plan to include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation of specimens into an accredited repository, and preparation of a report at the conclusion of the monitoring program.</p>	<p>Less Than Significant</p>
<p>Impact 4.5-4: Impact on human remains.</p>	<p>Potentially Significant</p>	<p>CR-4 In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery will be halted or diverted and the Imperial County Coroner will be notified (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the NAHC, which will designate an MLD for</p>	<p>Less Than Significant</p>



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>the project (Section 5097.98 of the PRC). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).</p>	
<p>Impact 4.5-5: Impact on tribal cultural resources.</p>	<p>Potentially Significant</p>	<p>CR-5 If previously unidentified tribal cultural resources are identified during construction activities, construction work within 100 feet of the find shall be halted and directed away from the discovery until a Secretary of the Interior qualified archaeologist and tribal representative assesses the significance of the resource. The archaeologist, in consultation with Imperial County and any interested Tribes, shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are determined to be a tribal cultural resource as defined in PRC Section 21074.</p>	<p>Less Than Significant</p>

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Geology and Soils			
Impact 4.6-1: Possible risks to people and structures caused by strong seismic ground shaking.	Potentially Significant	<p>GEO-1 Prepare Geotechnical Report(s) as Part of Final Engineering for the Project and Implement Required Measures. Facility design for all project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by the project applicant. The final geotechnical and/or civil engineering report shall address and make recommendations on the following:</p> <ul style="list-style-type: none"> • Site preparation • Soil bearing capacity • Appropriate sources and types of fill • Potential need for soil amendments • Structural foundations • Grading practices • Soil corrosion of concrete and steel • Erosion/winterization • Seismic ground shaking • Liquefaction • Expansive/unstable soils <p>In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include subsurface testing of soil and groundwater conditions, and shall determine appropriate foundation designs that are consistent with the version of the CBC that is applicable at the time building and grading permits are applied for. All recommendations contained in the final geotechnical engineering report shall be implemented by the project applicant.</p>	Less Than Significant



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Impact 4.6-2: Unstable geologic conditions.	Potentially Significant	Implement Mitigation Measure GEO-1.	Less Than Significant
Impact 4.6-3: Construction-related erosion.	Potentially Significant	Implement Mitigation Measure HYD-1.	Less Than Significant
Impact 4.6-4: Exposure to potential hazards from problematic soils.	Potentially Significant	Implement Mitigation Measure GEO-1.	Less Than Significant
Hydrology/Water Quality			
Impact 4.9-1: Violation of water quality standards.	Potentially Significant	<p>HYD-1</p> <p>Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The project applicant or its contractor shall prepare a SWPPP specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the project. The SWPPP(s) shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> • Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching) • Dewatering and/or flow diversion practices, if required (Mitigation Measure HYD-2) • Sediment control practices (temporary sediment 	Less Than Significant

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>basins, fiber rolls)</p> <ul style="list-style-type: none"> • Temporary and post-construction on- and off-site runoff controls • Special considerations and BMPs for water crossings, wetlands, and drainages • Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity • Waste management, handling, and disposal control practices • Corrective action and spill contingency measures • Agency and responsible party contact information • Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP <p>The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of</p>	



Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		<p>contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.</p> <p>HYD-2 Properly Dispose of Construction Dewatering in Accordance with the Construction General Permit (SWRCB Order No. 2009-0009-DWQ and Associated Amendments) If required, all construction dewatering shall be discharged or utilized for dust control in accordance with the Construction General Permit. The Storm Water Pollution Prevention Plan shall provide Best Management Practices to be implemented if groundwater is encountered during construction.</p> <p>HYD-3 Incorporate Post-Construction Runoff BMPs into Project Drainage Plan. The project Drainage Plan shall adhere to County and IID guidelines to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.</p>	

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Statement of Overriding Considerations

CEQA Guidelines Section 15093 requires the Lead Agency to balance, as applicable, the economic, legal, social, and technological, or other benefits of the project against its unavoidable environmental risks when determining whether to approve the project. No significant and unmitigated impacts have been identified for the proposed project; therefore, the County would not be required to adopt a Statement of Overriding Considerations pursuant to Section 15093 for this project.

Project Alternatives

Alternatives Considered but Rejected

Section 15126.6(f)(2) of the CEQA Guidelines addresses alternative locations for a project. The key question and first step in the analysis is whether any of the significant effects of the proposed project would be avoided or substantially lessened by constructing the proposed project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR. Further, CEQA Guidelines Section 15126.6(f)(1) states that among the factors that may be taken into account when addressing the feasibility of alternative locations are whether the project proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent).

With respect to the proposed project, no significant, unmitigable impacts have been identified. With implementation of proposed mitigation, all significant environmental impacts will be mitigated to a level less than significant. Additionally, the proposed project would be consistent with applicable plans, such as the County's General Plan, and importantly the Renewable Energy Element and RE Overlay Zone.

The Applicant investigated the opportunity to develop the project site in the general project area and determined that the currently proposed project site is the most suitable for development of the solar facility. An alternative site was considered in the early planning process. The alternative site is located in the vicinity of the project site on privately-owned agricultural lands. The site comprises approximately 126 acres of land.

However, this site was rejected from detailed analysis for the following reasons:

- The site comprises a total of 126 acres of land; however, the Applicant's criteria for a suitable site (to achieve a 30 MW facility) is 200 acres. Therefore, this parcel is approximately 74 acres smaller than the site size needed to accommodate the project.
- The alternative location site, as compared to the proposed project site, has a greater agricultural value (the project site's agricultural value is limited as the project site has remained fallow since the construction of the Midway substation).
- As compared to the alternative location, the proposed project site is large enough to accommodate the project, would not impact existing farming operations, and is adjacent to existing transmission lines with existing capacity to accommodate the project.
- No significant, unmitigated impacts have been identified for the proposed project. Construction and operation of the proposed project at this alternative location would likely result in similar, impacts associated with the proposed project, or additional impacts that are currently not identified for the project at the currently proposed location.

- The proposed project is consistent with the overall goals and objectives of the County's General Plan and is located within the RE Overlay Zone.
- As compared to the alternative site, a portion of the proposed project site is already developed with the Midway substation, and the remaining portions of the site are characterized by fallow agricultural land, and disturbed habitat.

As such, the County considers this alternative location infeasible and rejects further analysis of this alternative due to the factors listed above.

Alternatives Evaluated

The environmental analysis for the proposed project evaluated the potential environmental impacts resulting from implementation of the proposed project, as well as alternatives to the project. The alternatives include: Alternative 1: No Project/No Development; Alternative 2: Development on Northern Parcel Only; and Alternative 3: Development on Southern Parcel Only. A detailed discussion of the alternatives considered is included in Section 8. Table ES-2 summarizes the impacts resulting from the proposed project and the identified alternatives.

Alternative 1: No Project/No Development Alternative

The CEQA Guidelines require analysis of the No Project Alternative (PRC Section 15126). According to Section 15126.6(e), "the specific alternative of 'no project' shall also be evaluated along with its impacts. The 'no project' analysis shall discuss the existing conditions at the time the 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."

The No Project/No Development Alternative assumes that the project, as proposed, would not be implemented and the project site would not be developed.

The No Project/No Development Alternative would not meet any of the objectives of the project. Additionally, the No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006).

Alternative 2: Development on Northern Parcel Only

The Alternative 2: Development on Northern Parcel Only would involve development of the solar energy facility on the northern parcel of the project site only. The northern parcel comprises approximately 106 acres; however, approximately 12 acres is developed with the Midway substation. Therefore, there would be approximately 94 gross acres available to accommodate the solar field and associated infrastructure.

The Alternative 2: Development on Northern Parcel Only would reduce impacts to agricultural resources, air quality, hydrology/water quality, and public services and utilities. This alternative would not meet the following objectives of the proposed project:

- To provide solar energy for the IID's eGreen low-income community solar program. This project will lower the electricity bills for the District's 15,000 qualified low-income customers from a local source of clean energy.
- To construct and operate a 30 MW solar PV energy facility using high-efficiency PV technology to provide a renewable and reliable source of electrical power to California utilities.

Alternative 3: Development on Southern Parcel Only

The Alternative 3: Development on Southern Parcel Only would involve development of the solar energy facility on the southern parcel of the project site only. The southern parcel comprises approximately 117 acres, which would be available to accommodate the solar field and associated infrastructure.

The Alternative 3: Development on Southern Parcel Only would reduce impacts to agriculture, air quality, biological resources, hydrology/water quality, public services and utilities.

The Alternative 3: Development on Southern Parcel Only would not meet the following objectives:

- To provide solar energy for the IID's eGreen low-income community solar program. This project will lower the electricity bills for the District's 15,000 qualified low-income customers from a local source of clean energy.
- To construct and operate a 30 MW solar PV energy facility using high-efficiency PV technology to provide a renewable and reliable source of electrical power to California utilities.

Environmentally Superior Alternative

The No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the project. However, CEQA Guidelines Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." As shown in Table ES-2, Alternative 3 would reduce impacts to biological resources in addition to other resource areas that would be reduced by Alternative 2; therefore, Alternative 3 is considered the Environmentally Superior Alternative.

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Table ES-2. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development on Northern Parcel Only	Alternative 3: Development on Southern Parcel Only
Aesthetics	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact
Agriculture	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact
Air Quality	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact
Biological Resources	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact
Cultural Resources	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact
Geology and Soils	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact
GHG Emissions	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact

Table ES-2. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development on Northern Parcel Only	Alternative 3: Development on Southern Parcel Only
Hazards and Hazardous Materials	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact
Hydrology/ Water Quality	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact
Land Use/Planning	No Impact	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Similar Impact
Noise	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact
Public Services	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Less Impact
Transportation/ Traffic	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact
Utilities	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Less Impact

CEQA – California Environmental Quality Act; GHG – greenhouse gas



1 Introduction

This EIR has been prepared to meet the requirements of CEQA for purposes of evaluating the potential environmental impacts, mitigation measures, and alternatives associated with the proposed Citizens Imperial Solar, LLC Project. This EIR describes the existing environment that would be affected by, and the environmental consequences which could result from the construction and operation of the proposed project as described in detail in Chapter 3.0 of this EIR.

1.1 Overview of the Proposed Project

The Citizens Imperial Solar, LLC Project involves the construction of a 30 MW AC solar PV energy generating facility on approximately 223 acres of land owned by IID. Of the total 223 acres, approximately 159 acres (area within the fence line) would be developed with a ground mounted PV solar power generating system, supporting structures, on-site substation, access driveways, and transmission structures. Approximately 12.02 acres is currently developed with the Midway Substation.

The proposed project would connect to the electric grid at the IID's Midway Substation, located on the northern parcel of the project site. The project has a PPA with IID for the sale of power from the project. The lifespan of the project is expected to be 25 years. The project would provide lower-cost energy to low-income customers through the eGreen program administered by IID.

1.1.1 Agency Roles and Responsibilities

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

1.1.1.1 County of Imperial

The County would be required to approve the following approvals for implementation of the project:

1. **Approval of Conditional Use Permit.** Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar facility and gentie line. The project site is located on two privately-owned legal parcels of land zoned A-3 (Heavy Agriculture). Pursuant to Title 9, Division 5, Chapter 9, "Solar Energy Plants" and "Transmission lines, including supporting towers, poles microwave towers, utility substations" are uses that are permitted in the A-3 Zone, subject to approval of a CUP.
2. **Certification of the EIR.** After the required public review for the Draft EIR, the County will respond to written comments, edit the document, and produce a Final EIR to be certified by the Planning Commission and Board of Supervisors prior to making a decision on the project.

Subsequent ministerial approvals may include, but are not limited to:

- Grading and clearing permits
- Building permits
- Reclamation plan
- Encroachment permits

1.1.1.2 Other Agency Reviews and/or Consultations

Federal

United States Fish and Wildlife Service

- The United States Fish and Wildlife Service (USFWS) enforces compliance with regulations related to special-status species or their habitat as required under the Federal Endangered Species Act (ESA).

State

California Department of Fish and Wildlife Service (Trustee Agency)

- The California Department of Fish and Wildlife Service (CDFW) is a Trustee Agency, and enforces compliance with regulations related to California special-status species or their habitats as required under the California Endangered Species Act (CESA).

California Regional Water Quality Control Board

- **National Pollution Discharge Elimination System Construction General Permit Order No. 2009-009-DWQ.** Requires the applicant to file a public Notice of Intent to discharge stormwater and to prepare and implement a stormwater pollution prevention plan (SWPPP).
- **National Pollution Discharge Elimination System General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems Order No. 2013-0001-DWQ.** Requires that discharges of pollutants from areas of new development be reduced to the maximum extent practicable in order to protect receiving waters and uphold water quality standards.
- **Jurisdictional Waters.** Agencies and/or project proponents must consult with the California Regional Water Quality Control Board (RWQCB) regarding, when applicable, regarding compliance with the Clean Water Act (CWA) Section 401 Water Quality Certification, or permitting under California Porter-Cologne Act.

Local

Imperial County Fire Department

- Review as part of the EIR process including the final design of the proposed fire system.

Imperial Irrigation District

- Review as part of the EIR process including approval of encroachment permits and water supply agreements.



Imperial County Air Pollution Control District

- Review as part of the EIR process regarding consistency with the Imperial County Air Pollution Control District CEQA Air Quality Handbook, the final “Modified” 2009 8-hour Ozone Air Quality Management Plan, the State Implementation Plan for particulate matter less than 10 microns in diameter (PM₁₀) in the Imperial Valley, the State Implementation Plan (SIP) for particulate matter less than 2.5 microns in diameter (PM_{2.5}), and verification of Rule 801 compliance.

1.2 Relationship to Statutes, Regulations, and Other Plans

County of Imperial General Plan and Land Use Ordinance

The General Plan provides guidance on future growth in the County of Imperial. Any development in the County of Imperial must be consistent with the General Plan and Land Use Ordinance (Title 9, Division 10).

Renewables Portfolio Standard Program

Established in 2002 under Senate Bill (SB) 1078, California's Renewables Portfolio Standard (RPS) was accelerated in 2006 under SB 107 by requiring that 20 percent of electricity retail sales be served by RE resources by 2010. RE sources include wind, geothermal, and solar. Subsequent recommendations in California energy policy reports advocated a goal of 33 percent by 2020. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order (EO) S-14-08 requiring that "...[a]ll retail sellers of electricity shall serve 33 percent of their load with RE by 2020." The following year, EO S-21-09 directed the California Air Resources Board (CARB), under its Assembly Bill 32 authority, to enact regulations to achieve the goal of 33 percent renewables by 2020.

In the ongoing effort to codify the ambitious 33 percent by 2020 goal, SB X1-2 was signed by Governor Brown, in April 2011. This new RPS preempts the California ARB's 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities had to adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020.

Governor Brown signed into legislation SB 350 in October 2015, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible RE resources by 2030.

California Global Warming Solutions Act of 2006, Assembly Bill 32 (Statutes 2006; Chapter 488; Health and Safety Code Sections 38500 et seq.)

This Act requires the ARB to enact standards that will reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. Electricity production facilities are regulated by the ARB.

Title 17 California Code of Regulations, Subchapter 10, Article 2, Sections 95100 et seq.

These ARB regulations implement mandatory GHG emissions reporting as part of the California Global Warming Solutions Act of 2006.

Federal Clean Air Act

The legal authority for federal programs regarding air pollution control is based on the 1990 Clean Air Act (CAA) Amendments. These are the latest in a series of amendments made to the CAA. This

legislation modified and extended federal legal authority provided by the earlier Clean Air Acts of 1963 and 1970.

The Air Pollution Control Act of 1955 was the first Federal legislation involving air pollution. This Act provided funds for federal research in air pollution. The CAA of 1963 was the first Federal legislation regarding air pollution control. It established a federal program within the U.S. Public Health Service and authorized research into techniques for monitoring and controlling air pollution. In 1967, the Air Quality Act was enacted in order to expand Federal government activities. In accordance with this law, enforcement proceedings were initiated in areas subject to interstate air pollution transport. As part of these proceedings, the Federal government for the first time conducted extensive ambient monitoring studies and stationary source inspections.

The Air Quality Act of 1967 also authorized expanded studies of air pollutant emission inventories, ambient monitoring techniques, and control techniques.

Imperial County Air Pollution Control District

The Imperial County Air Pollution Control District enforces rules and regulations regarding air emissions associated with various activities, including construction and farming, and operational activities associated with various land uses, in order to protect the public health.

Federal Clean Water Act (33 United States Code Section 1251-1387)

The Federal Water Pollution Control Act (33 United States Code [USC] §§1251-1387), otherwise known as the CWA, is a comprehensive statute aimed at restoring and maintaining the chemical, physical and biological integrity of the nation's waters. Enacted originally in 1948, the Act was amended numerous times until it was reorganized and expanded in 1972. It continues to be amended almost every year. Primary authority for the implementation and enforcement of the CWA rests with the U.S. Environmental Protection Agency (U.S. EPA). In addition to the measures authorized before 1972, the Act authorizes water quality programs, requires federal effluent limitations and state water quality standards, requires permits for the discharge of pollutants into navigable waters, provides enforcement mechanisms, and authorizes funding for wastewater treatment works construction grants and state revolving loan programs, as well as funding to states and tribes for their water quality programs. Provisions have also been added to address water quality problems in specific regions and specific waterways.

Important for wildlife protection purposes are the provisions requiring permits to dispose of dredged and fill materials into navigable waters. Permits are issued by the U.S. Army Corps of Engineers (USACE) under guidelines developed by EPA pursuant to Section 404 of the CWA.

Federal Clean Water Act and California Porter-Cologne Water Quality Control Act

The project is located within the Colorado River Basin RWQCB, Region 7. The CWA and the California Porter-Cologne Water Quality Control Act require that Water Quality Control Plans (more commonly referred to as Basin Plans) be prepared for the nine state-designated hydrologic basins in California. The Basin Plan serves to guide and coordinate the management of water quality within the region.

Federal Endangered Species Act

ESA (16 USC 1531-1544) provides protection for plants and animals whose populations are dwindling to levels that are no longer sustainable in the wild. The Act sets out a process for listing species, which allows for petition from any party to list a plant or animal. Depending on the species, USFWS or the



National Marine Fisheries Service (NMFS) will determine whether listing the species is warranted. If it is warranted, the species will be listed as either threatened or endangered. The difference between the two categories is one of degree, with endangered species receiving more protections under the statute.

National Historic Preservation Act

Federal regulations (36 Code of Federal Regulations [CFR] Part 800.2) define historic properties as "any prehistoric or historic district, site, building, structure, or object included, or eligible for inclusion in, in the National Register of Historic Places (NRHP)." The term "cultural resource" is used to denote a historic or prehistoric district, site, building, structure, or object, regardless of whether it is eligible for the NRHP.

California Endangered Species Act

CESA is enacted through Government Code Section 2050. Section 2080 of the California Fish and Game Code (FGC) prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the FGC as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species populations and their essential habitats.

California Lake and Streambed Program (Fish and Game Code Section 1602)

CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the FGC (Section 1602) requires an entity to notify CDFW of any proposed activity that may substantially modify a river, stream, or lake.

1.3 Purpose of an EIR

The purpose of an EIR is to analyze the potential environmental impacts associated with a project. CEQA (Section 15002) states that the purpose of CEQA is to: (1) inform the public and governmental decision makers of the potential, significant environmental impacts of a project; (2) identify the ways that environmental damage can be avoided or significantly reduced; (3) prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and (4) disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

1.4 EIR Process

1.4.1 Availability of Reports

This Draft EIR and documents incorporated by reference are available for public review at the County of Imperial Planning and Development Services Department, 801 Main Street, El Centro, California 92243. Copies are also available for review at the City of El Centro Public Library, 539 State Street, El Centro, California. Documents at these locations may be reviewed during regular business hours.

Patricia Valenzuela, Planner IV
County of Imperial, Planning and Development Services Department
801 Main Street
El Centro, CA 92243

Comments received during the public review period of the Draft EIR will be reviewed and responded to in the Final EIR. The Final EIR will then be reviewed by the Imperial County Planning Commission and Board of Supervisors as a part of the procedure to adopt the EIR. Additional information on this process may be obtained by contacting the County of Imperial Planning and Development Services Department at (442) 265-1736.

1.4.2 Public Participation Opportunities/Comments and Coordination

1.4.2.1 Notice of Preparation

The County of Imperial issued a NOP for the preparation of an EIR for the Citizens Imperial Solar, LLC Project on April 24, 2018. The NOP was distributed to city, county, state, and federal agencies, other public agencies, and various interested private organizations and individuals in order to define the scope of the EIR. The NOP was also published in the Imperial Valley Press on April 24, 2018. The purpose of the NOP was to identify public agency and public concerns regarding the potential impacts of the project, and the scope and content of environmental issues to be addressed in the EIR. Correspondence in response to the NOP was received from the following entities and persons:

- Augustine Band of Cahuilla Indians (April 9, 2018)
- Native American Heritage Commission (April 27, 2018)
- Department of Toxic Substances Control (DTSC) (May 14, 2018)
- California Department of Transportation (Caltrans) (May 23, 2018)
- Imperial County Air Pollution Control District (May 29, 2018)
- Imperial County Department of Public Works (July 13, 2018)

The comments submitted on the NOP during the public review and comment period are included as Appendix A to this EIR.

1.4.2.2 Scoping Meeting and Environmental Evaluation Committee

During the NOP public review period, the Citizens Imperial Solar, LLC Project was discussed as an informational item at the County's Environmental Evaluation Committee meeting on May 10, 2018.

Additionally, a scoping meeting for the general public as well public agencies was held on May 10, 2018 at 6 p.m., to further obtain input as to the scope of environmental issues to be examined in the EIR. The NOP, which included the scoping meeting date and location, was published in the Imperial Valley Press on April 24, 2018. The meeting was held by the Imperial County Planning & Development Services Department in the Board of Supervisors Chambers located at the County Administration Center at 940 Main Street, El Centro, California. At the scoping meeting, members of the public were invited to ask questions regarding the proposed project and the environmental review process, and to comment both verbally and in writing on the scope and content of the EIR. No written comments were received during the scoping meeting.



1.4.3 Environmental Topics Addressed

Based on the analysis presented in the NOP and the information provided in the comments to the NOP, the following environmental topics are analyzed in this EIR.

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- GHG Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use and Planning
- Noise and Vibration
- Public Services
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities/Service Systems

1.4.3.1 Eliminated from Further Review in Notice of Preparation

The IS/NOP completed by the County (Appendix A of this EIR) determined that environmental effects to Forestry Resources, Mineral Resources, Recreation, Population/Housing, Public Services (Schools, Parks, and Other Facilities), and Utilities (Wastewater, Stormwater, and Solid Waste) would not be potentially significant. Therefore, these impacts are not addressed in this EIR; however, the rationale for eliminating these issues is briefly discussed below:

Forestry Resources

The project site is located on privately owned, undeveloped agricultural land. No portion of the project site or the immediate vicinity is zoned or designated as forest lands, timberlands, or Timberland Production. As such, the proposed project would not result in a conflict with existing zoning or cause rezoning. Therefore, implementation of the proposed project would not impact forestry resources.

Mineral Resources

The project site is not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to the Conservation and Open Space Element of the General Plan, no known mineral resources occur within the project site nor does the project site contain mapped mineral resources. As such, the proposed project would not adversely affect the availability of any known mineral resources within the project site. No impact is identified.

Based on a review of the DOC's Division of Oil, Gas, and Geothermal Resources Well Finder, there is one plugged and abandoned geothermal well (Well No. 02590318) located immediately east of the southern parcel of the project site. This geothermal well is not located within the project's construction limit and, therefore, would be avoided by the proposed project. Implementation of the proposed project would not impact geothermal wells.

Recreation

The proposed project would not generate new employment on a long-term basis. As such, the project would not significantly increase the use or accelerate the deterioration of regional parks or other recreational facilities. The temporary increase of population during construction that might be caused by an influx of workers would be minimal and not cause a detectable increase in the use of parks. Additionally, the project does not include or require the expansion of recreational facilities. Therefore, no impact is identified for recreation.

Population/Housing

Development of housing is not proposed as part of the project. Once construction is completed, the facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Security personnel may conduct unscheduled security rounds, and would be dispatched to the project site in response to a fence breach or other alarm. A part-time operations and maintenance staff of two to three people would be responsible for performing all routine and emergency operational and maintenance activities. The proposed project would not result in substantial population growth, as the number of employees required to operate and maintain the facility is minimal. Therefore, no impact is identified for population and housing.

Public Services (Schools, Parks, and Other Facilities)

The proposed project does not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed project would not result in an increase in student population within the School District's that would service the area since it is anticipated that construction workers would commute in during construction operations.

Additionally, operation of the proposed project would require minimal part-time staff for maintenance. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities (such as post offices) are not expected.

Utilities (Wastewater, Stormwater, and Solid Waste)

The project would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No habitable structures are proposed on the project site (such as O&M buildings); therefore, there would be no wastewater generation from the proposed project. The proposed project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. The proposed project is not anticipated to generate a significant increase in the amount of runoff water from water use involving solar panel washing. Water will continue to percolate through the ground, as a majority of the surfaces on the project site will remain pervious. The proposed project would not substantially alter the existing drainage pattern of the site, substantially increase the rate of runoff, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. A less than significant impact is identified for these issue areas.

Solid waste generation would be minor for the construction and operation of the project. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. Trash would likely be hauled to the Niland Solid Waste Site (13-AA-0009) located in Niland. The Niland Solid Waste Site has approximately 318,669 cubic yards of remaining capacity and is estimated to remain in operation through 2056 (CalRecycle n.d.). Therefore, there is ample landfill capacity in the County to receive the minor amount of solid waste generated by construction and operation of the project.

Additionally, because the proposed project would generate solid waste during construction and operation, the project will be required to comply with state and local requirements for waste reduction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the CUP will contain provisions for recycling and diversion of Imperial County construction waste policies.

Further, when the proposed project reaches the end of its operational life, the components will be decommissioned and deconstructed. When the project concludes operations, much of the wire, steel, and modules of which the system is comprised would be recycled to the extent feasible. The project



components would be deconstructed and recycled or disposed of safely, and the site could be converted to other uses in accordance with applicable land use regulations in effect at the time of closure. Commercially reasonable efforts will be used to recycle or reuse materials from the decommissioning. All other materials will be disposed of at a licensed facility. A less than significant impact is identified for this issue.

1.4.4 Areas of Controversy and Issues to be Resolved

Section 15123(b)(2) of the CEQA Guidelines requires that an EIR identify areas of controversy known to the Lead Agency, including issues raised by other agencies and the public as well as issues to be resolved. A primary issue associated with these solar farm projects, and other solar facility projects that are proposed in the County, is the conversion of agricultural lands to solar farm use and the corresponding land use compatibility and fiscal/economic impacts to the County. Through the course of the environmental review process for the project, other areas of concern and issues to be resolved include potential impacts related to aesthetics, biological resources, and water supply. These are typical issues associated with solar facilities. However, it should be noted that no comments were received from the public regarding these specific issues.

1.4.5 Document Organization

The structure of the Draft EIR is identified below. The Draft EIR was organized into 11 chapters, including the Executive Summary.

- The **Executive Summary** provides a summary of the proposed project, including a summary of project impacts, mitigation measures, and project alternatives.
- **Chapter 1 Introduction** provides a brief introduction of the proposed project; relationship to statutes, regulations and other plans; the purpose of an EIR; public participation opportunities; availability of reports; and, comments received on the NOP.
- **Chapter 2 Environmental Setting** provides a description of the physical characteristics of the proposed project.
- **Chapter 3 Project Description** provides a description of the Citizens Imperial Solar, LLC Project. This chapter also defines the goals and objectives of the proposed project, provides details regarding the individual components that together comprise the project, and identifies the discretionary approvals required for implementation of the project.
- **Chapter 4 Environmental Analysis** provides an analysis of the environmental impacts of the project for the following environmental issues: aesthetics; agricultural resources; air quality; biological resources; cultural resources; geology and soils; GHG emissions; hazards and hazardous materials; hydrology/water quality; land use and planning; noise and vibration; public services; transportation/traffic; tribal cultural resources; and utilities/service systems. This chapter also identifies mitigation measures to address potential impacts to the environmental issues identified above.
- **Chapter 5 Analysis of Long-Term Effects** provides an analysis of growth inducing impacts, significant irreversible environmental changes, and unavoidable adverse impacts.
- **Chapter 6 Cumulative Impacts** discusses the impact of the proposed project in conjunction with other planned and future development in the surrounding areas.

- **Chapter 7 Effects Found Not to be Significant** lists all the issues determined to not be significant as a result of the preparation of this EIR.
- **Chapter 8 Alternatives** analyzes the alternatives to the proposed project.
- **Chapter 9 References** lists the data references utilized in preparation of the EIR.
- **Chapter 10 EIR Preparers and Organizations Contacted** lists all the individuals and companies involved in the preparation of the EIR, as well as the individuals and agencies consulted and cited in the EIR.



2 Environmental Setting

2.1 Location of Project

The proposed project is located approximately 6 miles northeast of the City of Calipatria and 5 miles southeast of Niland, a census-designated place, in the unincorporated area of Imperial County. The East Highline Canal is located on the project site's eastern boundary, with desert lands immediately beyond. The project site is surrounded to the north, west, and south by privately-owned agricultural lands. Adjacent roadways, which are currently developed for agricultural uses, include Merkley Road and Simpson Road.

The project site encompasses approximately 223 acres, comprised of two parcels of land identified as assessor parcel numbers (APNs): 025-260-024 (northern parcel) and 025-280-003 (southern parcel). The northern parcel is located at the northwest corner of Simpson Road and the IID's East Highline Canal. The existing Midway Substation is located on the southeast corner of the northern parcel of the project site. The northern parcel is bound by IID's 'M' Lateral on the south, 'N' Lateral on the north, and the East Highline Canal diagonally along the east. The southern parcel is bounded by IID's 'L' Lateral (irrigation supply canal) on the south, 'M' Lateral on the north, and the East Highline Canal diagonally along the east.

2.2 Physical Characteristics

2.2.1 Aesthetics and Visual Resources

The area surrounding the project site to the north, west, and south is predominantly flat as most of the land has been leveled to facilitate irrigation and agricultural production. Numerous canals, ditches, and drains owned by the Imperial Irrigation District are located throughout the project site and surrounding areas to the north, west, and south providing irrigation water and drainage to the individual fields.

Agricultural fields, earthen berms, and overhead utility lines dominate the scenery in the project area. However, immediately adjacent to the project site to the east is the East Highline Canal. Beyond the East Highline Canal lies desert lands currently zoned as Open Space and Preservation and lands managed by the Bureau of Land Management. The East Highline Canal acts as a clear line of distinction between the privately-owned, agricultural lands that dominate the project area to the west of the canal, and the desert lands that are introduced into view east of the canal.

2.2.2 Agricultural Resources

The majority of the proposed project site is comprised of fallow agricultural lands, which have not been actively farmed and not irrigated, for over 10 years. The proposed project would be developed adjacent to productive agricultural and developed lands. Much of the land base in the vicinity of and within the project area is considered productive farmland where irrigation water is available. Farming operations in this area generally consist of medium to large-scale crop production with related operational facilities. Crops generally cultivated in the area may include alfalfa, barley, and/or Bermuda grass in any given year. Row and vegetable crops, such as corn, melons, wheat, are also prominent in the area.

According to the Important Farmland maps (California DOC 2016a), the project site contains a negligible amount of land mapped as Prime Farmland (however, this area is on the perimeter of the project site and has not been in active agriculture for over 10 years), Farmland of Statewide Importance (linear features located along the project site perimeter, which also is not subject to active farming), Farmland of Local Importance (currently, fallow agricultural land), and Other Land. Of the 223 acres that encompasses the project site, approximately 12.02 acres are currently developed with the Midway Substation. The Important Farmlands maps prepared by the California DOC identifies the area containing the Midway Substation and the sliver of area along the East Highline Canal within the northern parcel of the project site as Other Land.

2.2.3 Air Quality

The project site is located in the Salton Sea Air Basin (SSAB) under the jurisdiction of Imperial County Air Pollution Control District (ICAPCD). The SSAB, which contains part of Riverside County and all of Imperial County, is governed largely by the large-scale sinking and warming of air within the semi-permanent subtropical high-pressure center over the Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms, except in winter when the high is weakest and farthest south. When the fringes of mid-latitude storms pass through the Imperial Valley in winter, the coastal mountains create a strong “rainshadow” effect that makes Imperial Valley the second driest location in the U.S. The flat terrain near the Salton Sea, intense heat from the sun during the day, and strong radiational cooling at night create deep convective thermals during the daytime and equally strong surface-based temperature inversions at night. The temperature inversions and light nighttime winds trap any local air pollution emissions near the ground. The area is subject to frequent hazy conditions at sunrise, followed by rapid daytime dissipation as winds pick up and the temperature warms.

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-Hour ozone (O₃), PM₁₀, and PM_{2.5}. Imperial County is classified as a “serious” nonattainment area for PM₁₀ for the National Ambient Air Quality Standards (NAAQS). On November 13, 2009, the U.S. Environmental Protection Agency (U.S. EPA) published Air Quality Designations for the 2006 24-Hour Fine Particle (PM_{2.5}) NAAQS wherein Imperial County was listed as designated nonattainment for the 2006 24-hour PM_{2.5} NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed project is not located within the nonattainment boundaries for PM_{2.5}. On April 10, 2014, the California Air Resources Board (CARB) Board gave final approval to the 2013 Amendments to Area Designations for California Ambient Air Quality Standards (CAAQS). For the state PM_{2.5} standard, effective July 1, 2014, the City of Calexico will be designated nonattainment, while the rest of the SSAB will be designated attainment.

2.2.4 Biological Resources

The vegetation communities or land cover types were mapped within the project site during a field survey: arrow weed thickets, bush seepweed scrub, common reed marshes, fourwing saltbush scrub, mesquite thickets, quailbush scrub, fallowed agriculture, open water, disturbed, and developed land.

Razorback sucker (*Xyrauchen texanus*) is the only listed species with at least a moderate potential to be present on the project site. Loggerhead shrike (*Lanius ludovicianus*) is the only California Department of Fish and Wildlife (CDFW) Species of Special Concern that was observed at the project site. Several other CDFW Species of Special Concern have at least a moderate potential to

be present including burrowing owl (*Athene cunicularia*), Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), Crissal thrasher (*Toxostoma crissale*), and several species of bats. Several other special-status wildlife species have at least a moderate potential for occurrence on the project site including black-tailed gnatcatcher (*Poliophtila melanura*), which was observed on the project site during the field survey.

2.2.5 Cultural Resources

A records search was conducted at the California Historical Resources Information System (CHRIS) South Coastal Information Center (SCIC), San Diego State University, on February 28, 2018. The SCIC is the official repository for all cultural resources site records and reports for Imperial County. The records search at the CHRIS SCIC identified two previously completed survey reports located outside, but adjacent to the project site within a 0.25-mile of the project site. No sensitive historical resources, unique archaeological resources, or tribal cultural resources were identified within the project site or within the 0.25-mile surrounding radius.

The pedestrian survey did not identify evidence of cultural resources from any time period. Most of the area surveyed appeared disturbed from leveling and earthmoving activities associated with agriculture.

2.2.6 Geology and Soils

The project site is located in the Imperial Valley portion of the Salton Trough physiographic province. With surface elevations as low as 275 feet below sea level, the Salton Trough formed as a structural depression resulting from tectonic boundary adjustment between the Pacific and the North American plates. The Salton Trough is bounded on the east and northeast by the San Andreas Fault and on the west by the San Jacinto Fault Zone. The structural trough is filled with more than 15,000 feet of Miocene and younger, marine and non-marine sediments capped by approximately 100 feet of Pleistocene and later lacustrine deposits that have been deposited by intermittent filling derived from periodic flooding of the Colorado River and Lake Cahuilla.

The geologic conditions present within the County contribute to a wide variety of hazards that can result in loss of life, bodily injury, and property damage. Fault displacement is the principal geologic hazard affecting public safety in Imperial County. The primary seismic hazard at the project site is the potential for strong ground shaking because of potential fault movements along the Brawley, Elmore Ranch, and San Andreas (Coachella Section) Faults. Secondary geologic hazards that have a potential to occur include soil liquefaction and lateral spreading.

2.2.7 Greenhouse Gases

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions occur from natural processes as well as human activities. Human-caused sources of carbon dioxide (CO₂) include combustion of fossil fuels (coal, oil, natural gas, gasoline, and wood). Data from ice cores indicate that CO₂ concentrations remained steady prior to the current period for approximately 10,000 years. Concentrations of CO₂ have increased in the atmosphere since the industrial revolution. Methane (CH₄) is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of natural gas include landfills, fermentation of manure and cattle farming. Human-caused sources of nitrous oxide (N₂O) include combustion of fossil fuels and industrial processes, such as nylon production and production of nitric acid. Other GHGs are present in trace amounts in the atmosphere and are generated from various

industrial or other uses. GHGs present in the project sites primarily include CO₂ and N₂O from farm equipment and local traffic.

2.2.8 Hazards and Hazardous Materials

The project site is located within a rural agricultural area of northeastern Imperial Valley approximately 6 miles northeast of the City of Calipatria. Agricultural operations include the use of aboveground storage tanks (AST) and underground storage tanks (UST) for fuel storage, transmission facilities, intricate canal systems, the confluence of major surface arteries and rail systems, and the use of fertilizers and herbicides. Although a hazardous material accident can occur almost anywhere, particular regions are more vulnerable. The potential for an accident is increased in regions near major arterial roadways or railways that transport hazardous materials and in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous material.

The *Phase I Environmental Site Assessment* (Phase I ESA) prepared for the proposed project did not identify any on-site recognized environmental conditions, ASTs, or USTs. Because of the lack of site structures and site development on the project site, the potential for asbestos-containing materials and lead based paint residues existing at the project site is very low. The project site was previously used for agricultural production. Consequently, there is a potential for the project site to contain hazards related to pesticide and herbicide use from aerial and/or ground application.

2.2.9 Hydrology/Water Quality

The project site is located in the Imperial Valley Planning Area of the Colorado River Basin. The Colorado River Basin Region covers approximately 13 million acres (20,000 square miles) in the southeastern portion of California. It includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. The Colorado River Basin Region is divided into seven major planning areas on the basis of different economic and hydrologic characteristics. The Imperial Valley Planning Area consists of the following hydrological units (HU): Imperial (723.00) comprised of 2,500 square miles in the southern portion of the Colorado River Basin Region, with the majority located in Imperial County; Davies (724.00), and Amos-Ogilby (726.00). The project site is located within the Imperial HU.

The Imperial Hydrologic Unit consists of the majority of the Imperial Valley, encompassing over 1.3 million acres of land. The watershed includes vast acreages of agricultural land; towns such as El Centro, Calexico, and Brawley, along with a large network of IID operated canals and drains. The watershed is atypical of most watersheds in California, as it currently and historically has been shaped by man-made forces. The watershed's primary watercourses, the New and Alamo rivers, flow north, from the Mexican border toward their final destination, the Salton Sea. The Salton Sea, a 376 square mile closed inland lake was created in 1905 through a routing mistake and subsequent flood on the Colorado River. The sea has been fed primarily by agricultural runoff from the New and Alamo Rivers ever since that time.

2.2.10 Land Use/Planning

The project site encompasses approximately 223 acres, comprised of two parcels of land identified as APNs 025-260-024 (northern parcel) and 025-280-003 (southern parcel) (Chapter 3, Figure 3-2). Of the total 223 acres that encompasses the project site, approximately 12.02 acres are currently developed with the Midway Substation. The East Highline Canal is located on the project site's eastern boundary, with desert lands immediately beyond. The project site is surrounded to the north,



west, and south by privately-owned agricultural lands. Adjacent roadways, which are currently developed for agricultural uses, include Merkley Road and Simpson Road.

The project site is designated as Agriculture under the County's General Plan. The project site is located on two privately-owned legal parcels zoned A-3 (Heavy Agriculture).

The project site is located in a sparsely populated, agriculturally zoned portion of Imperial County. The nearest residence to the project site is located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road. There are no established residential communities located within or in the vicinity of the project site.

2.2.11 Noise

The predominant sources of noise in the project area includes vehicular traffic on local roads and highways and agricultural operations. Activities involving the use of heavy-duty equipment such as frontend loaders, forklifts, and diesel-powered trucks are common noise sources typically associated with agricultural uses. Noise typically associated with agricultural operations, including the use of heavy-duty equipment, can reach maximum levels of approximately 85 (A-weighted decibel) dBA at 50 feet (Caltrans 1998). With the soft surfaces characterizing the agricultural landscape, these noise levels attenuate to ~60 dBA at distances over 800 feet. Primary sources of noise in the project area include vehicle traffic along roadways including Merkley Road, Simpson Road and Wiest Road, and agricultural operations in the vicinity of the project area including the operation of heavy equipment and vehicles.

2.2.12 Public Services

The project site is located on private land within the Imperial County Fire Department (ICFD) and Office of Emergency Services area of service. There are no parks or libraries in the vicinity of the project area.

2.2.13 Transportation/Traffic

The nearest paved road, Wiest Road, is approximately 0.5 mile from the western edge of the project site. The primary means of access (all public) is from Wiest Road, turning east onto Simpson Road. The southern project parcel would be accessed directly from Simpson Road. The northern parcel would be accessed from East Highline Canal Road. Secondary means of accessing the northern parcel could be achieved with surrounding property owner's permission, by utilizing private roads running east from Wiest Road, along existing canals.

The following roadways would be utilized for access to the project site during construction, and subsequent operation (e.g., maintenance) activities:

- SR-11 and SR-115
- McDonald Road east of SR-111
- Simpson Road
- East Highline Canal Road (IID-owned access road)

2.2.14 Utilities/Service Systems

The Imperial Valley area is located within the south-central part of Imperial County and is bound by Mexico on the south, the Algodones Sand Hills on the east, the Salton Sea on the north and San Diego County on the northwest, and the alluvial fans bordering the Coyote Mountains and the Yuha Desert to the southwest. The valley is an irrigated agricultural area. Agriculture is the most highly water consumptive use in Imperial County.

The Imperial Valley depends solely on the Colorado River for surface water supply. IID delivers its annual entitlement of 3.1 million acre-feet (AF) to nearly 500,000 acres for agricultural, municipal, and industrial use. Imperial Dam, located north of Yuma, Arizona, serves as a diversion structure for water deliveries throughout southeastern California, Arizona, and Mexico. Water diverted at Imperial Dam for use in the Imperial Valley first passes through one of three desilting basins, used to remove silt and clarify the water. From the desilting basins, water is then delivered to the Imperial Valley through the All-American Canal. Three main canals, East Highline, Central Main, and Westside Main, receive water from the 80-mile-long All-American Canal and distribute water to smaller lateral canals throughout the Imperial Valley (IID n.d.)

The northern parcel is bound by IID's 'M' Lateral on the south, 'N' Lateral on the north, and the East Highline Canal diagonally along the east.



3 Project Description

Chapter 3 provides a description of the Citizens Imperial Solar, LLC Project. This chapter also defines the goals and objectives of the proposed project, provides details regarding the individual components that together comprise the project, and identifies the discretionary approvals required for project implementation.

3.1 Project Location

The proposed project is located approximately 6 miles northeast of the City of Calipatria and 5 miles southeast of Niland, a census-designated place, in the unincorporated area of Imperial County (Figure 3-1). The East Highline Canal is located on the project site’s eastern boundary, with desert lands immediately beyond. The project site is surrounded to the north, west, and south by privately-owned agricultural lands. Adjacent roadways, which are currently developed for agricultural uses, include Merkley Road and Simpson Road.

The project site encompasses approximately 223 acres, comprised of two parcels of land identified as APNs: 025-260-024 (northern parcel) and 025-280-003 (southern parcel). Table 3-1 identifies the APNs, zoning, and acreage of the project parcels. The location of the project site is shown on Figure 3-2.

The northern parcel is located at the northwest corner of Simpson Road and the IID’s East Highline Canal. The existing Midway Substation is located on the southeast corner of the northern parcel of the project site. The northern parcel is bound by IID’s ‘M’ Lateral on the south, ‘N’ Lateral on the north, and the East Highline Canal diagonally along the east. The southern parcel is bounded by IID’s ‘L’ Lateral (irrigation supply canal) on the south, ‘M’ Lateral on the north, and the East Highline Canal diagonally along the east.

Table 3-1. Project Assessor Parcel Numbers, Zoning, and Acreages

APN	Zoning	Acreage
025-260-024	A-3	106
025-280-003	A-3	117
Total		223

APN – assessor parcel number

3.1.1 Renewable Energy Overlay Zone

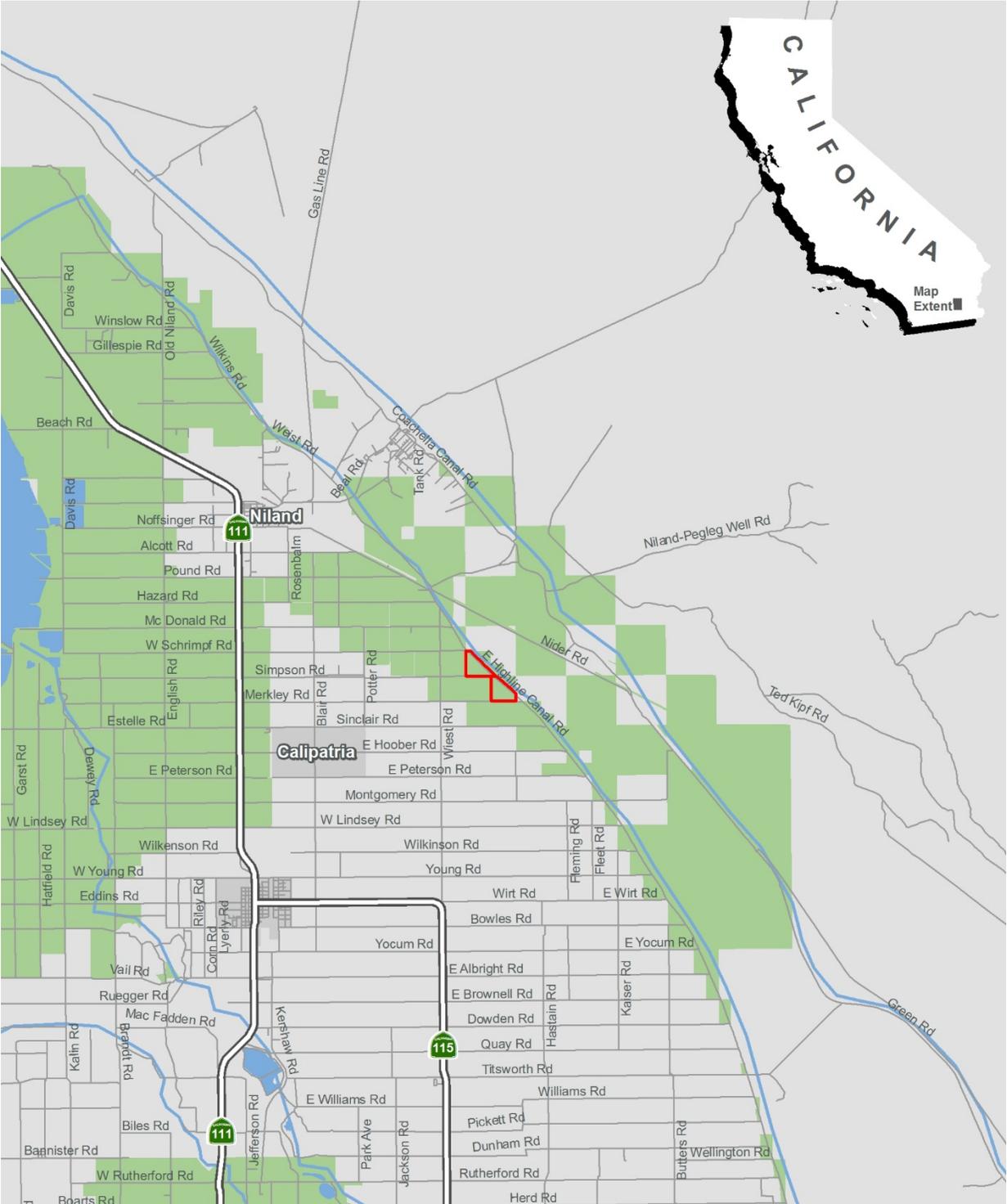
In 2016, the County adopted the Imperial County Renewable Energy and Transmission Element, which includes a RE Zone (RE Overlay Map). This General Plan element was created as part of the California Energy Commission Renewable Energy Grant Program to amend and update the County’s General Plan to facilitate future development of renewable energy projects.

The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of renewable energy projects with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of renewable

energy facilities while minimizing the impact on other established uses. As shown on Figure 3-1, the project site is located within the RE Overlay Zone.



Figure 3-1. Regional Location



LEGEND
[Red Box] Project Site
[Green Box] Renewable Energy Overlay Zone



Figure 3-2. Project Site



LEGEND

 Project Site





3.2 Project Objectives

The primary objective of the project is to deliver cost-effective, renewable energy that maximizes the use of existing transmission infrastructure and relies on highly-efficient, proven technology to realize federal and State energy goals.

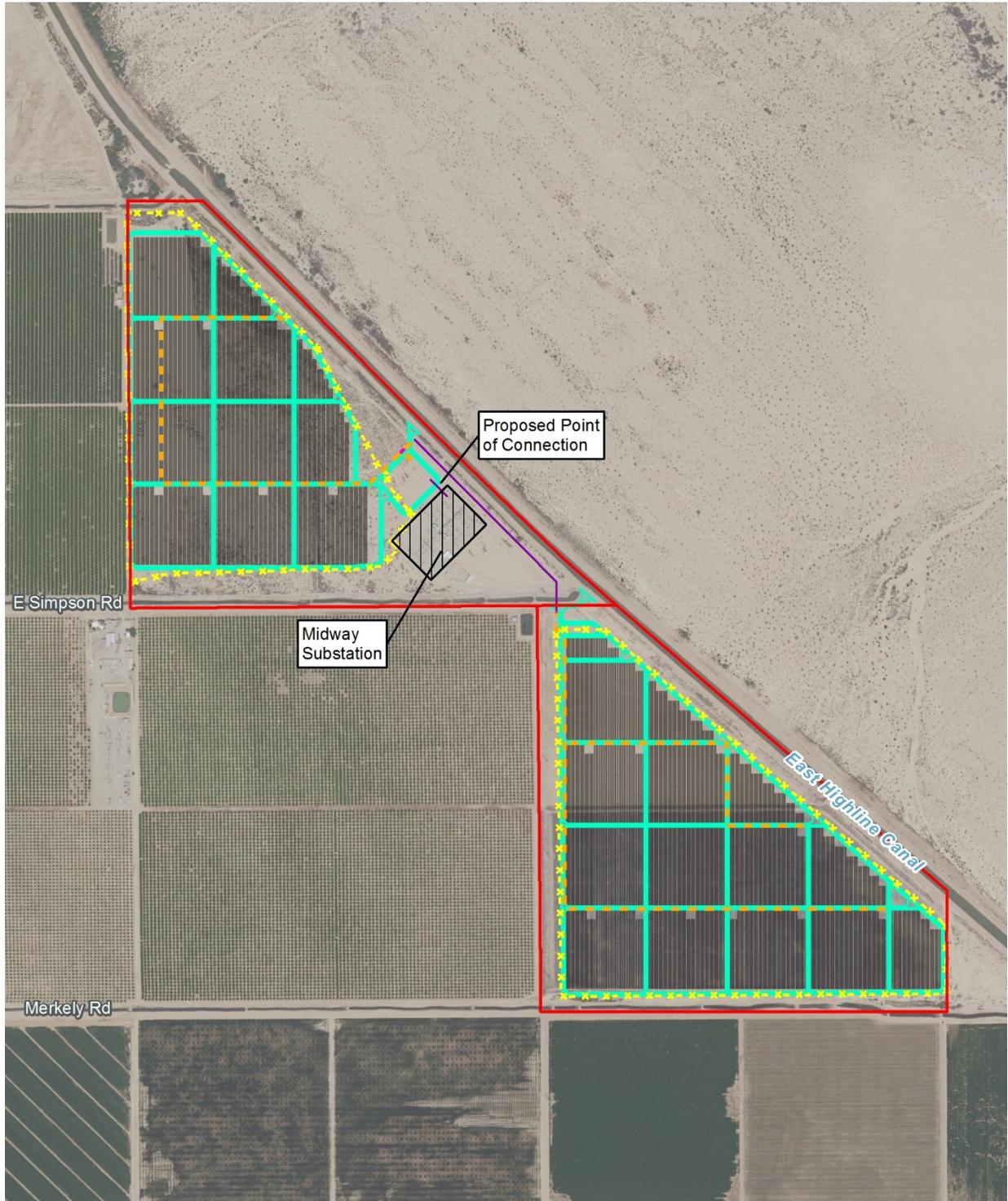
- To provide solar energy for the Imperial Irrigation District's (IID) eGreen low-income community solar program. This project will lower the electricity bills for the District's 15,000 qualified low-income customers from a local source of clean energy.
- To construct and operate a 30 megawatt (MW) solar photovoltaic (PV) energy facility using high-efficiency PV technology to provide a renewable and reliable source of electrical power to California utilities.
- To locate the project on private lands with high-solar insolation and relatively flat terrain and to minimize construction of new transmission infrastructure.
- To minimize environmental impacts and land disturbance by locating the project on fallowed agricultural lands.
- To assist California and its investor-owned utilities in meeting the State's RPS and greenhouse gas emission reduction requirements.
- To provide economic benefits to Imperial County, through new jobs, spending in local business, and additional sales tax revenue.

3.3 Project Characteristics

The Citizens Imperial Solar, LLC Project involves the construction of a 30 MW alternating current (AC) solar photovoltaic (PV) energy generating facility on approximately 223 acres of land owned by IID. Of the total 223 acres, approximately 159 acres (area within the fence line) would be developed with a ground mounted PV solar power generating system, supporting structures, on-site substation, access driveways, and transmission structures. Approximately 12.02 acres is currently developed with the Midway Substation. Figure 3-3 depicts the proposed site plan.

The project would connect to the electric grid at the IID Midway Substation, located on the northern parcel of the project site (Figure 3-2). The project has a Power Purchase Agreement (PPA) with IID for the sale of power from the project. The lifespan of the project is expected to be 25 years. The project would provide lower-cost energy to low-income customers through the eGreen program administered by IID.

Figure 3-3. Preliminary Site Plan



LEGEND

- | | |
|---|---|
|  Project Site |  Project Substation |
|  Midway Substation (Proposed Point of Interconnection) |  Solar Array |
| |  Existing Overhead Line |
| |  Collection Line |
| |  Proposed Perimeter Fence |
| |  Proposed Site Access Road |



3.3.1 Photovoltaic Panels/Solar Arrays

PV solar cells convert sunlight directly into direct current (DC) electricity. The process of converting light (photons) to electricity (voltage) in a solid state process is called the photovoltaic effect. A number of individual PV cells are electrically arranged and connected into solar PV modules, sometimes referred to as solar panels.

The PV cells would be made from thin film or crystalline silicon materials, which would be dark in color, have low reflectivity, and be highly absorptive of the sunlight that strikes their glass surfaces. PV modules would be wired together in a mixture of series and parallel configurations and connected to DC to AC inverters and transformers located within the project site.

PV Panel/Mounting Configuration. The project would include approximately 126 acres of tracking solar PV panels. The project would utilize single-axis tracking systems in rows running north-south, typical for projects in the region. The panels would be tracking and would be no more than 15 feet high at the high end (at maximum rotation angle). Fixed-tilt racking could also be utilized in areas not suited for tracking equipment. The maximum height would still not exceed 15 feet if fixed-tilt racking is utilized. Figure 3-4 provides a representative example of these types of systems.

As shown on Figure 3-3, the project would consist of eight arrays, or grouping of trackers, that are electrically optimized and located around a central inverter station.

Figure 3-4. Representative Examples of Photovoltaic Panel/Mounting Configuration



Typical Single-Axis Tracking Solar Panels



Typical Fixed-Tilt Mounting Structure



Typical Fixed-Tilt Solar Panel Rows

3.3.2 Inverter Station

PV energy would be delivered via cable to inverter stations, generally located near the center of each block. Central inverters would be enclosed within outdoor rated electrical equipment enclosures. The project would include eight inverter stations that would be approximately 10 feet tall and 10 feet by 35 feet wide per station. Figure 3-5 provides representative examples of a typical inverter station. Central inverter stations would be 3.75 MWac on average. Each inverter station includes an inverter step-up transformer for connection to the 34.5 kV collection system. The inverters convert the DC electricity to AC electricity, which then flows to the transformer where it is stepped up to the appropriate voltage (34.5 kV).

3.3.3 Collection System

The project would include 34.5 kV underground cables and overhead, pole-mounted conductors to connect each of the eight inverter stations to the project substation. Overhead sections are typically on wood-poles with heights up to 40 feet and are used most commonly for crossing over roads, canals, and gas lines.

3.3.4 Substation

A project substation, developed and located in close coordination with IID, would be constructed to transform the collected 34.5 kV power generation to IID transmission system voltages. The substation would include a main power transformer, facility protection equipment, and a control enclosure. Substation structure maximum heights would be equal to or less than existing IID facility structures. A representative example of a substation is presented on Figure 3-6.

The purpose of the project substation is to convert the collection-level electricity (34.5 kV) to the voltage (230 kV) of the IID Midway Substation. All interconnection equipment would be installed aboveground and within the footprint of the project substation. The overall footprint of the project substation is anticipated to be approximately 130 by 180 feet and poles up to 50 feet in height.

The project substation would include a 45-kW emergency generator for use if the regional transmission system fails; this emergency generator would provide emergency power until the regional transmission system restores operations. The substation would be surrounded by a barbed wire chain-link fence to comply with electrical codes.

The project substation must have access to communication systems in the area to comply with utility monitoring and remote-control requirements. Compliance may be accomplished by underground lines, aboveground lines, or wireless solutions, such as microwave or satellite.

Figure 3-5. Representative Examples of Typical Inverter Stations



Figure 3-6. Representative Example of Typical Substation Design



3.3.5 Transmission Line and Interconnection Facilities

The proposed project may require two to three transmission structures to connect the project substation to IID's existing Midway Substation. Such structures would be designed in cooperation with and per IID's requirements, and crossing of existing 230 kV transmission lines may be required. Final structure heights would be determined by IID, but typically would not exceed 120 feet.

3.3.6 Telecommunications

The project requires telecommunications connections for remote operations and utility telemetry. The region in which the project is proposed is known to be without significant fiber infrastructure or high-speed copper based telecommunication options. As is typical for facilities of this nature in the project region, microwave point to point service would likely be required. Satellite based solutions may also be considered, if such solutions can meet the project requirements. Microwave solutions do require the installation of a radio antenna pole or tower, typical ranging in height from 20 to 100 feet. Any such structure would be located immediately adjacent to the substation control enclosure.

3.3.7 Auxiliary Facilities

This section describes the auxiliary facilities that would be constructed and operated in conjunction with the solar facility.

Site Security and Fencing

The boundary of the project site would be secured by a 6-foot-tall chain-link perimeter fence, topped by 1-foot-tall three-strands of barbed wire. Points of ingress/egress would be accessed via locked gates.

Lighting System

Minimal lighting would be required for operations and would be limited to safety and security functions. All lighting would be directed downward and shielded to confine direct rays to the project site and muted to the maximum extent consistent with safety and operational necessity (Title 9, Division 17, Chapter 2: Specific Standards for all Renewable Energy Projects, of the County's Zoning Ordinance).

Access

The nearest paved road, Wiest Road, is approximately 0.5 mile from the western edge of the project site. The primary means of access (all public) is from Wiest Road, turning east onto Simpson Road. The southern project parcel would be accessed directly from Simpson Road. The northern parcel would be accessed from East Highline Canal Road. Secondary means of accessing the northern parcel could be achieved with surrounding property owner's permission, by utilizing private roads running east from Wiest Road, along existing canals. For all access to the site, active dust control mitigation measures would be utilized for all un-paved portions during construction of the facility.

To accommodate emergency access, PV panels would be spaced to maintain proper clearance. A 20-foot-wide access road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. The internal access road would be graded and compacted (native soils) as required for construction, operations, maintenance, and emergency vehicle access.

Fire Protection

The project is located within the jurisdiction of ICFD. A 10,000-gallon aboveground water storage tank(s) would be installed on the project site as required by the ICFD. The water tank(s) would be sized to meet the requirements of the County of Imperial to supply sufficient fire suppression water during operations.

Project facilities would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements. The following steps will be taken to identify and control fires and similar emergencies:

- Electrical equipment that is part of the project will only be energized after the necessary inspection and approval, so there is minimal risk of any electrical fire during construction.
- Project staff will monitor fire risks during construction and operation to ensure that prompt measures are taken to mitigate identified risks.
- Transformers located on-site will be equipped with coolant that is non-flammable, biodegradable, and contains no polychlorinated biphenyls or other toxic compounds.

Landscaping

The project applicant would address landscaping in the final project design. Given the size of the project and its location near agricultural properties, the project applicant would work with the County to identify appropriate landscaping, if any, for this project that meets the intent of County landscaping ordinance requirements.

3.3.8 Dust Suppression and Erosion Control

The project would comply with all applicable air pollution control regulations. During the construction phase of the project, standard dust control measures would be used to mitigate emissions of fugitive dust. These may include watering or applying other dust palliatives to roadways and parking areas. Site entrances and parking areas would be graveled and/or have dust palliative applied.

3.4 Project Construction

The proposed project is anticipated to take approximately 23 weeks from the commencement of the construction process to complete. The following sections provide details regarding the project timeline and construction process.

3.4.1 Solar Construction Process

Construction activities would include the installation of civil infrastructure (e.g., driveways, grading, fencing), mechanical infrastructure (e.g., piles, panel and inverter foundations), and electrical infrastructure (e.g., PV panels, cables). The following steps would be implemented.

Installation of Civil Infrastructure

- Pre-construction biological resources surveys and resource-related best management practices (BMP), as required
- Survey and project layout, including road, array, substation, and fence lines
- Driveway construction
- Temporary facilities, water storage (fire and dust control), parking, and staging areas
- Installation of temporary and permanent chain-link fence and gate
- Grading as required for arrays and SWPPP BMPs
- Substation pad

Installation of Mechanical and Electrical Infrastructure

- Excavation and installation of Power Conversion Station (PCS) pads
- Installation of steel piles and placement of racking system
- Setting of combiner boxes
- Trenching for buried wiring
- Installation of buried wiring (i.e. AC, DC, ground and fiber)
- Setting of PCS
- Installation of PV modules
- Installation of above ground DC wiring
- Terminations of required wiring
- Construction of the project substation

- Construction of the interconnection to the Midway Substation
- Telecommunications installation
- Installation of meteorological equipment

3.4.2 Site Preparation, Surveying, and Staking

Preconstruction survey work would consist of staking and flagging the following: 1) construction area boundaries, 2) work areas (permanent and short term), 3) cut and fill, 4) access and roads, 5) transmission structure centers, 6) foundation structures. Staking and flagging would be maintained until final cleanup.

Site Preparation

Site preparation activities include installation of fencing and completion of any required pre-construction surveys, preparing and constructing site access roads, establishing temporary construction trailers and sanitary facilities, and preparing a construction staging area.

Vegetation Removal/Clearing

Within the solar field and plant roadways, vegetation would be disced under, mulched or composted, and retained on site to assist in erosion control and limit waste disposal. Vegetation would be cleared for construction of any required drainage controls, including berms.

Grading

The project site is flat, nearly level, and requires minimal grading to allow for installation of the PV panels. Typical grading would consist of array grading as required by the PV racking system tolerance requirements, SWPPP compliance, substation, driveways, and other improvements. Access driveways would be constructed by placing 2 to 4 inches of decomposed granite or comparable material directly on the existing soil. Soil compaction, soil strengthening agents, or geo fabric may be used for access and circulation driveways. Compaction may also be required for grading, underground electrical trenches, inverter pads, substation, and driveways. Typical dust mitigation measures would be performed during construction.

3.4.3 Temporary Construction Facilities

A temporary construction staging area and an area for construction worker parking would be included within the project site. These areas would be utilized throughout the approximately 23-week project construction period and then decommissioned and/or replaced by solar arrays. Graded roads would be required in selected locations on or around the project site during construction to bring equipment and materials from the staging areas to the construction work areas, and for long-term project operation and maintenance.

The staging areas would include material laydown and storage areas and an equipment assembly area. During construction, the staging area would contain a guard shack, construction trailers, construction worker parking, and portable toilet facilities that would serve the project's sanitation needs during construction. Temporary construction fencing would surround this area and the guard shack would be manned to provide security during construction.

3.4.4 Construction Schedule and Workforce

Heavy construction work is expected to be from 6 a.m. to 5 p.m., Monday through Friday; however, to meet schedule demands, it may be necessary to work early morning, evening, or nights and on weekends during certain construction phases. Some activities may continue 24 hours, 7 days per week. These activities include but are not limited to refueling equipment, staging material for the following day's construction activities, quality assurance/control, and commissioning. The work schedule may be modified throughout the construction period to account for changing weather conditions. If construction work takes place outside these typical hours, activities would comply with Imperial County standards for construction noise levels.

The project would use restricted nighttime task lighting during construction. No more lighting would be used than is needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure to areas outside the construction area.

During project construction, the workforce is expected to average approximately 80 employees over the 23-week construction period, with a peak workforce of approximately 200 employees. The project construction workforce would be recruited from within Imperial County and elsewhere in the surrounding region to the extent practicable.

3.4.5 Construction Equipment

Most construction equipment would be brought to the project site at the beginning of the construction process during construction mobilization and would remain on-site throughout the duration of the construction activities for which they were needed. Generally, the equipment would not be driven on public roads while in use for the project. In addition to construction worker commuting vehicles, construction traffic would include periodic truck deliveries of materials and supplies, recyclables, trash, and other truck shipments. Truck shipments would normally occur during daylight hours; however, offloading and transporting to the site may occur during evening hours. Table 3-2 presents the anticipated equipment by construction phase for the project.



Table 3-2. Construction Equipment and Trip Assumptions

<i>Phase 1 – Site Preparation (~2 months; 55 working days)</i>			
<i>Off-Road Equipment Type</i>	<i>Number</i>	<i>Horsepower</i>	<i>Hours/Day</i>
Rollers/Mowers	2	87	4
Rough Terrain Forklift	2	93	6
Dozers	2	357	6
Tractors/Loaders/Backhoes	3	108	5
Skid Steer Loader	4	61	6
Utility Vehicles	4	49	4
<i>On-Road Trips</i>	<i>Trips</i>	<i>Miles/Trip</i>	<i>Unpaved/Trip</i>
Employee Commute	1,100	30	1
Work Trucks	110	30	1
Heavy Haul Trucks (including off-road equipment delivery)	20	30	1
Water Truck	8	30	1
Fuel Truck	25	30	1
<i>Phase 2 – Facility Installation (~3 months; 102 working days)</i>			
<i>Off-Road Equipment Type</i>	<i>Number</i>	<i>Horsepower</i>	<i>Hours/Day</i>
Pile Driver Rigs	4	50	8
Crane	1	399	4
Rough Terrain Forklift	3	93	6
Trencher/Loaders/Backhoes	3	108	6
Skid Steer Loader	2	61	6
Utility Vehicles	3	49	4
<i>On-Road Trips</i>	<i>Trips</i>	<i>Miles/Trip</i>	<i>Unpaved/Trip</i>
Employee Commute	5,225	30	1
Work Trucks	306	30	1
Heavy Haul Trucks (off-road equipment delivery/removal)	60	30	1
Heavy Haul Trucks (concrete)	36	30	1
Heavy Haul Trucks (other bulk materials)	70	30	1
Heavy Haul Trucks (panels and arrays)	430	60	1
Heavy Haul Trucks (balance of facility)	100	60	1
Miscellaneous Delivery Trips	130	30	1
Water Truck	4	30	1
Fuel Truck	60	30	1

Table 3-2. Construction Equipment and Trip Assumptions

Phase 3 – Commissioning/Finishing (~1 month; 20 working days)			
Off-Road Equipment Type	Number	Horsepower	Hours/Day
Utility Vehicles	2	49	4
Skid Steer Loader	2	61	6
Trencher/Loader/Backhoe	4	108	6
Rough Terrain Forklift	2	93	6
On-Road Trips	Trips	Miles/Trip	Unpaved/Trip
Employee Commute	200	30	1
Work Trucks	60	30	1
Heavy Haul Trucks (off-road equipment delivery/removal)	30	30	1
Heavy Haul Trucks (other/miscellaneous)	7	30	1
Water Truck	2	30	1
Fuel Truck	10	30	1

3.4.6 Construction Water Requirements

Construction water usage rates and total requirements would vary depending on the length and intensity of each construction activity. The overall construction timeframe is estimated to be 23 weeks. During construction, water would be needed for dust control and soil compaction, with small amounts used for sanitary and other purposes. Total water demand during construction is estimated to be 80 acre-feet.

Water for construction-related dust control and operations would be obtained from IID. The project applicant would work with IID on obtaining a permit for this water use and the water use associated with facility operation. During construction, restroom facilities would be provided by portable units to be serviced by licensed providers.

3.4.7 Electrical Construction Activities

The design and work would be performed in accordance with the National Electrical Code requirements. Once all the solar panels are installed in a block, they can be electrically connected. Workers would walk behind each row and plug the wires from each module into a wiring harness that collects all power from each cable. Workers then terminate all harnesses to a combiner box. The combiner boxes then route underground or above ground DC cables to the inverters. The inverters convert the DC power to three-phase AC power which is fed into a step-up transformer. The AC cables from the transformers are routed underground or aboveground to the on-site substation. The on-site substation would step the power up for transmission via the interconnection line to the IID Midway Substation. Dust mitigation would be performed during the installation of underground cables.

If required, a cathodic protection system would be installed to protect steel structures from potentially corrosive soils on site.

3.4.8 Other Construction Activities

Health and Safety Program

A comprehensive health and safety program would be implemented consistent with all applicable State and Federal laws and industry best practices to ensure that the project is built and operated in a safe, responsible manner and presents a safe working environment for all employees. A Health and Safety Plan would be used during construction. Familiarity and adherence to safety policies and procedures would be required of all employees, throughout the installation period and during site operations. In addition, participation in safety briefings and protocol review would be mandatory for all construction personnel.

Waste and Hazardous Materials Management

Construction of the project would involve the limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and County regulations. No extremely hazardous substances are anticipated to be produced, used, stored, transported, or disposed of as a result of project construction. Material Safety Data Sheets for all applicable materials present on-site would be made readily available to on-site personnel.

Construction materials would be sorted on-site throughout construction and transported to appropriate waste management facilities. Recyclable materials would be separated from non-recyclable items and stored until they could be transported to a designated recycling facility.

3.4.9 Spill Prevention and Containment

Spill response plans would be developed prior to project construction and operation or prior to the storage on-site of an excess of 55 gallons of hazardous materials, and personnel would be made aware of the procedures for spill cleanup and the procedures to report a spill. Spill cleanup materials and equipment appropriate to the type and quantity of chemicals and petroleum products expected would be located onsite and personnel shall be made aware of their location.

The small quantities of chemicals to be stored at the project site during construction include equipment and facilities maintenance chemicals. These materials would be stored in their appropriate containers in an enclosed and secured location, such as portable outdoor hazardous materials storage cabinets equipped with secondary containment to prevent contact with rainwater. The portable chemical storage cabinets may be moved to different locations around the site as construction activity locations shift. The chemical storage area would not be located immediately adjacent to any drainage. Disposal of excess materials and wastes would be performed in accordance with local, State, and Federal regulations. Excess materials/waste would be recycled or reused to the maximum extent practicable.

3.5 Operations and Maintenance

The following describes the operational security and maintenance requirements of the proposed project.

3.5.1 Operational Security

The project facility would be monitored remotely by the project applicant or an affiliated company. Once constructed, the project would operate during daylight, 7 days per week, 365 days per year. Security would be maintained through installation of a 6-foot-tall wire fence topped by 1-foot-tall three-strands of barbed wire.

A security company would be contracted for security purposes during construction and operation. Should the security system detect the presence of unauthorized personnel, a security representative would be dispatched to the facility, and appropriate local authorities would be notified. A box containing keys for the project facility would be installed to permit emergency access to the project site.

3.5.2 Operations Workforce and Equipment

It is anticipated that maintenance of the facilities would require minimal site presence to perform periodic visual inspections and minor repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, because of the nature of the facilities, such actions would likely occur infrequently. Overall, minimal maintenance requirements are anticipated. Maintenance and other operational staff would use standard size pickup trucks and vehicles.

During operations, potable water would be trucked onto the site. The operation and maintenance workforce would generate small amounts of sanitary wastewater that would be handled by temporary facilities. Only limited deliveries would be necessary for replacement PV modules and equipment during project operation.

3.5.3 Maintenance Activities

Project maintenance activities generally include road maintenance; vegetation restoration and management; scheduled maintenance of inverters, transformers, and other electrical equipment; and occasional replacement of faulty modules or other site electrical equipment. The project's access roads would be regularly inspected, and any degradation because of weather or wear and tear would be repaired. A dust palliative may be applied on dirt access roads, if needed.

Panel Washing and Operational Water Needs

Water required for operations and maintenance of the project would be provided by IID. One water storage tank would be installed as required by the ICFD.

Water would be used for periodic cleaning of the solar PV panels. It is anticipated that the solar PV panels would be washed up to four times per year to ensure optimum solar absorption by removing dust particles and other buildup. Total water demand during operation, including panel washing and other domestic water needs, is estimated to be approximately 10 acre-feet per year (AFY).

One or two small above ground portable sanitary waste facilities may be installed to retain wastewater for employee use. If installed, these facilities would remain onsite for the duration of the project. These facilities would be installed in accordance with state requirements and emptied as needed by a

contracted wastewater service vehicle. No wastewater would be generated during panel washing as water would continue to percolate through the ground, as a majority of the surfaces within the project site would remain pervious.

Operational Dust Control

The project would comply with all applicable air pollution control regulations during facility operation. The site region has minimal traffic, and no dust control measures are expected to be required; however, the project applicant would monitor traffic on dirt roads and implement dust control, including watering, bio-degradable chemical stabilization, and speed restrictions, as needed. No air pollution control measures are proposed for operation of the facility, as native vegetation would be retained, and there would not be any emissions once construction has ceased.

Spill Prevention and Containment

If required by the County, a Spill Prevention Control and Countermeasure (SPCC) Plan would be implemented during operation. BMPs would be employed in the use and storage of all hazardous materials within the project, including the use of containment systems in appropriate locations. Appropriately sized and supplied spill containment kits would be maintained on-site, and employees would be trained on spill prevention, response, and containment procedures. The chemical storage area would not be located immediately adjacent to any drainage. In addition, in accordance with the Emergency Planning & Community Right to Know Act, the project applicant would supply the local emergency response agencies with a Hazardous Materials Management Plan and an associated emergency response plan and inventory, if required.

3.6 Facility Decommissioning

The expected lifetime of the project is 25 years. The generating facility and access roads would be used year-round. If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project would be decommissioned and dismantled. When the project concludes operations, much of the wire, steel, and modules of which the system is comprised would be recycled to the extent feasible. The project components would be deconstructed and recycled or disposed of safely, and the site could be converted to other uses in accordance with applicable land use regulations in effect at the time of closure.

Consistent with County of Imperial and CEQA requirements, a Reclamation Plan would be developed in a manner that both protects public health and safety and is environmentally acceptable. The project applicant would employ a collection and recycling program to dispose of site materials. After closure, measures would be taken to stabilize disturbed areas once equipment and structures are decommissioned and removed from the project site. These measures would be outlined in the Reclamation Plan.

3.7 Required Project Approvals

3.7.1 Imperial County

The County would be required to approve the following pursuant to CEQA:

1. **Approval of CUP.** Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar facility and gen-tie line. The project site is located on two privately-owned legal parcels of land zoned A-3 (Heavy Agriculture). Pursuant to Title 9, Division 5, Chapter 9, “Solar Energy Plants” and “Transmission lines, including supporting towers, poles microwave towers, utility substations” are uses that are permitted in the A-3 Zone, subject to approval of a CUP.
2. **Certification of the EIR.** After the required public review for the Draft EIR, the County will respond to written comments, edit the document, and produce a Final EIR to be certified by the Planning Commission and Board of Supervisors prior to making a decision on the projects.

Subsequent ministerial approvals may include, but are not limited to:

- Grading and clearing permits
- Building permits
- Reclamation plan
- Encroachment permits

3.7.2 Discretionary Actions and Approvals by Other Agencies

Responsible Agencies are those agencies that have discretionary approval over one or more actions involved with development of the project. Trustee Agencies are state agencies that have discretionary approval or jurisdiction by law over natural resources affected by a project. These agencies may include, but are not limited to the following:

- IID – Water Supply Agreement, Permit for Water Use Lease Agreement, Encroachment Permit or Encroachment Agreement
- ICFD – Approval of Final Design of the Proposed Fire System
- Imperial County Public Works Department – Encroachment Permit
- California Regional Water Quality Control Board – Notice of Intent for General Construction Permit
- California Department of Fish and Wildlife (CDFW) Service (Trustee Agency) – Endangered Species Act Compliance
- U.S. Fish and Wildlife Service – Endangered Species Act Compliance
- Imperial County Air Pollution Control District – Fugitive Dust Control Plan, Authority to Construct

4 Introduction to Environmental Analysis

This section provides an overview of the environmental analysis and presents the format for the environmental analysis in each topical section.

4.1 Organization of Issue Areas

This chapter provides an analysis of impacts for those environmental topics that the County determined could result in “significant impacts,” based on preparation of an Initial Study and review by the County’s Environmental Evaluation Committee. Sections 4.1 through 4.14 discuss the environmental impacts that may result with approval and implementation of the project, and where impacts are identified, recommends mitigation measures that, when implemented, would reduce significant impacts to a level less than significant. Each environmental issue area in Chapter 4 contains a description of the following:

- The environmental setting as it relates to the specific issue
- The regulatory framework governing that issue
- The threshold of significance (from Appendix G of the CEQA Guidelines)
- The methodology used in identifying and considering the issues
- An evaluation of the project-specific impacts and identification of mitigation measures
- A determination of the level of significance after mitigation measures are implemented
- The identification of any residual significant impacts following mitigation

4.2 Format of the Impact Analysis

This analysis presents the potential impacts that could occur under the project along with any supporting mitigation requirements. Each section identifies the resulting level of significance of the impact using the terminology described below following the application of the proposed mitigation. The section includes an explanation of how the mitigation measure(s) reduces the impact in relation to the applied threshold of significance. If the impact remains significant (i.e., at or above the threshold of significance) additional discussion is provided to disclose the implications of the residual impact and indicate why no mitigation is available or why the applied mitigation does not reduce the impact to a less than significant level.

Changes that would result from the project were evaluated relative to existing environmental conditions within the project site as defined in Chapter 3 and illustrated on Figure 3-2 (Chapter 3). Existing environmental conditions are based on the time at which the Notice of Preparation was published on April 24, 2018. In evaluating the significance of these changes, this EIR applies thresholds of significance that have been developed using: (1) criteria discussed in the CEQA Guidelines; (2) criteria based on factual or scientific information; and (3) criteria based on regulatory standards of local, state, and/or federal agencies. Mechanisms that could cause impacts are discussed for each issue area.

This EIR uses the following terminology to denote the significance of environmental impacts of the project:

- *No impact* indicates that the construction, operation, and maintenance of the project would not have any direct or indirect effects on the environment. It means no change from existing conditions. This impact level does not need mitigation.
- A *less than significant impact* is one that would not result in a substantial or potentially substantial adverse change in the physical environment. This impact level does not require mitigation, even if feasible, under CEQA.
- A *significant impact* is defined by CEQA Section 21068 as one that would cause “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.” Levels of significance can vary by project, based on the change in the existing physical condition. Under CEQA, mitigation measures or alternatives to the project must be provided, where feasible, to reduce the magnitude of significant impacts.
- An *unmitigable significant impact* is one that would result in a substantial or potentially substantial adverse effect on the environment, and that could not be reduced to a less than significant level even with any feasible mitigation. Under CEQA, a project with significant and unmitigable impacts could proceed, but the lead agency would be required to prepare a “statement of overriding considerations” in accordance with State CEQA Guidelines CCR Section 15093, explaining why the lead agency would proceed with the project in spite of the potential for significant impacts.



4.1 Aesthetics and Visual Resources

This section provides a description of the existing visual and aesthetic resources within the project area and relevant state and local plans and policies regarding the protection of scenic resources. This section incorporates visual simulations prepared by HDR. The visual simulations are included in Appendix B of this EIR. Effects to the existing visual character of the project area as a result of project-related facilities are considered and mitigation is proposed based on the anticipated level of significance.

4.1.1 Environmental Setting

Regional

Imperial County encompasses 4,597 square miles in the southeastern portion of California. The County is bordered by Riverside County on the north, the international border of Mexico on the south, San Diego County on the west and Arizona on the east. The length and breadth of the County provide for a variety of visual resources ranging from desert, sand hills, mountain ranges, and the Salton Sea.

The desert includes several distinct areas that add beauty and contrast to the natural landscape. The barren desert landscape of the Yuha Desert, lower Borrego Valley, East Mesa, and Pilot Knob Mesa provide a dramatic contrast against the backdrop of the surrounding mountain ranges. The West Mesa area is a scenic desert bordered on the east by the Imperial Sand Dunes, the lower Borrego Valley, the East Mesa, and Pilot Knob Mesa.

The eastern foothills of the Peninsular Range are located on the west side of the County. The Chocolate Mountains, named to reflect their dark color, are located in the northeastern portion of the County, extending from the southeast to the northwest between Riverside County and the Colorado River. These mountains reach an elevation of 2,700 feet making them highly visible throughout the County.

Project Vicinity

The area surrounding the project sites to the north, west, and south is predominantly flat as most of the land has been leveled to facilitate irrigation and agricultural production. Numerous canals, ditches, and drains owned by the Imperial Irrigation District are located throughout the project site and surrounding areas to the north, west, and south providing irrigation water and drainage to the individual fields.

Agricultural fields, earthen berms, and overhead utility lines dominate the scenery in the project area. However, immediately adjacent to the project site to the east is the East Highline Canal. Beyond the East Highline Canal lies desert lands currently zoned as Open Space and Preservation and lands managed by the Bureau of Land Management. The East Highline Canal acts as a clear line of distinction between the privately-owned, agricultural lands that dominate the project area to the west of the canal, and the desert lands that are introduced into view east of the canal.

Project Site

The proposed project is comprised of two parcels encompassing approximately 223 acres. The project site is located immediately west of East Highline Canal Road and north of Merkley Road.

A portion of the northern parcel of the project site is developed with the existing Midway Substation. Specifically, the Midway Substation is located on the southeast corner of the northern parcel. This parcel also contains overhead utility lines, ground connections to the substation, maintenance and operation substation building, fences, and irrigation. The remaining, undeveloped portion of the northern parcel was at one time utilized for agricultural operations; however, since the time at which the Midway Substation was constructed at the site, agricultural operations on this parcel ceased. Natural vegetation has established in the undeveloped portion of the northern parcel, with the dominant vegetation being bush seepweed scrub.

The southern parcel is comprised almost entirely of fallow agricultural lands. The character of the southern parcel is that of a disturbed nature, dominated by weedy species (e.g., tumbleweed), with existing, overhead transmission lines along the perimeter of the parcel.

Wiest Road and Simpson Road provide access to the project site and surrounding area. The nearest residence to the project site is located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road.

4.1.2 Regulatory Setting

This section identifies and summarizes state and local laws, policies, and regulations that are applicable to the project.

State

California Department of Transportation

Caltrans manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the scenic corridor.

Local

Imperial County General Plan

The Imperial County General Plan (County of Imperial 1993) contains policies for the protection and conservation of scenic resources and open spaces within the County. These policies also provide guidance for the design of new development. The Conservation and Open Space Element of the General Plan provides specific goals and objectives for maintaining and protecting the aesthetic character of the region. Table 4.1-1 provides an analysis of the project's consistency with the Conservation and Open Space Element Goal 7. Additionally, the Circulation and Scenic Highways Element of the General Plan provides policies for protecting and enhancing scenic resources within highway corridors in Imperial County, consistent with Caltrans State Scenic Highway Program.



Table 4.1-1. Consistency with Applicable General Plan Conservation and Open Space Policies

General Plan Policies	Consistency with General Plan	Analysis
Goal 7: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.	Consistent	The project would result in some changes to the visual character of the project site, which can be characterized as disturbed, fallow agricultural lands and including utilities including the Midway Substation, transmission lines, other supporting infrastructure, and fencing. As described in Section 4.1.3, the project site does not contain high levels of visual character or quality; therefore, the project would not result in a significant deterioration in the visual character of the project site or surrounding area.
Objective 7.1: Encourage the preservation and enhancement of the natural beauty of the desert and mountain landscape.	Consistent	The project site is owned by IID, but is located amongst private lands at the eastern most boundary of a generally agricultural portion of the County. As described below, the solar arrays (up to 15 feet high at maximum rotation angle) would not create a permanent visual obstruction for the background views of the desert or Chocolate Mountains. The site is not readily accessible to the general public and the solar arrays would be relatively low profile in the context of the mountains in the background.

Source: County of Imperial 1993

IID – Imperial Irrigation District

4.1.3 Existing Conditions

A site reconnaissance was conducted to identify visual resources in the general project area, including the project site. Viewpoints within the general project area were selected based on the potential to see the site from surrounding areas. Due to the very flat topography, and intervening vegetation (agricultural groves, and natural thickets), views of the project site are very limited from any public roadway. Only unpaved roadways provide access to the project site, so the area is not commonly visible to motorists on more distant paved roadways. A general description of the visual quality for the project area is described below. To capture the existing visual quality for each of the project components, views within the project area were photo-documented.

Figure 4.1-1 illustrates the photo-documented key observation points (KOP) and the direction to which the photographs were taken. Again, based on a field reconnaissance, views to the project site are very limited; therefore, the KOP are focused on what has been determined to be realistically visible considering topography and intervening vegetation. Therefore, KOPs are generally immediately adjacent to the project site. The photographs depicting the existing condition at the project site are presented in the Impact Analysis section, along with visual simulations at each key view point depicting the proposed condition. Descriptions of the KOPs are as follows:

- KOP 1: Southwest corner of northern parcel looking northeast
- KOP 2: Northwest corner of northern parcel looking southeast
- KOP 3: Corner of East Highline Canal Road and Simpson Road looking southwest

The viewer's distance from landscape elements plays an important role in the determination of an area's visual quality. Landscape elements are considered higher or lower in visual importance based on their proximity to the viewer, which contribute to a project area's overall viewshed. Generally, the closer a resource is to the viewer, the more dominant, and therefore visually important, it is to the viewer. As noted previously, the project site is far removed from any public views, including those that could be available on paved roadways in the area; therefore, for the most part the project site is not readily visible until one comes immediately upon the site.

Federal Highway Administration Assessment Model

The Federal Highway Administration (FHWA) methodology outlined in the *Visual Impact Assessment for Highway Projects* (2015) was used for this visual assessment. Per the FHWA guidelines, the aesthetic quality of an area is determined through the variety and contrasts of the area's visual features, the character of those features, and the scope and scale of the scene.

The aesthetic quality of an area depends on the relationship between its features and their importance in the overall view. Evaluating resource change requires a method that: (1) characterizes visual character; and (2) assesses their quality (vividness, intactness, and unity). The viewer exposure and viewer sensitivity is evaluated to determine the viewer response. The resource change is combined with the viewer response to determine the overall visual impact. Figure 4.1-2 illustrates this FHWA methodology. The FHWA terminology definitions are listed below.

Figure 4.1-1. Key Observation Points

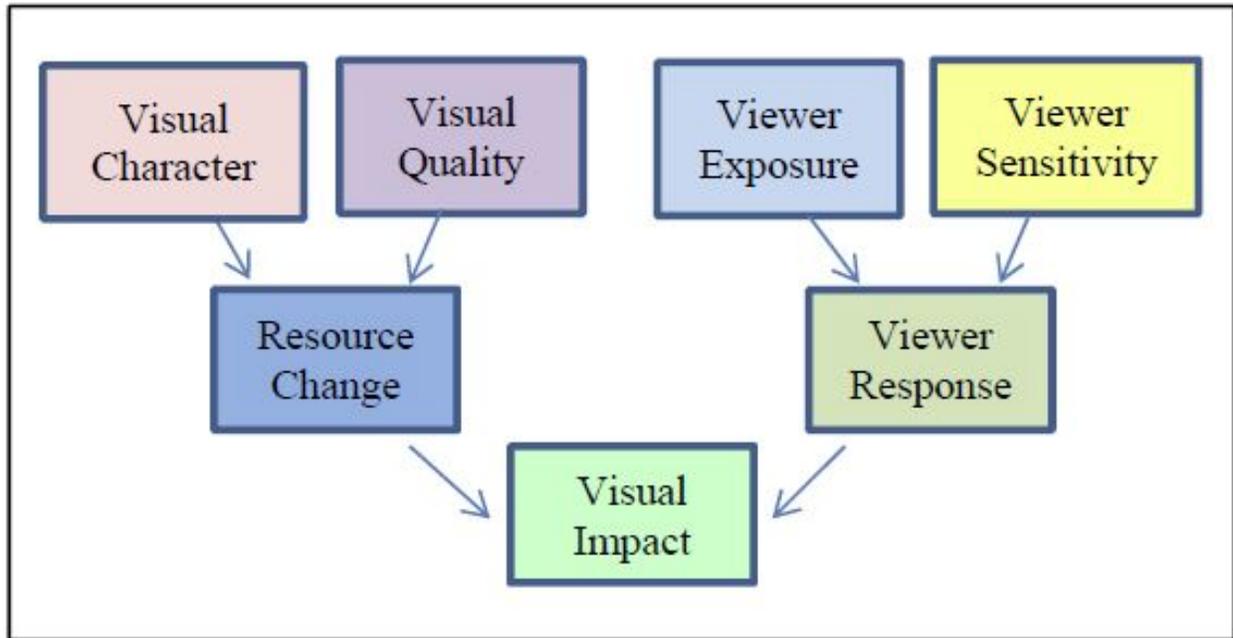


LEGEND

-  Project Site
-  Midway Substation (Proposed Point of Interconnection)
-  Key Observation Point Location



Figure 4.1-2. Federal Highway Administration Visual Environment Concept Diagram



Visual impacts related to the visual environment are characterized by their potential levels of change based on these following category ratings:

- Low (L) – Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation.
- Moderately Low (ML) – Low negative change to the visual resource with a moderate viewer response, or moderate negative change to the resource with a low viewer response. Impact can be mitigated.
- Moderate (M) – Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within 5 years using conventional practices.
- Moderately High (MH) – Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than 5 years to mitigate.
- High (H) – A high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid highly adverse impacts.

FHWA separates landscapes into foreground, middleground, and background views. Although this should be considered on a case-by-case basis, in general, the foreground is characterized by clear details (0 up to 0.25 to 0.5 mile from the viewer); the middleground is characterized by loss of clear texture within a landscape creating a uniform appearance (up to 0.25 - 0.5 to 0.05 to 3 to 5 miles in the distance); and the background extends from the middleground (3 to 5 miles) to the limit of human sight. The FHWA foreground, middleground, and background view approach is used for describing the relative quality of each of these landscapes.

The FHWA attributes of form, dominance, scale, and continuity were used to determine the overall existing visual character. Vividness, intactness, unity were then applied to determine the visual quality. These visual resource changes were then combined with the viewer response to determine the visual impacts of the project as discussed further in the Impact Analysis section.

Visual Character

Visual character includes attributes such as form, dominance, diversity, and continuity (as described below) to describe, not evaluate visual character; that is, these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character is identified by how visually compatible a project would be with the existing condition by using visual character attributes as an indicator. For this project, the following pattern characters or attributes were considered:

- Form – visual mass or shape
- Line – edges or linear definition
- Color – reflective brightness (light, dark) and hue (red, green)
- Texture – surface coarseness
- Dominance – position, size, or contrast
- Diversity – pattern elements, as well as the variety among them
- Continuity – uninterrupted flow of form, line, color, or textural pattern

The existing visual character of the project site is dominated by the Midway substation and supporting infrastructure, transmission lines, and disturbed, fallow-agricultural lands. Existing features in the surrounding area contributing to the existing visual form are neighboring agricultural fields, local (primarily unpaved) roads, overhead utilities, and canals and drains. These features create a repetitive pattern throughout the area creating a limited variety of textures and colors throughout the project vicinity. More distant, and distinguishable from the developed agricultural areas of the County are the desert lands located east of the East Highland Canal.

The line features are primarily created by the roads, Midway substation, and utility lines adjacent to and within the project site. Continuity within the project area is accomplished by the green, gray, and brown colors throughout the project site and the dominating surrounding agricultural lands to the north, west, and south of the project site. Because of the level terrain, common for the agricultural fields and surrounding area, there are no dominant features in the fore- and middle-ground. The Chocolate Mountains to the north and east create a visual form within the background. There are no dominant features within the project site or surrounding area.

Visual Quality

Both natural and created features in a landscape contribute to its visual quality. Landscape characteristics influencing visual quality include geologic, hydrologic, botanical, wildlife, recreation, and urban features. Several sets of criteria have been developed for defining and evaluating visual quality.

According to these criteria, none of these is itself equivalent to visual quality; all three must be considered high to indicate high quality. The visual quality terms are defined as follows:

- Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
- Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

The landscape in the vicinity of the project site is generally characterized as agricultural lands, and the Chocolate Mountains in the distance further east of the project site. Three KOPs were determined for the project site (Figure 4.1-3, Figure 4.1-5, and Figure 4.1-7) and are described below.

Key Observation Point 1

KOP 1 is located at the southwest corner of the northern parcel of the project site. The foreground consists of an access/maintenance road and barren earth. The middle ground consists of scattered vegetation and a hedge on the western edge of the property. The background consists of more vegetation. The Chocolate Mountains can be seen in the distance to the east. Overhead utility lines extend from the foreground into the background, and are a highly-recognizable existing man-made visual feature.

- Vividness: The foreground is comprised of flat, fallow agricultural land, a dirt road, and a utility pole and associated overhead utility lines. These features are consistent with the undeveloped, but fallowed agricultural land for the area. The middle ground is comprised of scattered low-lying, weedy vegetation, a well maintained hedge (adjacent agricultural crop), utility poles, overhead utility lines, and previously-disked, barren earth. The background is comprised of utility poles, and overhead utility lines, and the Chocolate Mountains in the distance. The distant Chocolate Mountains provide a contrasting feature within KOP 1. The vividness for KOP 1 is considered moderately low.
- Intactness: Surrounding land uses to the project site are dominated by agricultural operations. Visual intrusions within this KOP are limited to the hedge and the utility poles and associated overhead utility lines. However, these visual intrusions are considered typical for the area. These features do not degrade the natural landscape or view of the project site and surrounding area. The intactness for KOP 1 is considered high.
- Unity: The project site and surrounding area is predominately composed of natural features. This results in a harmonious visual pattern, and therefore, KOP 1 has a high level of unity.

As stated above, KOP 1 has moderately low vividness, high intactness, and high unity, resulting in a high visual quality.

Key Observation Point 2

KOP 2 is located at the northwest corner of the northern parcel of the project site. The foreground consists of barren earth, as a result of previous agricultural disturbance. The middle ground consists of scattered vegetation and utility poles and associated overhead utility lines. The background consists of vegetation, the Midway Substation, and utility poles and associated overhead utility lines.

- **Vividness:** The foreground is comprised of barren agricultural land or exposed soil with little vegetation. The middle ground is comprised of scattered vegetation, utility poles, overhead utility lines, and barren earth. The background consists of utility poles and overhead utility lines, vegetation, and the Midway Substation. The view does not provide memorable visual elements. The vividness for KOP 2 is considered low.
- **Intactness:** Visual intrusions within this KOP are limited to the utility poles, overhead utility lines and the Midway Substation. However, these visual intrusions, with the exception of the substation, are considered typical for the area. The Midway Substation moderately degrades the natural landscape or view of the project site and surrounding area. The intactness for KOP 2 is considered moderate.
- **Unity:** The project site and surrounding area is predominately composed of natural features. This results in a harmonious visual pattern. However, the Midway Substation breaks up the view and does not allow for a coherent visual pattern, and is inconsistent with the natural landscape typical of the project site and surrounding area. Therefore, KOP 2 has a moderate level of unity.

As stated above, KOP 2 has low vividness, moderate intactness, and moderate unity, resulting in a moderate visual quality.

Key Observation Point 3

KOP 3 is located at the eastern edge of the project site along the border of the two parcels that comprise the project site near the intersection of Simpson Road and East Highline Canal Road. The fore- and middle-ground consists of undeveloped, fallowed agricultural land comprised of scattered low-lying vegetation and barren earth. The background is comprised of developed agricultural fields. Utility poles and overhead utility lines extend from the middleground into the background. There are no dominate visual features within this KOP.

- **Vividness:** The foreground is comprised of fallow agricultural land. Different hues of brown form the fallow agricultural lands and is comprised of limited diversity and contrasting elements. The middleground is comprised of agricultural lands, vegetation from the undeveloped project site, and utility poles and overhead utility lines. The background consists of developed agricultural lands and utility poles and overhead utility lines. While the green and brown of the different vegetation do provide some contrast, the view is not considered distinctive for the area. Therefore, the vividness for KOP 3 is considered low.
- **Intactness:** Visual intrusions within this KOP are limited to the utility poles and associated overhead utility lines. However, these visual intrusions are considered typical for the area. These features do not degrade the natural landscape or view of the project site and surrounding area. The intactness for KOP 3 is considered high.

- Unity: The view from KOP of the project site and surrounding area is predominately composed of natural features. This results in a harmonious visual pattern, and therefore, KOP 3 has a high level of unity.

As stated above, KOP 3 has moderately low vividness, high intactness, and high unity, resulting in a moderately high visual quality.

Viewer Response

Viewer response is based on the viewer exposure (location, quantity, and duration) combined with the viewer sensitivity (activity, awareness, and local values), as described in the following definitions:

Viewer Exposure

- Activity relates to the preoccupation of viewers. Are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are actually observing their surroundings, the more sensitivity viewers will have of changes to visual resources.
- Awareness relates to the focus of view. If the focus is wide and the view general or the focus is narrow and the view specific the more specific the awareness, and the more sensitive a viewer is to change.
- Local values and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, state, or national designation, it is likely that viewers will be more sensitive to visible changes.

Viewer Sensitivity

- Location relates to the position of the viewer in relationship to the object being viewed. The closer the viewer is to the object, the more exposure.
- Quantity refers to how many people see the object. The more people who can see an object or the greater frequency an object is seen, the more exposure the object has to viewers.
- Duration refers to how long a viewer is able to keep an object in view. The longer an object can be kept in view, the more exposure. High viewer exposure helps predict that viewers will have a response to a visual change.

The project site can be seen by two types of sensitive viewer groups: roadway travelers and people residing and working within or near the project area.

- Roadway Travelers
 - Exposure: The nearest paved road, Wiest Road, is approximately 0.5 mile from the western edge of the project site. The primary access route to the southern parcel would be from Simpson Road. The northern parcel would be accessible from East Highline Canal Road. Adjacent roadways are currently developed for agricultural uses and are not heavily traveled, and are generally accessible only through a system of unpaved roadways. Roadway travelers are anticipated to be residents who live in the area or farm workers that work in the area. The terrain within the project area is relatively flat, which provides open space viewing opportunities. Roadway travelers would be visually drawn toward the background views of the Chocolate Mountains to the north and west of the

project site. Due to the limited major roadways in the vicinity of the project site, roadway traveler exposure is considered to be low.

- Sensitivity: The surrounding area has a limited population because of the agricultural nature and does not contain a diverse visual environment. Given the limited population in the area, the roadway traveler sensitivity is considered to be low.
- Residential
 - Exposure: The residences in this area are primarily associated with people living and working in the agricultural industry. This viewer type has a prolonged view of the area. The nearest residence to the project site is located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road. Given the limited number of residences in the area, the residential viewer exposure is considered moderately low.
 - Sensitivity: Residents are generally considered a sensitive viewer group because of the prolonged exposures (potentially 24 hours a day). Residents typically have an elevated concern regarding views from their homes that correlate to property values and would be considered engaged in their surrounding visual environment. Given the proximity and the limited number of residences in the area, the residential viewer's sensitivity is considered moderately low.

The viewer response within the project area is considered to be moderate. Table 4.1-2 provides a summary of the FHWA viewer response ratings for the project site.

Table 4.1-2. Federal Highway Administration Viewer Response Ratings

Viewer Type	Visual Exposure	+	Visual Sensitivity	=	Viewer Response
Roadway Travelers	L		L		L
Residential Viewers	ML		ML		ML

L – low; ML – moderately low

Scenic Highways

According to the Caltrans California Scenic Highway Mapping System (Caltrans 2011), the project site is not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project site.

Light, Glare, and Glint

Glare is considered a continuous source of brightness, relative to diffused light, whereas glint is a direct redirection of the sun beam in the surface of a PV solar module. Glint is highly directional, since its origin is purely reflective, whereas glare is the reflection of diffuse irradiance; it is not a direct reflection of the sun.

Because of the nature of the existing agricultural land uses and few residences, limited light is generated from within the project area. There is limited lighting associated with the existing Midway substation on the project site. The majority of the light and glare that emits within the project site is a result of motor vehicles traveling on surrounding roadways, airplanes, and farm equipment. Local roadways generate glare both during the night hours when cars travel with lights on, and during daytime hours because of the sun's reflection from cars and pavement surfaces. When light is not

sufficiently screened and spills over into areas outside of a particular development area the effect is called “light trespassing.”

4.1.4 Impacts and Mitigation Measures

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to aesthetics are considered significant if any of the following occur:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Methodology

This visual impact analysis is based on field observations, as well as a review of maps and aerial photographs for the project area. As previously presented in the Existing Conditions section, the FHWA visual assessment methodology was used for this analysis. The analysis of potential impacts was based on changes to the existing visual character that would result from project implementation. In making a determination of the extent and implications of the visual changes, consideration was given to:

- Specific changes in the visual composition, character, and valued qualities of the affected environment
- The visual context of the affected environment
- The extent to which the affected environment contained places or features that have been designated in plans and policies for protection or special consideration
- The numbers of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities affected by the project-related changes

An assessment of visual quality is a subjective matter, and reasonable people can disagree as to whether alteration in the visual character of the project area would be adverse or beneficial. For this analysis, a conservative approach was taken, and the potential for substantial change to the visual character of the project site is generally considered a significant impact.

Impact Analysis

Impact 4.1-1 Substantial Adverse Effect on a Scenic Vista.

Implementation of the project would not degrade of the visual quality of a scenic vista.

The project site is located in a rural portion of Imperial County and is not located within an area containing a scenic vista designated by the State or the County's General Plan (Imperial County 1993).

The nearest eligible highway for the state's Scenic Highway Program, State Route (SR) 111, is over 5 miles to the west. Local roads surround the project site and are not designated or proposed scenic roadways.

None of the KOPs described in Section 4.1.3 characterize the physical attributes necessary to qualify as a designated scenic vista; however, there are scenic mountains identified as background views of the project. The solar arrays (up to 15 feet high at maximum rotation angle) would not create a permanent visual obstruction for the background views of the desert or Chocolate Mountains. Proposed structures (i.e., transmission pole, power line, substation) would look similar to those existing within the project site and surrounding area. Based on these factors, implementation of the project would not have a substantial direct or indirect effect on a scenic vista or distinct view and no impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.1-2 Substantial Adverse Effect on a Scenic Highway.

Implementation of the project would not result in substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and ridgelines within a state scenic highway.

There are no scenic highways within the vicinity of the project. SR 111 is the nearest highway eligible for Caltrans California Scenic Highway designation, but is not a designated scenic highway. SR 111 is located over 5 miles to the west of the project site.

Visibility to the project site from SR 111 is not likely due to the relatively flat nature of the area and intervening vegetation. Because SR 111 is over 5 miles away, distinct features of the project site are not visible. Similarly, the view of the highway from the project site is very limited. Views from SR 111 to the Chocolate Mountains would not be obscured because of the distance from the project site and the scale of the Chocolate Mountains in comparison. Implementation of the project would not result in substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and ridgelines within a state scenic highway. No impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.1-3 Changes to Visual Character.

Implementation of the project would not substantially degrade the existing visual character or quality of the project site and its surroundings.

The proposed project's components would result in a partial change in the existing land use at the project sites. A portion of the northern parcel is already developed with the Midway substation and supporting infrastructure, transmission lines, and fencing. The entire site is disturbed, and is considered fallow, agricultural land. While the proposed project would alter the visual character of the project site, the change would not be dramatic both in terms of the on-site features proposed under the project and in the context of the study areas' relationship within the context of the currently developed portions of the site, the surrounding agricultural landscape, as well as existing and developing solar facilities that are located in proximity.

As described in Section 4.1.1, the project site is identified as being partially developed with the Midway substation and supporting infrastructure, including transmission lines, disturbed lands, and fallow agricultural land that contains some natural vegetation and weedy species. No distinctive visual resources, with the exception of background views of the Chocolate Mountains are located within the general area. Construction of the project would alter the existing visual character of the project area and its surroundings as a result of converting the existing condition of the site to a solar energy facility, although it is recognized that energy facilities are already located on-site and immediately adjacent to the site.

Although the project site would be visually disrupted in the short-term during construction because of soil disturbance activities, these activities would not be more disruptive than existing agricultural operations that also have soil disturbance activities, and would not be prominently visible from most locations off-site. The general area is essentially flat; therefore, no substantial site grading and landform change would occur. Because extensive grading is not required and these activities would be temporary, the visual character of the project site during construction would not be substantially degraded in the short-term and related impacts would be considered less than significant.

As discussed in Chapter 3, the major generation equipment that would be installed in conjunction with the project includes solar arrays, inverter modules and transformers, and an electrical distribution system. The boundary of the project site would be secured by a 6-foot-tall chain-link perimeter fence, topped by 1-foot-tall three-strand barbed wire.

Visual simulations were created for the three key viewpoints to represent "typical views" from points immediately adjacent to the site that are associated with the project components. Figure 4.1-3 through

Figure 4.1-8 present the existing conditions and visual simulations to illustrate the visual representation of the proposed condition to illustrate the potential changes of the visual environment.

Visual simulations (also termed "photographic simulations" or "photo-simulations") are realistic, computer-generated, three-dimensional images of a project that simulate certain project features in their context (as they would be seen from critical views and under specific viewing conditions), matching baseline photographs of the same views. These conditions include angle of view, distance, and time of day, ambient lighting, and atmospheric perspective (the attenuation of details because of particulates or moisture). The computer imaging is generally restricted to features of the project, with the context being represented by a photograph. The image and photograph are then blended to realistically portray the project in its context. Three-dimensional photo-simulations are simulations

based on a photographic montage and three-dimensional modeling of geographic elevation information with other associated pertinent information that is representative and accurate.

Current industry standard procedures were used for the development of the visual simulations, resulting in the visual simulation that is both seamless and accurate. The photo simulations presented are by no means representative of all views affected. They are included to provide the reader with a better overall sense of project changes to the existing environment as well as to help visualize public perception and responses to these changes.

As previously discussed in Section 4.1.3 the existing visual resources in the area are limited to the background views of Chocolate Mountains to the north and west. No scenic resources have been identified on the project site.

Figure 4.1-3 through

Figure 4.1-8 illustrates the visual changes from KOP 1, KOP 2, and KOP 3. The visual simulations show the solar arrays mounted on single-axis tracking systems. The changes from the existing condition to the proposed condition would change the character as being seen as vacant, or undeveloped, but would otherwise not have a significant visual change due to the existing facilities on portions of the site and in the project vicinity (e.g., adjacent transmission poles and lines).

Key Observation Point 1

As shown on Figure 4.1-4, the visual character of the site and visual quality remain quite similar. Additional linear features and visual forms are added to the view with the fence and the solar arrays. Despite the height of the solar arrays (up to 15 feet high at maximum rotation angle), the view of the Chocolate Mountains in the background is primarily intact, and would be more visible as a viewer moves further away from the site, where there is a greater viewing angle. The changes proposed for KOP 1 are relatively limited and do not significantly impact the view. The resource change for this view is low.

Key Observation Point 2

Proposed changes to the view include solar arrays in the fore- and middle-ground and a perimeter fence in the background. As shown on Figure 4.1-6, the solar arrays create visual intrusions creating a less cohesive view from KOP 2. Views of the surrounding agricultural lands are no longer visible in the background; however, access to this location is limited and would not represent a general obstruction to motorists traveling on area roadways. The resource change for KOP 2 is moderately low.

Key Observation Point 3

Similar to KOP 1 and KOP 2, proposed changes to the view include solar arrays in the middle- and back- ground and a perimeter fence in the foreground (

Figure 4.1-8). The perimeter fence in the foreground creates vertical and horizontal features cutting the view into segments. The solar arrays in the background introduce new forms and colors. Views of the surrounding agricultural lands are no longer visible in the background. The resource change for this view is considered moderately low.

Roadway travelers would have a low viewer exposure and moderately low sensitivity resulting in a moderately low viewer response. Given the limited views of the project area, residential viewers

having a moderately low exposure, combined with a moderately low sensitivity results in a moderately low viewer response.

As described in Chapter 3, the RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of renewable energy facilities while minimizing the impact on other established uses. As shown on Figure 3-1, the project site and surrounding areas are located within the RE Overlay Zone. Similar to the project site, the surrounding area is anticipated to be developed with renewably energy facilities in the future. Considering the surrounding area is anticipated to transition from agriculture to renewably energy development, the construction of the proposed project would be consistent with current and planned development patterns and types in the area.

Because of dust disturbing activities, common with existing agricultural uses, the background views to the Chocolate Mountains are visually obstructed because of the degraded air quality. The proposed heights of project components would temporarily obscure the background views of the Chocolate Mountains during the sun’s lowest and highest point because of the tracking nature of the proposed solar panel bases proposed. In addition, the power lines that will connect with the onsite Midway substation would be similar to the existing power lines in the area.

The viewer response ratings as identified in Table 4.1-3, Summary of Key View Ratings by KOP, are considered to be moderately low, combined with a low to moderately low resource change that would result in a moderately low visual impact because of the construction of the project. The visual changes associated with implementation of the proposed project would result in a less than significant impact.

Table 4.1-3. Summary of Key View Ratings

KOP	Existing Visual Quality	Viewer Response	+	Resource Change	+	Visual Impact
1	H	ML		L		ML
2	M	ML		ML		ML
3	MH	ML		ML		ML

KOP – key observation point; H – high; L – low; M – medium; MH – moderately high; ML – moderately low

Figure 4.1-3. Existing View at Key Observation Point 1



Figure 4.1-4. Project View Simulation at Key Observation Point 1



Figure 4.1-5. Existing View at Key Observation Point 2



Figure 4.1-6. Project View Simulation at Key Observation Point 2



Figure 4.1-7. Existing View at Key Observation Point 3



Figure 4.1-8. Project View Simulation at Key Observation Point 3



Mitigation Measure(s)

No mitigation measures are required.

Impact 4.1-4 New Sources of Nighttime Lighting and Glare.

The projects would not create new source of light and glare, which could adversely affect day or nighttime views in the project area.

As described in Chapter 3, the project would include new sources of nighttime lighting. In addition, given the nature of the project (e.g., solar facility), this discussion also considers potential glare-related impacts generated by the proposed solar arrays. This discussion considers each issue under the associated headings below.

Nighttime Lighting

Minimal lighting would be required for operations and would be limited to safety and security functions. All lighting would be directed downward and shielded to confine direct rays to the project site and muted to the maximum extent consistent with safety and operational necessity (Title 9, Division 17, Chapter 2: Specific Standards for all Renewable Energy Projects, of the County's Zoning Ordinance). If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used. Based on these considerations, the project is not anticipated to create a new source of substantial light which would adversely affect nighttime views in the project area and the impact is considered less than significant.

Glare and Glint

The proposed project would not result in a significant glint or glare impact to motorists driving on SR 111 or SR 115. The project site is located over 5 miles from SR 111 and SR 115, and the views to the project site would be limited or otherwise unavailable due to distance. Furthermore, the project would involve the installation of PV solar systems, which convert sunlight directly into electricity, and by their sheer nature, are non-reflective. By nature, PV panels are designed to absorb as much of the solar spectrum as possible in order to convert sunlight to electricity and are furnished with anti-reflective coating for that purpose. Reflectivity levels of solar panels are decisively lower than standard glass or galvanized steel, and should not pose a reflectance hazard to area viewers. Other glare sources in nature (free water surfaces) have a higher glare effect than PV modules. Reflected light from standard PV modules' surface is between 10 to 20 percent of the incident radiation (as low as free water surfaces), while galvanized steel (used in industrial roofs) is between 40 to 90 percent (Aztec Engineering Group, Inc. 2018). The project would generally avoid the use of materials, such as fiberglass, aluminum or vinyl/plastic siding, galvanized products, and brightly painted steel roofs, which have the potential to create on- and off-site glare impacts.

Given the project's distance from the Cliff Hatfield Memorial Airport of 7 miles to the southwest, the project would not use materials that would reflect significant levels of glare or glint upwards in a manner that could affect flight operations. Based on these considerations, implementation of the proposed project would result in a less than significant impact related to glare or glint to aircraft.

Mitigation Measure(s)

No mitigation measures are required.

4.1.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

The project site is relatively flat and primarily characterized by a level elevation. Therefore, no grading or significant land form modifications would be required during decommissioning activities upon site restoration in the future. Although the project site would be visually disrupted in the short-term during decommissioning activities, because extensive grading is not required and these activities would be temporary, the visual character of the project sites would not be substantially degraded in the short-term and related impacts would be less than significant.

Residual

Impacts related to glare and glint impacts to roadway travelers would be less than significant and no additional mitigation measures are required. Impacts related to substantial alteration of a scenic vista and damage to designated scenic corridor would be less than significant and no additional mitigation measures are required. Changes to visual character of the project area would be less than significant and would be transitioned back to their prior (pre-solar project) conditions following site decommissioning. Based on these conclusions, implementation of the project would not result in residual significant unmitigable impacts to the visual character of the project area or add substantial amounts of light and glare.

4.2 Agricultural Resources

This section provides an overview of existing agricultural resources within the project site and identifies applicable federal, state, and local policies related to the conservation of agricultural lands. This includes a summary of the production outputs, soil resources, and adjacent operations potentially affected by the project. The impact assessment in Section 4.2.4 provides an evaluation of potential adverse effects on agricultural resources based on criteria derived from the CEQA Guidelines in conjunction with actions proposed in Chapter 3, Project Description. Section 4.2.5 provides a discussion of residual impacts, if any. HDR prepared a land evaluation site assessment (LESA) for the project site, which is included in Appendix C of this EIR.

No forestry resources are present within the project site and, therefore, this section focuses on issues related to agricultural resources.

4.2.1 Environmental Setting

Agriculture has been the single most important economic activity of Imperial County throughout the 1900s, and is expected to play a major economic role in the foreseeable future. The gross annual value of agricultural production in the County has hovered around \$1 billion for the last several years, making it the County's largest source of income and employment.

Imperial County agriculture is a major producer and supplier of high quality plant and animal foods and non-food products. In 2016, agriculture contributed a total of \$4.50 billion to the county economy. Vegetable and melon crops were the single largest production category by dollar value (\$1.01 billion), comprising 48.8 percent of the county total. At 22.7 percent, livestock represented the second largest category (\$468.2 million) and consisted mostly of feedlot cattle (\$400.6 million). Field crops ranked third with \$381.2 million and 18.5 percent. Together, these three categories accounted for 89.9 percent of the county's direct farm production values (Imperial County Agricultural Commissioner 2017).

4.2.2 Regulatory Setting

This section identifies and summarizes state and local laws, policies, and regulations that are applicable to the project.

State

California Land Conservation Act

The Williamson Act (California Land Conservation Act, California Government Code, Section 51200 et seq.) is a statewide mechanism for the preservation of agricultural land and open space land. The Act provides a comprehensive method for local governments to protect farmland and open space by allowing land in agricultural use to be placed under contract (agricultural preserve) between a local government and a land owner.

Under the provisions of the Williamson Act (California Land Conservation Act 1965, Section 51200), landowners contract with the County to maintain agricultural or open space use of their lands in return for reduced property tax assessment. The contract is self-renewing and the landowner may notify the County at any time of intent to withdraw the land from its preserve status. Withdrawal involves a 10-year period of tax adjustment to full market value before protected open space can be

converted to urban uses. Consequently, land under a Williamson Act Contract can be in either a renewal status or a nonrenewable status. Lands with a nonrenewable status indicate the farmer has withdrawn from the Williamson Act Contract and is waiting for a period of tax adjustment for the land to reach its full market value. Nonrenewable and cancellation lands are candidates for potential urbanization within a period of 10 years.

The requirements necessary for cancellation of land conservation contracts are outlined in Government Code Section 51282. The County must document the justification for the cancellation through a set of findings. Unless the land is covered by a farmland security zone contract, the Williamson Act requires that local agencies make both the Consistency with the Williamson Act and Public Interest findings.

On February 23, 2010, the Imperial County Board of Supervisors voted to not accept any new Williamson Act contracts and not to renew existing contracts because of the elimination of the subvention funding from the state budget. The County reaffirmed this decision in a vote on October 12, 2010, and notices of nonrenewal were sent to landowners with Williamson Act contracts following that vote. The applicable deadlines for challenging the County's actions have expired, and, therefore, all Williamson Act contracts in Imperial County will terminate on or before December 31, 2018.

California Farmland Mapping and Monitoring Program

The California DOC, under the Division of Land Resource Protection, has set up the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state's farmland to and from agricultural use. The map series identifies eight classifications, as defined below, and uses a minimum mapping unit size of 10 acres.

- Prime Farmland has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- Unique Farmland consists of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- Farmland of Local Importance is land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.



- Urban and Built-up Land is occupied by structures with a building density of at least one unit to 1.5 acre, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, prisons, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.
- Water is defined as perennial water bodies with an extent of at least 40 acres.
- Other Land is land not included in any other mapping category. Common examples include low density rural developments, vegetative and riparian areas not suitable for livestock grazing, confined animal agriculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land. More detailed data on these uses is available in counties containing the Rural Land Use Mapping categories.

The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its “Important Farmland Series Maps” every 2 years. Table 4.2-1 provides a summary of agricultural land within Imperial County converted to non-agricultural uses during the time frame from 2010 to 2012.

Table 4.2-1. Imperial County Change in Agricultural Land Use Summary (2010 to 2012)

Land Use Category	Total Acreage Inventoried		2010 to 2012 Acreage Changes			
	2010	2012	Acres Lost (-)	Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland	194,136	192,951	1,597	412	2,009	-1,185
Farmland of Statewide Importance	307,221	305,614	2,441	834	3,275	-1,607
Unique Farmland	2,141	2,074	82	15	97	-67
Farmland of Local Importance	35,773	37,687	1,273	3,187	4,460	1,914
Important Farmland Subtotal	539,271	538,326	5,393	4,448	9,841	-945
Grazing Land	0	0	0	0	0	0
Agricultural Land Subtotal	539,271	538,326	5,393	4,448	9,841	-945
Urban and Built-Up Land	28,487	28,790	15	318	333	303
Other Land	460,001	460,643	319	961	1,280	642
Water Area	749	749	0	0	0	0

Table 4.2-1. Imperial County Change in Agricultural Land Use Summary (2010 to 2012)

Land Use Category	Total Acreage Inventoried		2010 to 2012 Acreage Changes			
	2010	2012	Acres Lost (-)	Gained (+)	Total Acreage Changed	Net Acreage Changed
Total Area Inventoried	1,028,508	1,028,508	5,727	5,727	11,454	0

Source: California DOC 2015

Local

County of Imperial General Plan

The Agricultural Element of the County’s General Plan serves as the primary policy statement for implementing development policies for agricultural land use in Imperial County. The goals, objectives, implementation programs, and policies found in the Agricultural Element provide direction for new development as well as government actions and programs. Imperial County’s Goals and Objectives are intended to serve as long-term principles and policy statements to guide agricultural use decision-making and uphold the community’s ideals.

Agriculture has been the single most important economic activity in the County throughout its history. The County recognizes the area as one of the finest agricultural areas in the world because of several environmental and cultural factors including good soils, a year-round growing season, the availability of adequate water transported from the Colorado River, extensive areas committed to agricultural production, a gently sloping topography, and a climate that is well-suited for growing crops and raising livestock. The Agricultural Element in the County General Plan demonstrates the long-term commitment by the County to the full promotion, management, use, and development and protection of agricultural production, while allowing logical, organized growth of urban areas (County of Imperial 2015).

The County’s Agricultural Element identifies several Implementation Programs and Policies for the preservation of agricultural resources. The Agricultural Element recognizes that the County can and should take additional steps to provide further protection for agricultural operations and at the same time provide for logical, organized growth of urban areas. The County must be specific and consistent about which lands will be maintained for the production of food and fiber and for support of the County’s economic base. The County’s strategy and overall framework for maintaining agriculture includes the following policy directed at the preservation of Important Farmland:

The overall economy of the County is expected to be dependent upon the agricultural industry for the foreseeable future. As such, all agricultural land in the County is considered as Important Farmland, as defined by federal and state agencies, and should be reserved for agricultural uses. Agricultural land may be converted to non-agricultural uses only where a clear and immediate need can be demonstrated, such as requirements for urban housing, commercial facilities, or employment opportunities. All existing agricultural land will be preserved for irrigation agriculture, livestock production, aquaculture, and other agriculture-related uses except for non-agricultural uses identified in this General Plan or in previously adopted City General Plans.



The following program is provided in the Agricultural Element:

No agricultural land designated except as provided in Exhibit C [of the Agricultural Element] shall be removed from the Agriculture category except where needed for use by a public agency, for geothermal purposes, where a mapping error may have occurred, or where a clear long-term economic benefit to the County can be demonstrated through the planning and environmental review process. The Board (or Planning Commission) shall be required to prepare and make specific findings and circulate same for 60 days (30 days for parcels considered under Exhibit C of this [Agricultural] element) before granting final approval of any proposal, which removes land from the Agriculture category.

Also, the following policy addresses Development Patterns and Locations on Agricultural Land:

“Leapfrogging” or “checkerboard” patterns of development have intensified recently and result in significant impacts on the efficient and economic production of adjacent agricultural land. It is a policy of the County that leapfrogging will not be allowed in the future. All new non-agricultural development will be confined to areas identified in this plan for such purposes or in Cities’ adopted Spheres of Influence, where new development must adjoin existing urban uses. Non-agricultural residential, commercial, or industrial uses will only be permitted if they adjoin at least one side of an existing urban use, and only if they do not significantly impact the ability to economically and conveniently farm adjacent agricultural land.

Agricultural Element Programs that address “leapfrogging” or “checkerboard” development include:

All non-agricultural uses in any land use category shall be analyzed during the subdivision, zoning, and environmental impact review process for their potential impact on the movement of agricultural equipment and products on roads located in the Agriculture category, and for other existing agricultural conditions which might impact the projects, such as noise, dust, or odors.

The Planning and Development Services Department shall review all proposed development projects to assure that any new residential or non-agricultural commercial uses located on agriculturally zoned land, except land designated as a Specific Plan Area, be adjoined on at least one entire property line to an area of existing urban uses. Developments that do not meet these criteria should not be approved.

Table 4.2-2 provides a General Plan goal and policy consistency evaluation for the project.

Table 4.2-2. Project Consistency with Applicable General Plan Agricultural Policies

General Plan Policies	Consistency with General Plan	Analysis
<p>Goal 1. All Important Farmland, including the categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance, as defined by federal and state agencies, should be reserved for agricultural uses.</p>	<p>Consistent</p>	<p>The project site is currently fallow agricultural lands; however, the project would temporarily convert land designated (mapped by the DOC) as Farmland of Statewide Importance and Farmland of Local Importance to non-agricultural uses. Mitigation is required for the temporary conversion of agricultural lands. Also, a restoration plan is required to restore the lands to their pre-project condition.</p>
<p>Objective 1.1. Maintain existing agricultural land uses outside of urbanizing areas and allow only those land uses in agricultural areas that are compatible with agricultural activities.</p>	<p>Consistent</p>	<p>The project site is located within the County's designated Renewable Energy zone and is, therefore, considered to be located within an area that has been determined to be suitable and compatible with the development of a solar facilities and existing agricultural uses. While the project would involve development of a solar facility adjacent to productive agricultural lands, a portion of the site has been developed with energy infrastructure – the Midway substation and transmission lines. This infrastructure is located on the northern parcel of the project site. Furthermore, the project site is comprised of fallow, agricultural land that has not been utilized for agricultural production for over 10 years, and is located in proximity to existing (Sonora Solar Facility) and proposed (Nider Solar Project) utility-scale solar energy projects. Therefore, the proposed project would be compatible with the existing surrounding uses.</p>
<p>Objective 1.2. Encourage the continuation of irrigation agriculture on Important Farmland.</p>	<p>Consistent</p>	<p>The project would temporarily convert land mapped by the DOC as Important Farmland on site to non-agricultural uses. However, the project site is currently fallow, agricultural land that has not been irrigated or utilized for agricultural production for over 10 years. Agricultural operations on the site ceased upon construction of the Midway substation and supporting transmission infrastructure.</p>
<p>Objective 1.3. Conserve Important Farmland for continued farm related (non-urban) use and development while ensuring its proper management and use.</p>	<p>Consistent</p>	<p>The project would result in the temporary conversion of land mapped by the DOC as Important Farmland to non-agricultural uses. This would be considered an adverse impact requiring mitigation. A reclamation plan would be prepared for the project site, which, when implemented, would return the site to existing site conditions.</p>



Table 4.2-2. Project Consistency with Applicable General Plan Agricultural Policies

General Plan Policies	Consistency with General Plan	Analysis
<p>Objective 1.4. Discourage the location of development adjacent to productive agricultural lands.</p>	<p>Consistent</p>	<p>The project would include development of a solar facility adjacent to productive agricultural lands; however, the site is located on the eastern perimeter of the agricultural lands in this portion of the County. Also, existing energy infrastructure (Midway substation and transmission lines) is already located on the northern parcel of the project site. Furthermore, the project site is located within the Renewable Energy Overlay zone and is in proximity to existing (Sonora Solar Facility) and proposed (Nider Solar Project) utility-scale solar energy projects. With the approval of a CUP, the project would be consistent with the County’s Land Use Ordinance and thus also consistent with the land use designation of the site. In areas where solar development would be located in proximity to existing agricultural lands, there would be no nuisance issues that would be normally associated with residential and agricultural uses being located in proximity to one another.</p>
<p>Objective 1.5. Direct development to less valuable farmland (i.e., Unique Farmland and Farmland of Local Importance rather than Prime Farmland or Farmland of Statewide Importance) when conversion of agricultural land is justified.</p>	<p>Consistent</p>	<p>The majority of the project site is mapped as Farmland of Local Importance. The site was selected by the applicant, in part, because the site is considered less productive agricultural lands as they are primarily comprised of Local Importance Farmland and have been fallow for approximately 10 years. Mitigation is required to prevent permanent conversion of valuable farmland. A reclamation plan would be prepared for the project site, which, when implemented, would return the site to existing conditions after the solar use is discontinued.</p>
<p>Objective 1.6. Recognize and preserve unincorporated areas of the County, outside of city sphere of influence areas, for irrigation agriculture, livestock production, aquaculture, and other special uses.</p>	<p>Consistent.</p>	<p>The project site is has not been utilized for irrigated agricultural crops for approximately 10 years. Also, the project site is located within the County’s designated Renewable Energy zone and is, therefore, considered to be located within an area that has been determined to be appropriate for the development of solar facilities. The project would temporarily convert land located in an unincorporated area to non-agricultural uses; however, with the approval of a CUP, the project would be considered an allowable use in an agricultural zone as a conditionally-allowed use.</p>

Table 4.2-2. Project Consistency with Applicable General Plan Agricultural Policies

General Plan Policies	Consistency with General Plan	Analysis
<p>Objective 1.8. Allow conversion of agricultural land to non-agricultural uses including renewable energy only where a clear and immediate need can be demonstrated, based on economic benefits, population projections and lack of other available land (including land within incorporated cities) for such non-agricultural uses. Such conversion shall also be allowed only where such uses have been identified for non-agricultural use in a city general plan or the County General Plan, and are supported by a study to show a lack of alternative sites.</p>	<p>Consistent</p>	<p>The project has remained fallow for approximately 10 years and is not considered active, agricultural land. Also, the project site is located within the County’s designated Renewable Energy zone and is, therefore, consistent with the General Plan. Additionally, with the approval of a CUP, the project would be consistent with the County’s Land Use Ordinance. Therefore, the project is consistent with the County’s General Plan land use designation.</p>
<p>Objective 1.9. Preserve major areas of Class II and III soils which are currently nonirrigated but which offer significant potential when water is made available.</p>	<p>Consistent</p>	<p>The project would temporarily convert III soils to non-agricultural uses; however, a restoration plan is required that requires the site to be returned to pre-project conditions, including soil quality.</p>
<p>Objective 1.11. Control and prevent soil erosion when possible.</p>	<p>Consistent</p>	<p>The project would implement BMPs within the site during construction and long-term operation of the project.</p>
<p>Goal 2. Adopt policies that prohibit “leapfrogging” or “checkerboard” patterns of nonagricultural development in agricultural areas and confine future urbanization to adopted Sphere of Influence area.</p>	<p>Consistent</p>	<p>The project is located at the eastern perimeter of agricultural lands in the County, with the East Highland Canal defining the eastern boundary. The project would include development of solar facilities adjacent to productive agricultural lands; however, existing energy infrastructure (Midway substation and transmission lines) is already located on the northern parcel of the project site. Additionally, the project is located within the County’s designated Renewable Energy zone, which identifies areas that are considered appropriate for the development of renewable energy. The project site is also located in proximity to existing (Sonora Solar Facility) and proposed (Nider Solar Project) utility-scale solar energy projects.</p> <p>This development does not include a residential component that would induce urbanization adjacent to the project. Furthermore, with the approval of a CUP, the project would be consistent with the County’s Land Use Ordinance. Consistency with the Land Use Ordinance implies consistency with the General Plan land use designation.</p>



Table 4.2-2. Project Consistency with Applicable General Plan Agricultural Policies

General Plan Policies	Consistency with General Plan	Analysis
<p>Objective 2.1. Do not allow the placement of new non-agricultural land uses such that agricultural fields or parcels become isolated or more difficult to economically and conveniently farm.</p>	<p>Consistent</p>	<p>The project is located at the eastern perimeter of agricultural lands in the County, with the East Highland Canal defining the eastern boundary. Desert lands are located further west. Additionally, the project is located within the County's designated Renewable Energy zone, which identifies areas that are considered appropriate for the development of renewable energy. Neither construction nor operation of the solar facility would not make it difficult to economically or conveniently farm.</p>
<p>Objective 2.2. Encourage the infilling of development in urban areas as an alternative to expanding urban boundaries.</p>	<p>Consistent</p>	<p>The project is located at the eastern perimeter of agricultural lands in the County, with the East Highland Canal defining the eastern boundary. Desert lands are located further west. Additionally, the project is located within the County's designated Renewable Energy zone, which identifies areas that are considered appropriate for the development of renewable energy.</p> <p>The project consists of the construction and operation of a solar facility in an area where existing energy infrastructure already exist.</p> <p>While these facilities would introduce development in the area, they do not include residential uses that would, in turn, create a demand for other uses, such as commercial, employments centers, and supporting services.</p>
<p>Objective 2.3. Maintain agricultural lands in parcel size configurations that help assure that viable farming units are retained.</p>	<p>Consistent</p>	<p>The project does not involve the subdivision of the property into smaller parcels. The project is considered a temporary industrial use but would not induce growth in the area nor result in the expansion of urban boundaries. While the project would temporarily convert agricultural land to non-agricultural uses; a reclamation plan would be prepared for the project site, which, when implemented, would return the site to its pre-project conditions after the solar uses are discontinued.</p>
<p>Objective 2.4. Discourage the parcelization of large holdings.</p>	<p>Consistent</p>	<p>The project does not involve the subdivision of the property into smaller parcels. The size of the existing parcels would be retained for future agricultural use following site restoration.</p>
<p>Objective 2.6. Discourage the development of new residential or other non-agricultural areas outside of city "sphere of influence" unless designated for non-agricultural use in the County General Plan, or for necessary public facilities.</p>	<p>Consistent</p>	<p>The project is located within the County's designated Renewable Energy zone, which identifies areas that are considered appropriate for the development of renewable energy.</p>

Table 4.2-2. Project Consistency with Applicable General Plan Agricultural Policies

General Plan Policies	Consistency with General Plan	Analysis
<p>Goal 3. Limit the introduction of conflicting uses into farming areas, including residential development of existing parcels which may create the potential for conflict with continued agricultural use of adjacent property.</p>	<p>Consistent</p>	<p>Upon approval of a CUP, the proposed project would be an allowable use within the applicable agricultural zone. Additionally, the project does not include the development of housing. The solar development would be compatible with existing agricultural uses to the west.</p>
<p>Objective 3.2. Enforce the provisions of the Imperial County Right-to-Farm Ordinance (No. 1031).</p>	<p>Consistent</p>	<p>The Imperial County Right-to-Farm Ordinance would be enforced. Existing nuisance issues, such as noise, dust, and odors from existing agricultural use would not impact the projects given the general lack of associated sensitive uses (e.g., residences). Likewise, with mitigation measures proposed in other resource sections (e.g., air quality, noise, etc.) project-related activities would not adversely affect adjacent agricultural operations.</p>
<p>Objective 3.3. Enforce the provisions of the State nuisance law (California Code Sub-Section 3482).</p>	<p>Consistent</p>	<p>The provisions of the state nuisance law would be incorporated into the projects. As discussed below, there is the potential that weeds or other pests may occur within the solar fields if these areas are not properly maintained and managed to control weeds and pests. Mitigation Measure AG-2 requires the project applicant to develop a Pest Management Plan prior to the issuance of a grading permit or building permit (whichever occurs first).</p>

Source: County of Imperial 2015

BMP – best management practice; CUP – conditional use permit; DOC – Department of Conservation; IID – Imperial Irrigation District

4.2.3 Existing Conditions

Important Farmland

According to the Important Farmland maps prepared by the California DOC (California DOC 2016a) and as shown on Figure 4.2-1, the project site contains a negligible amount of land mapped as Prime Farmland. However, this area is on the perimeter of the project site and has not been in active agriculture for over 10 years. The project site also contains land mapped by the DOC as Farmland of Statewide Importance, Farmland of Local Importance, and Other Land. Of the 223 acres that encompasses the project site, approximately 12.02 acres are currently developed with the Midway Substation. As shown on Figure 4.2-1, the Important Farmlands maps prepared by the California DOC identifies the area containing the Midway Substation and the sliver of area along the East Highline Canal within the northern parcel of the project site as Other Land. Table 4.2-3 provides an acreage breakdown for the project site.

Table 4.2-3. Farmland Mapping and Monitoring Program Designations within the Project Site

Project Site	Important Farmland				
	Prime Farmland	Farmland of Statewide Importance	Farmland of Local Importance	Other Land	Total
Project Site	0.02	7.04	194.56	21.63	223
Midway Substation	0.0	0.0	0.0	12.02	12.02
Total Net Acres (Total Acreage – Midway Substation)					210.98

Source: California DOC 2016a

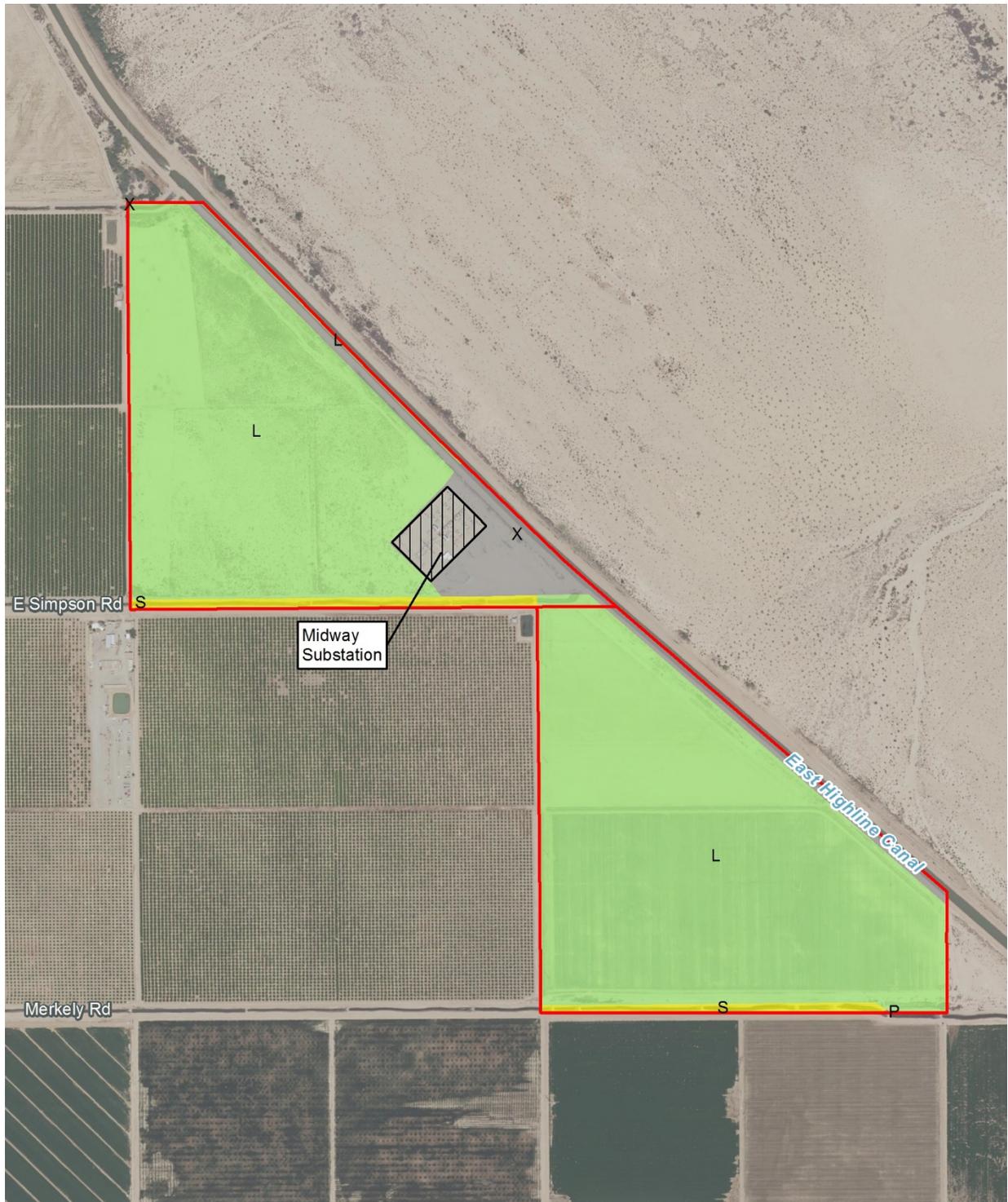
Williamson Act Contract Land

The project site is not located on Williamson Act contracted land (California DOC 2016b).

Agricultural Cropping Patterns

The proposed project would be developed adjacent to productive agricultural and developed lands; however, the project site is located on the eastern perimeter of the agricultural lands. Much of the land base in the vicinity of and within the project area is considered productive farmland where irrigation water is available. Farming operations in this area generally consist of medium to large-scale crop production with related operational facilities. Crops generally cultivated in the area may include alfalfa, barley, and/or Bermuda grass in any given year. Row and vegetable crops, such as corn, melons, wheat, are also prominent in the area.

Figure 4.2-1. Farmland Mapping and Monitoring Program Designations



LEGEND

- | | |
|---|--|
|  Project Site | Farmland Designation |
|  Midway Substation (Proposed Point of Interconnection) |  P - Prime Farmland |
| |  S - Farmland of Statewide Importance |
| |  L - Farmland of Local Importance |
| |  X - Other Land |





Farmland Quality

To assess the quality of the project site for agricultural cultivation, the LESA model developed by DOC was utilized for the project. The LESA model is an approach used to rate the relative quality of land resources based upon six specific measurable features. Two land evaluation (LE) factors are based upon measures of soil resource quality. Four site assessment (SA) factors provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands.

Results obtained from the LESA model closely correlate with Important Farmland Maps produced by the DOC's FMMP. The maps for Imperial County indicate that a majority of the project site is comprised of Farmland of Local Importance (approximately 194.56 acres), Farmland of Statewide Importance (approximately 7.04 acres), and Prime Farmland (approximately 0.02 acre). These farmland designations are illustrated on Figure 4.2-1. As discussed above, approximately 12.02 acres is currently developed with the Midway Substation. Accordingly, the Important Farmlands maps prepared by the California DOC identifies the area containing the Midway Substation as Other Land. For the purposes of the LESA prepared for the project, the project area does not include the 12.02 acres already developed with the existing Midway Substation.

Soil Resources

The suitability of the local soil resource plays a crucial part in the determination of a plot's farmland designation. The land capability classification system developed by the U.S. Department of Agriculture, Natural Resources Conservation Service, rates each of the soil types within the County in relation to its limitations for crop management. A soil rated as Class I is considered to have few limitations whereas a soil rated as Class VIII could have severe limitations that, in many circumstances, would preclude it from commercial crop production. According to the LESA prepared for the project, the project site contains soil rated as Class IV-VIII (approximately 170.48 acres) and Class III (approximately 31.54 acres) (Appendix C of this EIR).

Soils are also rated by the Storie Index, a numerical system expressing the relative degree of suitability, or value of a soil for general intensive agriculture use. The index considers a soil's color and texture, the depth of nutrients, presence of stones, and slope, all of which relate to the adequacy of a soil type for use in crop cultivation. The rating does not take into account other factors, such as the availability of water for irrigation, the climate, and the distance from markets. Values of the index range from 1 to 100 and are divided into six grades, with an index of 100 and a grade of 1 being the most suitable farmland. According to the LESA prepared for the project, the Storie Index for soil resources within the project site are classified as Grade 2 (Good), Grade 3 (Fair), and Grade 4 (Poor) (Appendix C of this EIR).

4.2.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to agricultural resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to agricultural resources are considered significant if any of the following occur:

- Convert economically viable Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (farmland) as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use
- Conflict with existing zoning for agricultural use, or a Williamson Act contract in an area in which continued agriculture is economically viable
- Involve other changes in the existing environment that, because of their location or nature, could individually or cumulatively result in loss of economically viable Farmland, to non-agricultural uses
- Impair agricultural productivity of the project site or use of neighboring areas

Methodology

This analysis evaluates the potential for the project, as described in Chapter 3, Project Description, to adversely impact agricultural resources within the project site based on the applied significance criteria as identified above. This analysis utilizes the LESA model in conjunction with other readily available information sources in assessing impacts on agriculture and farmland. As indicated in the environmental setting, a LESA model has been prepared to address the project. This report is included as Appendix C of this EIR. The analysis prepared for this EIR also relied on Important Farmland and Williamson Act maps for Imperial County produced by the California DOC's Division of Land Resource Protection. A combination of these sources was used to determine the agricultural significance of the land in the project site. Per the County of Imperial General Plan, Farmland of Local Importance is also considered an important farmland.

Additionally, potential conflicts with existing agricultural zoning or other changes resulting from the implementation of the project, which could indirectly remove Important Farmland from agricultural production or reduce agricultural productivity were considered. Sources used in this evaluation included, but were not limited to, the Imperial County General Plan, as amended through 2015, and zoning ordinance. The conceptual site plan for the project (Chapter 3, Figure 3-3) was also used to evaluate potential impacts.

Impact Analysis

Impact 4.2-1 Conversion of Important Farmlands to Non-Agricultural Use.

Implementation of the project would result in the conversion of economically viable Important Farmland, including Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance to non-agricultural uses.

Implementation of the project would result in the temporary conversion of approximately 211 acres of land currently fallow, but considered available for agricultural production to non-agricultural uses. Approximately 194.56 acres are classified as Farmland of Local Importance and 9.61 acres are classified as Other Land (excludes 12.02 acres associated with existing Midway Substation). It should be noted that the analysis of Farmland of Local Importance and Other Land is not required under CEQA significance criteria, as these designations are not considered an "agricultural land" per

CEQA Statute Section 21060.1(a). Approximately 7.04 acres of the project site are classified as Farmland of Statewide Importance and 0.02 acre are classified as Prime Farmland (Table 4.2-3). The loss of agricultural land designated as Prime Farmland and Farmland of Statewide Importance is typically considered a significant impact under CEQA.

To verify these farmland designations, the LESA model was used with the results provided in Appendix C of this EIR.

As shown in Table 4.2-4, the LE subscore is 21.88, while the SA subscore is 28.50. The final LESA score is 50.38. Based on the LESA’s scoring methodology, a final LESA score between 40 and 59 points is considered significant only if the LE and SA subscores are greater than or equal to 20 points. Therefore, with both subscores (LE and SA) above 20, the project is considered to have a significant impact on agricultural resources. As shown in Table 4.2-4, the LESA score for the project supports the farmland designations as identified in the FMMP. Hence, their conversion to non-agricultural use, albeit temporary, is considered a significant impact. Implementation of Mitigation Measure AG-1a would reduce the impact associated with the conversion of important farmlands to non-agricultural uses to a level of less than significant.

Table 4.2-4. Land Evaluation Site Assessment Scoring for the Project Site

LESA Score	LE Factors ¹	SA Factors ²	Significant
50.38	21.88	28.50	Yes

Source: Appendix C of this EIR

¹ LE includes soil land capability classification and Storie Index.

² SA factors include water availability, project size, and surrounding agricultural land and surrounding projected resource land.

LE – land evaluation; LESA – land evaluation site assessment; SA – site assessment

As provided in Chapter 3, Project Description, the project applicant would be required to restore the project site to preexisting (pre-project) conditions following project operations; therefore, agricultural uses would be possible in the future. Given that the project facility would be constructed near the existing grade, restoration of the project site to facilitate future cultivated agriculture would generally be feasible; however, with the project, there would be a 25-year period where existing agricultural uses within the project site would no longer be possible until the site is restored.

As a condition of project approval (CUP condition), a reclamation plan would be prepared for the project site. The reclamation plan will provide guidance and performance criteria to ensure that no net reduction in Important Farmland occurs. A short-term and potentially long-term net reduction in Prime Farmland and Farmland of Statewide Importance within the project site would be considered a significant impact. Implementation of Mitigation Measure AG-1b would reduce this impact to a level less than significant. This mitigation measure will ensure that the project applicant adheres to the terms of the agricultural reclamation plan that will be prepared for the project site as a condition of approval for the CUP.

Mitigation Measure(s)

AG-1a. Payment of Agricultural and Other Benefit Fees. One of the following options included below is to be implemented prior to the issuance of a grading permit or building permit (whichever is issued first) for the project:

A. Mitigation for Non-Prime Farmland.

Option 1: Provide Agricultural Conservation Easement(s). The Permittee shall procure Agricultural Conservation Easements on a “1 to 1” basis on land of equal size, of equal quality farmland, outside the path of development. The conservation easement shall meet DOC regulations and shall be recorded prior to issuance of any grading or building permits.

Option 2: Pay Agricultural In-Lieu Mitigation Fee. The Permittee shall pay an “Agricultural In-Lieu Mitigation Fee” in the amount of 20 percent of the fair market value per acre for the total acres of the proposed site based on five comparable sales of land used for agricultural purposes as of the effective date of the permit, including programs costs on a cost recovery/time and material basis. The Agricultural In-Lieu Mitigation Fee, will be placed in a trust account administered by the Imperial County Agricultural Commissioner’s office and will be used for such purposes as the acquisition, stewardship, preservation and enhancement of agricultural lands within Imperial County; or,

Option 3: Public Benefit Agreement. The Permittee and County voluntarily enter into an enforceable Public Benefit Agreement or Development Agreement that includes an Agricultural Benefit Fee payment that is (1) consistent with Board Resolution 2012-005; (2) the Agricultural Benefit Fee must be held by the County in a restricted account to be used by the County only for such purposes as the stewardship, preservation and enhancement of agricultural lands within Imperial County and to implement the goals and objectives of the Agricultural Benefit program, as specified in the Development Agreement, including addressing the mitigation of agricultural job loss on the local economy.

AG-1b. Site Reclamation Plan. The DOC has clarified the goal of a reclamation and decommissioning plan: the land must be restored to land which can be farmed. In addition to Mitigation Measure AG-1a for Prime Farmland and Non-Prime Farmland, the Applicant shall submit to Imperial County a reclamation plan prior to issuance of a grading permit. The reclamation plan shall document the procedures by which the CUP will be returned to its current agricultural condition/LESA score of 50.38. Permittee also shall provide financial assurance/bonding in the amount equal to a cost estimate prepared by a California-licensed general contractor or civil engineer for implementation of the reclamation plan in the event Permittee fails to perform the reclamation plan.

Significance after Mitigation

With the implementation of Mitigation Measure AG-1a, the project applicant would be required to minimize the permanent loss of valuable farmlands through either provision of an agricultural conservation easement, payment into the County agricultural fee program, or entering into a public benefit agreement. Mitigation Measure AG-1b will ensure that the project applicant adheres to the

terms of the agricultural reclamation plan prepared for the project site, which would address the temporary conversion impact. This mitigation measure would reduce the impact on Important Farmlands, to a less than significant level.

Impact 4.2-2 Result in the Non-Renewal or Cancellation of an Active Williamson Act Contract.

The project would not conflict with the existing agricultural zoning for the project site or with the provisions of an existing Williamson Act contract.

Williamson Act. The project site is not located on Williamson Act contracted land (California DOC 2016b). Therefore, the project would not conflict with a Williamson Act contract and no impact would occur.

Agricultural Zoning. Pursuant to the County General Plan, the project site is located on land designated for agricultural uses. The project would be constructed on land currently zoned A-3 (Heavy Agriculture). Solar energy plants are allowed uses within the A-3 zone, subject to the approval of a CUP. Upon approval of a CUP, the project's use would be consistent with the Imperial County Land Use Ordinance and thus is also consistent with the General Plan land use designation of the site. Additionally, the operation of the solar generating facility is not expected to inhibit or adversely affect adjacent agricultural operations through the placement of sensitive land uses, generation of excessive dust or shading, or place additional development pressures on adjacent areas. Based on these considerations, the impact is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.2-3 Result in Other Effects that could Contribute to the Conversion of Active Farmlands to Non-Agricultural Use.

The project could result in direct and indirect impacts on adjacent agricultural lands that could indirectly contribute to conversion of active farmland to non-agricultural use.

The Agricultural Element of the County's General Plan serves as the primary policy statement for implementing development policies for agricultural land use in Imperial County. The goals, objectives, implementation programs, and policies found in the Agricultural Element provide direction for private development as well as government actions and programs. A summary of the relevant Agricultural goals and objectives and the project's consistency with applicable goals and objectives is summarized in Table 4.2-2. As provided, the project is generally consistent with certain Agricultural Element Goals and Objectives of the County General Plan, but mitigation is required for the project.

Per County policy, agricultural land may be converted to non-agricultural uses only where a clear and immediate need can be demonstrated, such as requirements for urban housing, commercial facilities, or employment opportunities. Further, no agricultural land designated exempt shall be removed from the agriculture category except where needed for use by a public agency, for geothermal purposes, where a mapping error may have occurred, or where a clear long-term economic benefit to the County can be demonstrated through the planning and environmental review process. As discussed under Impact 4.2-1, although the project would convert lands mapped as

Important Farmland, and although fallow, technically available for agricultural production, the project site is located within the Renewable Energy Zone and is, therefore, considered an appropriate use in this area. Additionally, the applicant is required to prepare a site-specific reclamation plan for the project site. Additionally, the County is requiring Mitigation Measure AG-1b to ensure that post-restoration of the project-facility result in no net reduction in Farmland of Statewide or Local Importance. These measures in conjunction with project design features would be required to ensure the project's consistency with applicable County General Plan goals and objectives. With implementation of Mitigation Measure AG-1b, this impact would be reduced to a level less than significant.

Development of the project would not contribute to a "leapfrogging" pattern of development as the project site is located on the eastern fringe of agricultural lands, and is within the Renewable Energy Overlay zone. The use of the agricultural land is not considered permanent given that the project applicant will be conditioned to restore the project site back to preexisting (pre-project) conditions. In this context, the project would be consistent with applicable General Plan policies and is considered less than significant.

The project would not directly impact the movement of agricultural equipment on roads located within the agriculture category and access to existing agriculture-serving roads would not be precluded or hindered by the project. No modifications to roadways are proposed in the project area that would otherwise affect other agricultural operations in the area. Furthermore, existing nuisance issues, such as noise, dust, and odors from existing agricultural use would not impact the project given the general lack of associated sensitive uses (e.g., residences). Likewise, with mitigation measures proposed in other resource sections (e.g., air quality, noise, etc.) project-related activities would not adversely affect adjacent agricultural operations. Further, the provisions of the Imperial County Right-to-Farm Ordinance (No. 1031) and the State nuisance law (California Code Sub-Section 3482) would continue to be enforced. Based on these considerations, the project is not expected to adversely impact adjacent landowners' abilities to economically and conveniently farm adjacent agricultural land and the impact is considered less than significant.

Mitigation Measure(s)

Implement Mitigation Measure AG-1b.

Significance after Mitigation

With the implementation of Mitigation Measure AG-1b, the project applicant would be required to adhere to the terms of the reclamation plan that is required to be prepared for the project site. Implementation of Mitigation Measure AG-1b would reduce this impact to a less than significant level.

Impact 4.2-4 Adversely Affect Agricultural Productivity.

The project could impair the agricultural productivity of the project site or use of neighboring areas for agricultural use.

It is not likely that the agricultural productivity of the project site could be reduced from its current condition as a result of the project as the project site is fallow.

The project applicant will be required to prepare a site reclamation plan for the project site. In any land restoration project, it is necessary to minimize disruption to topsoil or stockpiled topsoil for later



use during restoration following project decommissioning. As previously noted in the setting discussion, the Storie Index for soil resources within the project site are classified as Grade 2 (Good), Grade 3 (Fair), and Grade 4 (Poor) (Appendix C of this EIR). Based on these classifications, on-site soil resources are suitable for agricultural cultivation (e.g., effective rooting depth, soil texture, nutrient holding capacity, etc.). With the implementation of the project, it is possible that the physical and chemical makeup of the soil materials within the upper soil horizon may change. For example, improper soil stockpiling and management of the stockpiles could result in increased decomposition of soil organic materials, increased leaching of plant available nitrogen, and depletion of soil biota communities (e.g., Rhizobium or Frankia). Each of these circumstances could have an adverse effect on the future productivity of the restored soils. Any reductions in agricultural productivity could significantly limit the types of crops (e.g., deeper rooting crops, orchards, etc.) that may be grown within the project site in the future. This is considered a significant impact attributable to the project. Implementation of Mitigation Measure AG-1b would reduce this impact to a level less than significant. Additionally, there is the potential that weeds or other pests may occur within the solar fields if these areas are not properly maintained and managed to control weeds and pests. This is considered a significant impact. Implementation of Mitigation Measure AG-2 would reduce this impact to a level less than significant.

Mitigation Measure(s)

AG-2 Prior to the issuance of a grading permit or building permit (whichever occurs first), a Pest Management Plan shall be developed by the project applicant and approved by the County of Imperial Agricultural Commissioner. The project applicant shall maintain a Pest Management Plan until reclamation is complete. The plan shall provide the following:

1. Monitoring, preventative, and management strategies for weed and pest control during construction activities at any portion of the project (e.g., transmission line);
2. Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows:
 - Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. The assistance of a licensed pest control advisor is recommended. All treatments must be performed by a qualified applicator or a licensed pest control business;
 - All treatments must be performed by a qualified applicator or a licensed pest control operator;
 - "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, bio control, cultural control, or chemical treatments;
 - Use of "permanent" soil sterilants to control weeds or other pests is prohibited because this would interfere with reclamation;

- Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species as defined by the California Department of Food Agriculture and the U.S. Department of Agriculture. Request a sample be taken by the Agricultural Commissioner's Office of a suspected invasive species. Eradication of exotic pests shall be done under the direction of the Agricultural Commissioner's Office and/or California Department of Food and Agriculture;
 - Obey all pesticide use laws, regulations, and permit conditions;
 - Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties;
 - Ensure all project employees that handle pest control issues are appropriately trained and certified, all required records are maintained and made available for inspection, and all required permits and other required legal documents are current;
 - Maintain records of pests found and treatments or pest management methods used. Records should include the date, location/block, project name (current and previous if changed), and methods used. For pesticides include the chemical(s) used, EPA Registration numbers, application rates, etc. A pesticide use report may be used for this;
 - Submit a report of monitoring, pest finds, and treatments, or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report is required even if no pests were found or treatment occurred. It may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request.
3. A long-term strategy for weed and pest control and management during the operation of the proposed projects. Such strategies may include, but are not limited to:
- Use of specific types of herbicides and pesticides on a scheduled basis.
4. Maintenance and management of project site conditions to reduce the potential for a significant increase in pest-related nuisance conditions on surrounding agricultural lands.

The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources.



Significance after Mitigation

With the implementation of Mitigation Measures AG-1b and AG-2, the project applicant would be required to adhere to the terms of the comprehensive reclamation plan that would restore the project site to preexisting (pre-project) conditions following decommissioning of the project (after use for solar generation activities) and implement a pest management plan. Compliance with these measures would reduce this impact to a level less than significant.

4.2.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

As required by Mitigation Measure AG-1b, the project applicant shall adhere to the terms of the site reclamation plans that is required to be submitted to Imperial County to return the property to its existing condition. In any land restoration project, it is necessary to minimize disruption to topsoil or stockpiled topsoil for later use during restoration following project decommissioning. With the implementation of the project, it is possible that the physical and chemical makeup of the soil materials within the upper soil horizon may change during construction and associated stockpiling operations. Improper soil stockpiling and management of the stockpiles could result in increased decomposition of soil organic materials, increased leaching of plant-available nitrogen, and depletion of soil biota communities (e.g., Rhizobium or Frankia). Each of these circumstances could have an adverse effect on the future productivity of the restored soils. Any reductions in agricultural productivity could significantly limit the types of crops (e.g., deeper rooting crops, orchards, etc.) that may be grown within the project site in the future. This is considered a significant impact attributable to the project; however, implementation of Mitigation Measure AG-1b would reduce this impact to a level less than significant.

Residual

With mitigation, issues related to the conversion of Important Farmland to non-agricultural use would be mitigated and reduced to a less than significant level. Operation of the project, subject to the approval of a CUP, would generally be consistent with applicable federal, state, regional, and local plans and policies. Following the proposed use (e.g., solar facilities), the project would be decommissioned and the project site would be restored to preexisting (pre-project) conditions. Based on these circumstances, the project would not result in any residual significant and unmitigable impacts on agricultural resources.

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4.3 Air Quality

This section provides an overview of existing air quality within the project area and identifies applicable federal, state, and local policies related to air quality. The impact assessment provides an evaluation of potential adverse effects on air quality based on criteria derived from the CEQA Guidelines and the Imperial County Air Pollution Control District's (ICAPCD) Air Quality Handbook in conjunction with actions proposed in Chapter 3, Project Description. HDR prepared an *Air Quality/Greenhouse Gas Report* for the Citizens Imperial Solar, LLC Project. This report is included in Appendix D of this EIR.

4.3.1 Environmental Setting

Regional Setting

The project site is located in the SSAB under the jurisdiction of ICAPCD. The SSAB, which contains part of Riverside County and all of Imperial County, is governed largely by the large-scale sinking and warming of air within the semi-permanent subtropical high-pressure center over the Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms, except in winter when the high is weakest and farthest south. When the fringes of mid-latitude storms pass through the Imperial Valley in winter, the coastal mountains create a strong “rainshadow” effect that makes Imperial Valley the second driest location in the U.S. The flat terrain near the Salton Sea, intense heat from the sun during the day, and strong radiational cooling at night create deep convective thermals during the daytime and equally strong surface-based temperature inversions at night. The temperature inversions and light nighttime winds trap any local air pollution emissions near the ground. The area is subject to frequent hazy conditions at sunrise, followed by rapid daytime dissipation as winds pick up and the temperature warms.

The lack of clouds and atmospheric moisture creates strong diurnal and seasonal temperature variations ranging from an average summer maximum of 108 degrees (°) Fahrenheit down to a winter morning minimum of 38° Fahrenheit. The most pleasant weather occurs from about mid-October to early May when daily highs are in the 70s and 80s with very infrequent cloudiness or rainfall. Imperial County experiences significant rainfall an average of only four times per year (less than 0.10 inches in 24 hours). The local area usually has 3 days of rain in winter and one thunderstorm day in August. The annual rainfall in this region is less than 3 inches per year.

Winds in the area are driven by a complex pattern of local, regional, and global forces, but primarily reflect the temperature difference between the cool ocean to the west and the heated interior of the entire desert southwest. For much of the year, winds flow predominantly from the west to the east. In summer, intense solar heating in the Imperial Valley creates a more localized wind pattern, as air comes up from the southeast via the Gulf of California. During periods of strong solar heating and intense convection, turbulent motion creates good mixing and low levels of air pollution. However, even strong turbulent mixing is insufficient to overcome the emissions that emanate from the Mexicali, Mexico area because of the limited air pollution controls on those emission sources. Imperial County is predominately agricultural land. This is a factor in the cumulative air quality of the SSAB. The agricultural production generates dust and small particulate matter through the use of agricultural equipment on unpaved roads, land preparation, and harvest practices. Imperial County experiences unhealthful air quality from photochemical smog and from dust because of extensive surface disturbance and the very arid climate.

Major Air Pollutants

Criteria Pollutants

Air quality is defined by ambient air concentrations of specific pollutants determined by the U.S. Environmental Protection Agency (U.S. EPA) to be of concern with respect to the health and welfare of the general public. Seven major pollutants of concern, called criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), O₃, particulate matter (PM) which is broken down for regulatory purposes into PM₁₀, PM_{2.5}, and lead (Pb). Table 4.3-1 describes the health effect of these criteria pollutants.

Table 4.3-1. Health Effects of Criteria Air Pollutants

Air Pollutant	Health Effects
CO	Reduces ability of blood to bring oxygen to body cells and tissues; cells and tissues need oxygen to work. CO may be particularly hazardous to people who have heart or circulatory (blood vessel) problems and people who have damaged lungs or breathing passages.
SO ₂	Breathing problems; may cause permanent damage to lungs.
NO ₂	Lung damage, illnesses of breathing passages and lungs (respiratory system).
O ₃	Breathing problems, reduced lung function, asthma, irritates eyes, stuffy nose, reduced resistance to colds or other infections, and may speed up aging of lung tissue.
PM ₁₀ and PM _{2.5}	Nose and throat irritation, lung damage, bronchitis, early death.
Pb	Brain and other nervous system damage; children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead causes digestive and other health problems.

CO – carbon monoxide; NO₂ – nitrogen dioxide; O₃ – ozone; Pb – lead; PM_{2.5} – particulate matter less than 2.5 microns in diameter; PM₁₀ – particulate matter less than 10 microns in diameter; SO₂ – sulfur dioxide

Toxic Air Contaminants

Toxic air contaminants (TAC) are substances that have the potential to be emitted into the ambient air that have been determined to present some level of acute or chronic health risk (cancer or non-cancer) to the general public. These pollutants may be emitted in trace amounts from various types of sources, including combustion sources. There are almost 200 compounds that have been designated as TACs in California. The 10 TACs posing the greatest known health risk in California, based primarily on ambient air quality data, are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, formaldehyde, methylene chloride, para-dichlorobenzene, perchloroethylene, and diesel particulate matter.

4.3.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

Clean Air Act

The Federal Clean Air Act (CAA), as amended, is the primary federal law that governs air quality. These laws, and related regulations by the U.S. EPA and CARB, set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: CO, NO₂, O₃, PM₁₀, PM_{2.5}, and SO₂. In addition, national standards exist for Pb. The NAAQS standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. TACs are covered, as well.

The Federal CAA requires U.S. EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table 4.3-2.

State

California Clean Air Act

In California, the California CAA is administered by the CARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels. The CARB, which became part of the California Environmental Protection Agency (Cal EPA) in 1991, is responsible for meeting the state requirements of the federal CAA, administering the California CAA, and establishing the CAAQS. The CCAA, as amended in 1992, requires all air districts in the state to endeavor to achieve and maintain the CAAQS. CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

CARB regulates mobile air pollution sources, such as motor vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications, which became effective in March 1996. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels.

The state standards are summarized in Table 4.3-2. The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous 3 calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

Table 4.3-2. Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard
O ₃	1-hour	0.09 ppm	--
	8-hour	0.070 ppm	0.070 ppm
PM ₁₀	24-hour	50 µg/m ³	150 µg/m ³
	Mean	20 µg/m ³	--
PM _{2.5}	24-hour	--	35 µg/m ³
	Mean	12 µg/m ³	12.0 µg/m ³
CO	1-hour	20 ppm	35 ppm
	8-hour	9.0 ppm	9 ppm
NO ₂	1-hour	0.18 ppm	100 ppb
	Mean	0.030 ppm	0.053 ppm
SO ₂	1-hour	0.25 ppm	75 ppb
	24-hour	0.04 ppm	--
Pb	30-day	1.5 µg/m ³	--
	Rolling 3-month		0.15 µg/m ³
Sulfates	24-hour	25 µg/m ³	No federal standard
Hydrogen sulfide	1-hour	0.03 ppm	
Vinyl chloride	24-hour	0.01 ppm	
Visibility-reducing particles	8-hour	Extinction coefficient of 0.23 per kilometer, visibility of 10 miles or more because of particles when relative humidity is less than 70 percent	

CO – carbon monoxide; mean – annual arithmetic mean; NO₂ – nitrogen dioxide; O₃ – ozone; Pb – lead; PM_{2.5} – particulate matter less than 2.5 microns in diameter; PM₁₀ – particulate matter less than 10 microns in diameter; ppb – parts per billion; ppm – parts per million; SO₂ – sulfur dioxide; µg/m³ – micrograms per cubic meter

California State Implementation Plan

The 1990 amendments to the Federal CAA set new deadlines for attainment based on the severity of the pollution problem and launched a comprehensive planning process for attaining the NAAQS. The promulgation of the national 8-hour O₃ standard and the fine particulate matter (PM_{2.5}) standards in 1997 resulted in additional statewide air quality planning efforts. In response to new federal regulations, SIPs also began to address ways to improve visibility in national parks and wilderness areas. SIPs are not single documents, but rather a compilation of new and previously submitted plans, programs, district rules, state regulations, and federal controls. Many of California's



SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items which are included in the California SIP.

Regional

Imperial County Air Pollution Control District

ICAPCD is responsible for regulating stationary sources of air emissions in Imperial County. Stationary sources that have the potential to emit air pollutants into the ambient air are subject to the Rules and Regulations adopted by ICAPCD. Monitoring of ambient air quality in Imperial County began in 1976. Since that time, monitoring has been performed by ICAPCD, CARB, and by private industry. There are six monitoring sites in Imperial County from Niland to Calexico.

Ozone Air Quality Management Plan. Because of Imperial County's "moderate" nonattainment status for 1997 federal 8-hour O₃ standards, ICAPCD was required to develop an 8-hour Attainment Plan for Ozone. On December 3, 2009, the EPA made a final determination that the Imperial County attained the 1997 8-Hour NAAQS for O₃. As long as Imperial County continues to attain the 1997 8-hour O₃ standard, the state does not have to submit an attainment demonstration, a reasonable further progress plan, contingency measure, and other planning requirements. Because this determination does not constitute a re-designation to attainment under the CAA Section 107(d)(3), the designation status will remain "moderate" non-attainment for the 1997 8-hour O₃ standard. However, ICAPCD is required to submit a modified air quality management plan (AQMP) to the EPA for approval. The final "Modified" 2009 8-hour Ozone Air Quality Management Plan was adopted by ICAPCD on July 13, 2010. On November 18, 2010, the CARB approved the Imperial County 8-Hour Ozone Air Quality Management Plan.

Particulate Matter SIP. Imperial Valley is classified as nonattainment for federal and state PM₁₀ standards. As a result, ICAPCD was required to develop a PM₁₀ Attainment Plan. The final plan was adopted by ICAPCD on August 11, 2009.

Imperial County Air Pollution Control District Rules and Regulations

ICAPCD has the authority to adopt and enforce regulations dealing with controls for specific types of sources, emissions or hazardous air pollutants, and New Source Review. The ICAPCD Rules and Regulations are part of the SIP and are separately enforceable by the EPA.

Rule 310 – Operational Development Fee. The purpose of this rule is to provide ICAPCD with a sound method for mitigating the emissions produced from the operation of new commercial and residential development projects throughout the County of Imperial and incorporated cities. All project proponents have the option to either provide: off-site mitigation, pay the operational development fee, or do a combination of both. This rule will assist ICAPCD in attaining the state and federal ambient air quality standards for PM₁₀ and O₃.

Rule 403 – General Limitations on the Discharge of Air Contaminants. Rule 403 sets forth limitations on emissions of pollutants, including particulate matter, from individual sources.

Regulation VIII – Fugitive Dust Rules. Regulation VIII sets forth rules regarding the control of fugitive dust, including fugitive dust from construction activities. The regulation requires implementation of fugitive dust control measures to reduce emissions from earthmoving, unpaved roads, handling of bulk materials, and control of track-out/carry-out dust from active construction sites. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

- Phasing of work in order to minimize disturbed surface area
- Application of water or chemical stabilizers to disturbed soils
- Construction and maintenance of wind barriers
- Use of a track-out control device or wash down system at access points to paved roads.

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size; however, compliance with Regulation VIII does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the Air District is required 10 days prior to the commencement of any construction activity. Furthermore, any use of engine(s) and/or generator(s) of 50 horsepower or greater may require a permit through ICAPCD.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the designated metropolitan planning organization for Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. CEQA requires that regional agencies like SCAG review projects and plans throughout its jurisdiction. SCAG, as the region’s “Clearinghouse,” collects information on projects of varying size and scope to provide a central point to monitor regional activity. SCAG has the responsibility of reviewing dozens of projects, plans, and programs every month. Projects and plans that are regionally significant must demonstrate to SCAG their consistency with a range of adopted regional plans and policies. The applicable SCAG goal for this analysis is the Regional Transportation Plan (RTP) Goal 5: Protect the environment, improve air quality, and promote energy efficiency.

Imperial County General Plan

The Imperial County General Plan serves as the overall guiding policy for the county. The Conservation and Open Space Element includes objectives for helping the County achieve the goal of improving and maintaining the quality of air in the region. The Imperial County Board of Supervisors ultimately determines consistency with the General Plan. The following objectives are applicable to the project:

- **Objective 9.1:** Ensure that all facilities shall comply with current federal and state requirements for attainment of air quality objectives.
- **Objective 9.2:** Cooperate with all federal and state agencies in the effort to attain air quality objectives.

As discussed in greater detail below, the proposed project complies with these objectives through implementation of mitigation measures to reduce emissions of criteria pollutants to below a level of significance.

4.3.3 Existing Conditions

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-Hour O₃, PM₁₀, and PM_{2.5} (Table 4.3-3). Imperial County is classified as a "serious" nonattainment area for PM₁₀ for the NAAQS. On November 13, 2009, EPA published Air Quality Designations for the 2006 24-Hour Fine Particle (PM_{2.5}) NAAQS wherein Imperial County was listed as designated nonattainment for the 2006 24-hour PM_{2.5} NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed project is not located within the nonattainment boundaries for PM_{2.5}. On April 10, 2014, the CARB Board gave final approval to the 2013 Amendments to Area Designations for CAAQS. For the state PM_{2.5} standard, effective July 1, 2014, the City of Calexico will be designated nonattainment, while the rest of the SSAB will be designated attainment.

Table 4.3-3. Designations/Classifications for the Salton Sea Air Basin

Pollutant	State Designation	Federal Designation(Classification)
O ₃	Nonattainment	Attainment
PM ₁₀	Nonattainment	Nonattainment (Serious)*
PM _{2.5}	Attainment***	Nonattainment**
CO	Attainment	Unclassifiable/Attainment
NO ₂	Attainment	Unclassifiable/Attainment
SO ₂	Attainment	Attainment
Sulfates	Attainment	No federal standard
Pb	Attainment	
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

Source: Appendix D of this EIR

Notes: * Designation for Imperial Valley Planning Area only.

** Designation is only for the urban areas within Imperial County.

*** Designation is for the whole of Imperial County except the City of Calexico.

CO – carbon monoxide; NO₂ – nitrogen dioxide; O₃ – ozone; Pb – lead; PM_{2.5} – particulate matter less than 2.5 microns in diameter; PM₁₀ - particulate matter less than 10 microns in diameter; SO₂ – sulfur dioxide

Air pollutants transported into the SSAB from the adjacent South Coast Air Basin (Los Angeles, San Bernardino County, Orange County, and Riverside County) and from Mexicali, Mexico substantially contribute to the non-attainment conditions in the SSAB.

The closest air quality monitoring station to the project site is the El Centro-9th station within the City of El Centro (150 9th Street, El Centro, CA 92243). This station monitors O₃, PM_{2.5}, PM₁₀, and NO₂. As the El Centro Station does not monitor CO or SO₂ concentrations, the data from the Calexico

Station was used for this analysis. Table 4.3-4 shows pollutant levels, the state and federal standards, and the number of exceedances recorded at these stations from 2014 to 2016. As identified in Table 4.3-4, the 1-hour and 8-hour O₃ standards were exceeded in each year. The state and federal PM₁₀ standards were exceeded in each of the past 3 years.

Table 4.3-4. Ambient Air Quality Monitoring Concentrations

Pollutant	Pollutant Concentration and Standard	Maximum Concentration		
		2014	2015	2016
CO	Maximum 1-hour concentration (ppm)	5.2	5.7	4.9
	Days> 20 ppm (state 1-hour standard)	0	0	0
	Days> 35 ppm (federal 1-hour standard)	0	0	0
	Maximum 8-hour concentration (ppm)	3.8	4.0	3.9
	Days> 9 ppm (state 8-hour standard)	0	0	0
	Days> 9 ppm (federal 8-hour standard)	0	0	0
O ₃	Maximum 1-hour concentration (ppm)	0.101	0.099	0.108
	Days> 0.09 ppm (state 1-hour standard)	2	2	4
	Maximum 8-hour concentration (ppm)	0.080	0.079	0.082
	Days> 0.070 ppm (state 8-hour standard)	12	11	11
	Days> 0.070 ppm (federal 8-hour standard)	12	11	11
NO ₂	Maximum 1-hour concentration (ppm)	0.059	0.059	0.051
	Days> 0.18 ppm (state 1-hour standard)	0	0	0
	Days> 0.10 ppm (federal 1-hour standard)	0	0	0
	Annual arithmetic mean (ppm)	0.007	0.007	0.005
	Exceed 0.030 ppm? (state annual standard)	No	No	No
	Exceed 0.053 ppm? (federal annual standard)	No	No	No
SO ₂	Maximum 1-hour concentration (ppb)	11.4	16.1	11.7
	Days> 250 ppb (state 1-hour standard)	0	0	0
	Days> 75 ppb (federal 1-hour standard)	0	0	0
	Maximum 24-hour concentration (ppb)	N/A	N/A	N/A
	Days> 40 ppb (state 24-hour standard)	N/A	N/A	N/A

Table 4.3-4. Ambient Air Quality Monitoring Concentrations

Pollutant	Pollutant Concentration and Standard	Maximum Concentration		
		2014	2015	2016
PM ₁₀	Maximum 24-hour concentration (µg/m ³)	120.4	165.9	284.9
	Days> 50 µg/m ³ (state 24-hour standard)	15	7	10
	Days> 150 µg/m ³ (federal 24-hour standard)	0	1	N/A
	Annual arithmetic mean (µg/m ³)	40.8	35.6	45.0
	Exceed 20 µg/m ³ ? (state annual standard)	Yes	Yes	Yes
PM _{2.5}	Maximum 24-hour concentration (µg/m ³)	27.5	31.2	31.3
	Days> 35 µg/m ³ (federal 24-hour standard)	0	0	0
	Annual arithmetic mean (µg/m ³)	7.1	6.6	7.4
	Exceed 12 µg/m ³ ? (state annual standard)	No	No	No
	Exceed 12 µg/m ³ ? (federal annual standard)	No	No	No

Source: Appendix D of this EIR

Notes: > exceed; N/A – not available; ppm – parts per million; ppb – parts per billion; µg/m³ – micrograms per cubic meter

CO – carbon monoxide; NO₂ – nitrogen dioxide; O₃ – ozone; Pb – lead; PM_{2.5} – particulate matter less than 2.5 microns in diameter; PM₁₀ – particulate matter less than 10 microns in diameter; SO₂ – sulfur dioxide

Sensitive Receptors

High concentrations of air pollutants pose health hazards for the general population, but particularly for the young, the elderly, and the sick. Typical health problems attributed to smog include respiratory ailments, eye and throat irritations, headaches, coughing, and chest discomfort. Certain land uses are considered to be more sensitive to the effects of air pollution. Schools, hospitals, residences, and other facilities where people congregate, especially children, the elderly and infirm, are considered particularly sensitive to air pollutants.

The project site is located in a sparsely populated, agriculturally zoned portion of Imperial County. There are no established residential communities located within or in the vicinity of the project site. The nearest sensitive receptor to the project site is a residence located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road.

4.3.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to air quality, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to air quality are considered significant if any of the following occur:

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O₃ precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

Imperial County Air Pollution Control District

ICAPCD amended the *Air Quality Handbook: Guidelines for the Implementation of CEQA* on December 12, 2017. ICAPCD established significance thresholds based on the state CEQA thresholds. The handbook was used to determine the proper level of analysis for the project.

Operations

Projects can be classified as either Tier 1 or Tier 2 projects, depending on the project's operational emissions. Table 4.3-5 presents the emission thresholds that are identified by ICAPCD. As shown in Table 4.3-5, Tier 1 projects are projects that emit less than 137 pounds per day of NO_x or ROG; less than 150 pounds per day of PM₁₀ or SO_x; or less than 550 pounds per day of CO or PM_{2.5}. Tier 1 projects are not required to develop a Comprehensive Air Quality Analysis Report or an EIR, and require the implementation of all feasible mitigation measures listed in Section 7.2 of the ICAPCD's *Air Quality Handbook: Guidelines for the Implementation of CEQA*.

Alternatively, Tier 2 projects are projects that emit 137 pounds per day of NO_x or ROG or greater; 150 pounds per day of PM₁₀ or SO_x or greater; or 550 pounds per day of CO or PM_{2.5} or greater. Tier 2 projects are required to develop a Comprehensive Air Quality Analysis Report at a minimum, and are required to implement all standard mitigation measures as well as all feasible discretionary mitigation measures listed in Sections 7.2 and 7.3 of the ICAPCD's *Air Quality Handbook: Guidelines for the Implementation of CEQA*.

Table 4.3-5. Imperial County Air Pollution Control District Significance Thresholds for Operation

Criteria Pollutant	Tier 1	Tier 2
NO _x and ROG	Less than 137 pounds per day	137 pounds per day and greater
PM ₁₀ and SO _x	Less than 150 pounds per day	150 pounds per day and greater
CO and PM _{2.5}	Less than 550 pounds per day	550 pounds per day and greater
Level of Significance	Less than Significant	Significant Impact

Source: ICAPCD 2017

CO – carbon monoxide; NO_x – nitrogen oxide; O₃ – ozone; Pb – lead; PM_{2.5} – particulate matter less than 2.5 microns in diameter; PM₁₀ - particulate matter less than 10 microns in diameter; ROG - reactive organic gas; SO_x – sulfur oxide

Construction

For construction projects, the Air Quality Handbook indicates that the significance threshold for nitrogen oxide (NO_x) is 100 pounds per day and for reactive organic gases (ROG) is 75 pounds per day. As discussed in the ICAPCD’s handbook, the approach to evaluating construction emissions should be qualitative rather than quantitative. In any case, regardless of the size of the project, the standard mitigation measures for construction equipment and fugitive PM₁₀ must be implemented at all construction sites. The implementation of discretionary mitigation measures, as listed in Section 7.1 of the ICAPCD’s Air Quality Handbook, apply to those construction sites that are 5 acres or more for non-residential developments or 10 acres or more in size for residential developments. The mitigation measures found in Section 7.1 of the ICAPCD’s handbook are intended as a guide of feasible mitigation measures and are not intended to be an all-inclusive comprehensive list of all mitigation measures. Table 4.3-6 presents the construction emission thresholds that are identified by ICAPCD.

Table 4.3-6. Imperial County Air Pollution Control District Significance Thresholds for Construction Activities

Pollutant	Threshold
PM ₁₀	150 pounds per day
ROG	75 pounds per day
NO _x	100 pounds per day
CO	550 pounds per day

Source: ICAPCD 2017

CO – carbon monoxide; NO_x – nitrogen oxide; PM₁₀ - particulate matter less than 10 microns in diameter; ROG - reactive organic gas

Diesel Toxic Risk Thresholds

There are inherent uncertainties in risk assessment with regard to the identification of compounds as causing cancer or other health effects in humans, the cancer potencies and reference exposure levels of compounds, and the exposure that individuals receive. It is common practice to use conservative (health protective) assumptions with respect to uncertain parameters. The uncertainties and conservative assumptions must be considered when evaluating the results of risk assessments.

There is debate as to the appropriate levels of risk assigned to diesel particulates. The EPA has not yet declared diesel particulates as a toxic air contaminant. Using the CARB threshold, a risk concentration of one in one million (1:1,000,000) per micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of continuous 70-year exposure is considered less than significant.

Methodology

The analysis criteria for air quality impacts are based on the approach and methods discussed in the ICAPCD's Air Quality Handbook. The handbook establishes aggregate emission calculations for determining the potential significance of a project. In the event that the emissions exceed the established thresholds (Table 4.3-5 and Table 4.3-6), air dispersion modeling may be conducted to assess whether the project results in an exceedance of an air quality standard.

Emissions of criteria air pollutants were estimated using existing conditions information, project construction details, and project operations information, as well as a combination of emission factors from the following sources.

- CARB modeling software EMFAC2017 for estimating exhaust emissions from on-road motor vehicles
- U.S. EPA re-entrained paved road dust methodology
- U.S. EPA off-road emission factors

An air quality technical report was prepared by HDR (Appendix D of this EIR). This report was used in the evaluation of construction and operational air quality impacts.

The air quality impacts are mainly attributable to the construction of the project, including any erosion control measures deemed necessary; stabilization of construction entrances and exits to reduce tracking internal access roads; construction of PV modules; and testing/certification. Operational impacts include inspection and maintenance operations, which includes washing of the solar panels.

Impact Analysis

Impact 4.3-1 Conflict with or Obstruct Implementation of the Applicable Air Quality Plan.

The project would not obstruct implementation of applicable air quality plans.

The air quality attainment plan (AQAP) for the SSAB, through the implementation of the AQMP (previously AQAP) and SIP for PM_{10} , sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation

with local governments. Conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections, meeting the land use designation set forth in the local General Plan, and comparing assumed emissions in the AQMP to proposed emissions.

The project must demonstrate compliance with all ICAPCD applicable rules and regulations, as well as local land use plans and population projections. The project does not contain a residential component; therefore, the project would not result in an increase in regional population that exceeds the forecasts in the AQMP. Furthermore, the project is consistent with future build-out plans for the project site under the General Plan, as well as with the state's definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California Public Resources Code (PRC). The project will not exceed future population forecasts for future AQMPs. As discussed in the Impact 4.3-2 discussion, with implementation of mitigation and compliance with all ICAPCD applicable rules and regulations, the project's operational contribution to PM₁₀ would be below a level of significance. The project would, therefore, not interfere with the SIP for PM₁₀. A less than significant impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.3-2 Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation.

The project would result in a temporary increase of emissions during construction and operation activities.

The following analysis is broken out by a discussion of potential impacts during construction of the project followed by a discussion of potential impacts during operation of the project.

Construction

Air emissions are generated during construction through activities, such as grading, clearing, hauling, underground utility construction, paving, and building assembly. Diesel exhaust emissions are generated through the use of heavy equipment, such as dozers, loaders, scrapers, and vehicles, such as dump/haul trucks. During site clearing and grading, PM₁₀ is released as a result of soil disturbance. Construction emissions vary from day-to-day depending on the number of workers, number, and types of active heavy-duty vehicles and equipment, level of activity, the prevailing meteorological conditions, and the length over which these activities occur.

The proposed project is anticipated to take approximately 23 weeks from the commencement of the construction process to complete. Construction of the proposed project would occur in multiple phases: (1) Site Preparation; (2) Facility Installation; (3) Commissioning/Finishing. The construction emissions associated with each of these phases was based on the construction schedule. The construction emissions for each phase were calculated using the equipment list, the construction schedule, and EPA emission rates. Refer to Chapter 3, Project Description, for a discussion of construction equipment and construction workforce.

The total exhaust emissions generated within each of the construction phases are shown in Table 4.3-7. As shown in Table 4.3-7, the project's daily construction emissions would not exceed

the ICAPCD thresholds for CO, ROG, NO_x, and PM₁₀. Although no significant air quality impact would occur during construction, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Implementation of Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to further improve air quality and ensure that this potential impact would remain less than significant.

Table 4.3-7. Estimated Construction Emissions by Phase

Construction Phase	Criteria Emissions (pounds per day)					
	CO	ROGs	NO _x	SO _x	PM ₁₀	PM _{2.5}
Phase 1. Site Preparation	154.0	9.5	35.4	0.1	129.5	29.1
Phase 2. Facility Installation	122.0	7.5	37.5	0.1	129.8	29.4
Phase 3. Commissioning/ Finishing	76.8	4.4	14.7	0.0	1.1	1.1
Peak Day	154.0	9.5	37.5	0.1	129.8	29.4
ICAPCD Thresholds	550	75	100	N/A	150	N/A
Exceed Thresholds?	No	No	No	N/A	No	N/A

Source: Appendix D of this EIR

ICAPCD – Imperial County Air Pollution Control District; N/A – not applicable

CO – carbon monoxide; NO_x – nitrogen oxide; O₃ – ozone; Pb – lead; PM_{2.5} – particulate matter less than 2.5 microns in diameter; PM₁₀ – particulate matter less than 10 microns in diameter; ROG – reactive organic gas; SO_x – sulfur oxide

Operation

The solar facility would operate 7 days a week, 24 hours a day, generating electricity during normal daylight hours when the solar energy is available. The facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Local and remote operations and maintenance staff would be on-call to respond to any alerts generated by the monitoring systems, and would be present on the site periodically to perform maintenance.

It is anticipated that maintenance of the facilities would require minimal site presence to perform periodic visual inspections and minor repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, because of the nature of the facilities, such actions would likely occur infrequently. Overall, minimal maintenance requirements are anticipated.

As the proposed project would have no major stationary emission sources and would require minimal vehicular trips, operation of the proposed solar facility would result in substantially lower emissions than project construction. The project's operational emissions would not exceed the Tier I thresholds listed in Table 4.3-5. Although no significant air quality impact would occur during operation, the project applicant is required to submit a Dust Suppression Management Plan for both construction and operations to reduce fugitive dust emissions. Implementation of Mitigation Measures AQ-3, AQ-4, and AQ-5 would ensure that this potential impact would remain less than significant.



Mitigation Measure(s)

AQ-1 Construction Equipment. Construction equipment shall be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). A list of the construction equipment, including all off-road equipment utilized at each of the projects by make, model, year, horsepower and expected/actual hours of use, and the associated EPA Tier shall be submitted to the County Planning and Development Services Department and ICAPCD prior to the issuance of a grading permit. ICAPCD shall utilize this list to calculate air emissions to verify that equipment use does not exceed significance thresholds. The Planning and Development Services Department and ICAPCD shall verify implementation of this measure.

AQ-2 Fugitive Dust Control. Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. Whereas these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the ICAPCD CEQA Handbook's required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. The County Department of Public Works will verify implementation and compliance with these measures as part of the grading permit review/approval process.

ICAPCD Standard Measures for Fugitive Dust (PM₁₀) Control

- All disturbed areas, including bulk material storage, which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative ground cover.
- All on-site and offsite unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
- The transport of bulk materials shall be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.
- All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.
- Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line.
- The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary

unpaved road. Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants, and/or watering.

ICAPCD “Discretionary” Measures for Fugitive Dust (PM₁₀) Control

- Water exposed soil with adequate frequency for continued moist soil.
- Replace ground cover in disturbed areas as quickly as possible.
- Automatic sprinkler system installed on all soil piles.
- Vehicle speed for all construction vehicles shall not exceed 15 miles per hour on any unpaved surface at the construction site.
- Develop a trip reduction plan to achieve a 1.5 average vehicle ridership for construction employees.
- Implement a shuttle service to and from retail services and food establishments during lunch hours.

Standard Mitigation Measures for Construction Combustion Equipment

- Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

Enhanced Mitigation Measures for Construction Equipment

To help provide a greater degree of reduction of PM emissions from construction combustion equipment, ICAPCD recommends the following enhanced measures.

- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways.
- Implement activity management (e.g., rescheduling activities to reduce short-term impacts).

AQ-3 Dust Suppression. The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. The project applicant shall apply chemical stabilization as directed by the product manufacturer to control dust between the panels as approved by ICAPCD, and other non-used areas (exceptions will be the paved entrance and parking area, and Fire Department access/emergency entry/exit points as approved by Fire/Office of Emergency Services [OES] Department).

AQ-4 Dust Suppression Management Plan. Prior to any earthmoving activity, the applicant shall submit a construction dust control plan and obtain ICAPCD and Imperial County Planning and Development Services Department (ICPDS) approval. **AQ-5**

Operational Dust Control Plan. Prior to issuance of a Certificate of Occupancy, the applicant shall submit an operations dust control plan and obtain ICAPCD and ICPDS approval.

ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed project, ICAPCD shall review the project to determine if Rule 310 fees are applicable to the project.

Significance after Mitigation

Although the proposed project would not exceed ICAPCD's significance thresholds, Mitigation Measures AQ-1 through AQ-5 would provide additional reduction strategies to further improve air quality and reductions in criteria pollutants (O₃ precursors) and ensure that this potential impact would remain less than significant impact.

Impact 4.2-3 Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is Non-Attainment.

The project would result in a temporary increase of PM₁₀, CO, ROG, and NO_x (O₃ precursors) during construction activities.

The following analysis is broken out by a discussion of potential impacts during construction of the project followed by a discussion of potential impacts during operation of the project.

Construction

Imperial County is classified as a "serious" non-attainment area for PM₁₀ and a "moderate" nonattainment area for 8-hour O₃ for the NAAQS and non-attainment for PM_{2.5} for the urban areas of Imperial County. The proposed project is not located within the nonattainment boundaries for PM_{2.5}. As identified above in Impact 4.3-2, the project would result in emissions of the air pollutants ROG, NO_x, CO, and PM₁₀. However, construction activities would not result in a significant increase in CO, ROG, and NO_x that would exceed ICAPCD thresholds. The project's emissions of O₃ precursors and particulate matter are mainly attributable to temporary construction activities. These activities would cease after approximately 23 weeks. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce the emissions to a level less than significant.

Operation

As identified above in Impact 4.3-2, the operational impacts associated with the project would be less than significant. However, the proposed project, in conjunction with cumulative projects, could result in a cumulatively considerable impact related to PM₁₀ before implementation of mitigation. With mitigation, a less than significant impact is identified. Please refer to Section 6, Cumulative Impacts.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.2-4 Expose Sensitive Receptors to Substantial Pollutant Concentrations?

The project would not expose sensitive receptors to substantial pollutant concentrations.

The project site is located in a sparsely populated, agriculturally zoned portion of Imperial County. There are no established residential communities located within or in the vicinity of the project site. The nearest sensitive receptor to the project site is a residence located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road. Construction activities would result in emissions of diesel particulate matter from heavy construction equipment used on site and truck traffic to and from the site, as well as minor amounts of TAC emissions from motor vehicles (such as benzene, 1,3-butadiene, toluene, and xylenes). Health effects attributable to exposure to diesel particulate matter are long-term effects based on chronic (i.e., long-term) exposure to emissions. Health effects are generally evaluated based on a lifetime (70 years) of exposure. Because of the short-term nature of construction at the site, no adverse health effects would be anticipated from short-term diesel particulate emissions. In addition, motor vehicle emissions would not be concentrated in any one area but would be dispersed along travel routes and would not be anticipated to pose a significant health risk to receptors. The project's compliance with ICAPCD's Regulation VIII will prevent the exposure of sensitive receptors to substantial pollutant concentrations. The hours of construction will occur during the day when most people are at work. Implementation of the proposed project would result in a less than significant impact related to exposure of sensitive receptors to substantial pollutant concentrations.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.2-5 Create Objectionable Odors Affecting a Substantial Number of People.

The project would not result in objectionable odors during construction and operation.

An odor impact depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies.

Among possible physical harms is inhalation of volatile organic compounds (VOC) that cause smell sensations in humans. These odors can affect human health in four primary ways:

- The VOCs can produce toxicological effects
- The odorant compounds can cause irritations in the eye, nose, and throat
- The VOCs can stimulate sensory nerves that can cause potentially harmful health effects
- The exposure to perceived unpleasant odors can stimulate negative cognitive and emotional responses based on previous experiences with such odors

Land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, and concentrated agricultural feeding operations and dairies. The construction and operation of a solar farm is not an odor producer and the project site is not located near an odor producer.

No major sources of odors were identified in the vicinity of the project site that could potentially affect proposed on-site land uses. Development of the project could generate trace amounts (less than 1 $\mu\text{g}/\text{m}^3$) of substances, such as ammonia, CO_2 , hydrogen sulfide, CH_4 , dust, organic dust, and



endotoxins (i.e., bacteria are present in the dust). Additionally, proposed on-site uses could generate such substances as volatile organic acids, alcohols, aldehydes, amines, fixed gases, carbonyls, esters, sulfides, disulfides, mercaptans, and nitrogen heterocycles. Any odor generation would be intermittent and would terminate upon completion of the construction activities. Implementation of the proposed project would result in a less than significant impact associated with the creation of objectionable odors during construction and operation.

Mitigation Measure(s)

No mitigation measures are required.

4.3.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Similar to construction activities, decommissioning and restoration of the project site would generate air emissions. A summary of the daily construction emissions for the project is provided in Table 4.3-7. A similar scenario would be expected to occur during the decommissioning and site restoration stage of the project. Air quality emissions would be similar to or less than the emissions presented for construction. No significant air quality impacts are anticipated during decommissioning and restoration of the project site. However, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Mitigation Measures AQ-1 through AQ-5 would provide additional reduction strategies to further improve air quality. Therefore, a less than significant impact is identified during decommissioning and site restoration of the project site.

Residual

The proposed project would not result in short-term significant air quality impacts during construction. Implementation of Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to reduce ROG, NO_x, PM₁₀, and CO emissions during construction. Operation of the project, subject to the approval of a CUP, would be consistent with applicable federal, state, regional, and local plans and policies. Implementation of Mitigation Measures AQ-3, AQ-4, and AQ-5 would ensure that fugitive dust emissions would be reduced during construction and operations. The project would not result in any residual operational significant and unavoidable impacts with regards to air quality.

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4.4 Biological Resources

This section discusses biological resources that may be impacted by the proposed project. The following identifies the existing biological resources on the project site, analyzes potential impacts of the proposed project, and recommends mitigation measures to avoid or reduce potential impacts of the proposed project. Information for this section is summarized from the *Biological Resources Technical Report* prepared by Aspen Environmental Group. This report is included in Appendix E of this EIR.

The Biological Technical Report (BTR) integrates information collected from a variety of literature sources and field survey to describe the biological resources within the vicinity of the project site. On February 22, 2018, Aspen Environmental Group visited the project site to map vegetation, assess habitat suitability for special-status species, and conduct a reconnaissance-level survey for all special-status species.

4.4.1 Environmental Setting

According to the Conservation and Open Space Element of the Imperial County General Plan, an extensive range of vegetation communities have been identified in the County, including native and nonnative communities on which sensitive and common plant and wildlife species are dependent. Native communities include wetland and riparian habitats within fresh and saltwater systems and high and low elevation woodland and scrub habitats, some with saline and alkali soil conditions. Nonnative communities include agriculture, annual grasslands, and tamarisk or salt cedar stands.

A number of species listed or candidates for listing as endangered or threatened under the Endangered Species Act or California Endangered Species Act, or listed as rare under the California Native Plant Protection Act (NPPA), have been recorded or potentially occur in Imperial County. Listed species documented in the California Natural Diversity Database for the County include desert tortoise, southwestern willow flycatcher, California black rail, and razorback sucker.

Several California Species of Special Concern are of particular conservation focus in Imperial County including the burrowing owl and flat-tailed horned lizard. Approximately two-thirds of the burrowing owl population in California occurs in agricultural areas in the Imperial Valley (County of Imperial 1993).

4.4.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone without a permit to “take” bald or golden eagles. ‘Take’ is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” ‘Disturb’ is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or

sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior” (USFWS 2016).

Federal Endangered Species Act

Enacted in 1973, the ESA provides for the conservation of threatened and endangered species and their ecosystems. The ESA prohibits the “take” of threatened and endangered species except under certain circumstances and only with authorization from the USFWS through a permit under Section 4(d), 7 or 10(a) of the Act. Under the ESA, “take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Migratory Bird Treaty Act

Congress passed the Migratory Bird Treaty Act (MBTA) in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia.

Section 404 Permit (Clean Water Act)

The CWA establishes a program to regulate the discharge of dredge and fill material into waters of the U.S. including wetlands. Activities regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Either an individual 404b permit or authorization to use an existing USACE Nationwide Permit will need to be obtained if any portion of the construction requires fill into a river, stream, or stream bed that has been determined to be a jurisdictional waterway. When applying for a permit a company or organization must show that they would avoid wetlands when practicable, minimize wetland impacts, and provide compensation for any unavoidable destruction of wetlands.

State

California Environmental Quality Act

Title 14 California Code of Regulations (CCR) 15380 requires that endangered, rare, or threatened species or subspecies of animals or plants be identified within the influence of the projects. If any such species are found, appropriate measures should be identified to avoid, minimize, or mitigate to the extent possible the effects of the projects.

California Department of Fish and Wildlife Code 1600 (as amended)

The CDFW regulates activities that substantially diverts or obstructs the natural flow of any river, stream, or lake or uses materials from a streambed. This can include riparian habitat associated with watercourses.

California Department of Fish and Wildlife Codes 3503, 3503.5, and 3513

CDFW Codes 3503, 3503.5, and 3513 protect migratory birds, bird nests and eggs including raptors (birds of prey) and raptor nests from take unless authorized by CDFW. Additionally, the state further protects certain species of fish, mammals, amphibians and reptiles, birds and mammals through CDFW’s Fully Protected Animals which prohibits any take or possession of classified species. No

licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

California Department of Fish and Wildlife Code Sections 1900 -1913 – Native Plant Protection Act

The NPPA prohibits the taking, possessing, or sale within the state of any plant listed by CDFW as rare, threatened, or endangered. An exception to this prohibition in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW at least 10 days prior to the initiation of activities that would destroy them. The NPPA exempts from “take” prohibition “the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right-of-way (ROW).”

Porter-Cologne Water Quality Control Act (as amended)

Administered by the State Water Resources Control Board (SWRCB), the Porter-Cologne Water Quality Control Act protects water quality and is an avenue to implement California responsibilities under the CWA. This act regulates discharge of waste into a water resource.

Local

Imperial County General Plan

The Conservation and Open Space Element provides detailed plans and measures for the preservation and management of biological and cultural resources, soils, minerals, energy, regional aesthetics, air quality, and open space. The purpose of the Conservation and Open Space Element is to promote the protection, maintenance, and use of the County’s natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the state’s natural resources. Additionally, the purpose of this Element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public, protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and for public health and safety. Table 4.4-1 analyzes the consistency of the project with specific policies contained in the Imperial County General Plan associated with biological resources.

Table 4.4-1. Project Consistency with General Plan Biological Resource Policies

General Plan Policies	Consistency with General Plan	Analysis
<p>Open Space Conservation Policy: The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County.</p> <p>Program: Notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat.</p>	Consistent	<p>A biological assessment has been conducted at the project site to evaluate the potential impacts associated with the proposed project.</p> <p>Applicable agencies responsible for protecting plants and wildlife will be notified of the proposed project and provided an opportunity to comment on this EIR prior to the County’s consideration of any approvals for the project.</p>
<p>Land Use Element Policy: The General Plan covers the unincorporated area of the County and is not site specific; however, a majority of the privately owned land is located in the area identified by the General Plan as “Agriculture,” which is also the predominate area where burrowing owls create habitats, typically in the brims and banks of agricultural fields.</p> <p>Program: Prior to approval of development of existing agricultural land either in form of one parcel or a numerous adjoining parcels equally a size of 10 acres or more shall prepare a Biological survey and mitigate the potential impacts. The survey must be prepared in accordance with the USFWS and CDFW regulations, or as amended.</p>	Consistent	<p>A biological assessment has been conducted at the project site to evaluate the potential impacts associated with the proposed project.</p> <p>Burrowing owls were not present on the project site during the biological surveys; however suitable nesting and foraging habitat is present; therefore, burrowing owls may be present at the start of project construction. Mitigation Measures BIO-1 and BIO-2 would avoid take and reduce potential impacts to this species to below a level of significance by requiring pre-construction surveys, establishing avoidance buffers, and reducing other construction related impacts. The loss of burrowing owl foraging habitat would be less than significant given the abundance of suitable foraging habitat in the lands surrounding the project site and throughout the region.</p>

Source: County of Imperial 1993

CDFW – California Department of Fish and Wildlife; EIR – environmental impact report; USFWS – U.S. Fish and Wildlife Service

4.4.3 Existing Conditions

The project site encompasses approximately 223 acres comprised of two parcels of land owned by the IID. Of the total 223 acres, approximately 159 acres (area within the fence line) would be developed with a ground mounted PV solar power generating system, supporting structures, on-site substation, access driveways, and transmission structures. For the purposes of this EIR, the 223-acre property is referred to as the project site. The 159 acres on which development is proposed is referred to as the development area.

Vegetation Communities

The vegetation communities or land cover types were mapped within the project site during a field survey: arrow weed thickets, bush seepweed scrub, common reed marshes, fourwing saltbush scrub, mesquite thickets, quailbush scrub, fallowed agriculture, open water, disturbed, and developed land. These vegetation communities are depicted on Figure 4.4-1. The vegetation and land cover types present on the project site are summarized in Table 4.4-2. A brief description of each vegetation community is provided below.



Table 4.4-2. Vegetation and Cover Types on the Project Site

Vegetation or Cover Type	Acres on Project Site	Acres on Development Area
Arrow weed thickets	3.7	0.1
Bush seepweed scrub	41.4	37.8
Common reed marshes	0.5	0.0
Fourwing saltbush scrub	14.3	7.9
Mesquite thickets	0.2	0.2
Quailbush scrub	3.9	1.2
Fallowed agriculture	95.3	86.5
Open Water	5.9	0.0
Disturbed	34.3	23.0
Developed	22.5	1.4
Total	222.0	158.1

Source: Appendix E of this EIR

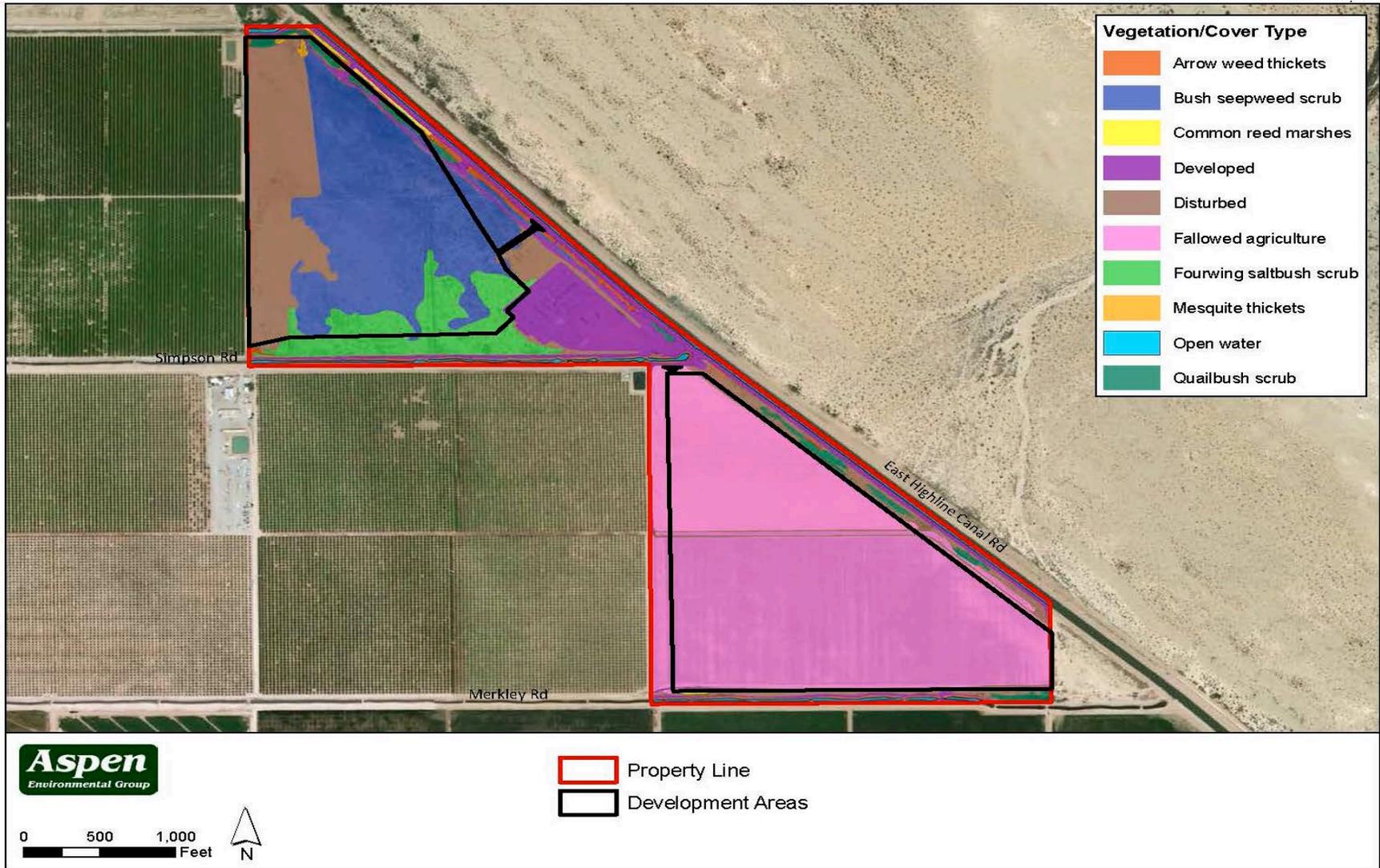
Arrow Weed Thickets

Arrow weed thickets (*Pluchea sericea* Shrubland Alliance) within the project site are dominated by arrow weed (*Pluchea sericea*). It is the dominant vegetation along the irrigation canals within the project site. Other species such as cattails (*Typha* spp.), common reed (*Phragmites australis*), and saltcedar (*Tamarix ramosissima*) are also present, but much less common. Arrow weed thickets are recognized by CDFW as a sensitive vegetation type.

Bush Seepweed Scrub

Bush seepweed scrub (*Suaeda moquinii* Shrubland Alliance) on the project site is dominated by alkali goldenbush (*Isocoma acradenia*). Bush seepweed (*Suaeda nigra*) is also present but is much less common. Bush seepweed is not required to be the dominant species in this vegetation type and a relative cover of at least 50 percent alkali goldenbush qualifies (Appendix E of this EIR). Other species present include saltcedar, saltbush (*Atriplex* spp.), and burrobrush (*Ambrosia salsola*). As shown on Figure 4.4-1 , bush seepweed scrub occurs on the northern parcel of the project site and is growing on an area that appears to have been cleared around 1996 (based on historic aerial images), but shows very little evidence of agriculture or other human land use. Bush seepweed scrub is recognized by CDFW as a sensitive vegetation type.

Figure 4.4-1. Vegetation / Land Cover Types on Project Site



Source: Appendix E of this EIR

Common Reed Marshes

Common reed marshes (*Phragmites australis* Herbaceous Alliance) occur at several locations on the project site and are dominated by common reed. Common reed marshes grow in areas with high soil moisture, typically near irrigation canals. It tends to form dense, nearly monotypic stands with an occasional arrow weed also present.

Fourwing Saltbush Scrub

Fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance) is dominated by fourwing saltbush (*Atriplex canescens*) along with quailbush (*Atriplex lentiformis*), desert holly (*Atriplex hymenelytra*), arrow weed, and bush seepweed. Several large creosote bushes (*Larrea tridentata*) are also present, but are uncommon. This vegetation is common on the project site and covers a portion of the northern parcel. It tends to integrate frequently with bush seepweed scrub.

Mesquite Thickets

A single mesquite thicket (*Prosopis glandulosa* - *Prosopis velutina* - *Prosopis pubescens* Woodland Alliance) was mapped in the northern parcel in an area with several large screw bean mesquites (*Prosopis pubescens*). Other species such as saltcedar, alkali goldenbush, and arrow weed were also present but much less common. Mesquite thickets are recognized by CDFW as a sensitive vegetation type.

Quailbush Scrub

Quailbush scrub (*Atriplex lentiformis* Shrubland Alliance) is dominated by quailbush. Other species such as saltcedar, fourwing saltbush, alkali goldenbush, and arrow weed are also present, but are less common. It is uncommon on the project site and grows in several small patches, primarily around the perimeter of the project site.

Fallowed Agriculture

Portions of the project site that were formerly used as agriculture areas and still have remnants of the old row crops and irrigation systems are mapped as fallowed agriculture. As shown on Figure 4.4-1, the majority of the southern parcel of the project site is mapped as fallowed agriculture. They are now dominated by Russian thistle (*Salsola tragus*), Bermuda grass (*Cynodon dactylon*), and other non-native weeds that are typical of such areas.

Open Water

This cover type is used to map portions of the project site that typically have water present. During the site visit, most of the irrigation canals had water present; however, they appear to fluctuate regularly based on agricultural needs. Several native plants are present along the margins of the open water including false daisy (*Eclipta prostrata*), catchfly prairie gentian (*Eustoma exaltatum*), bent spikerush (*Eleocharis geniculata*), and cattails (*Typha* spp.). Leafy pondweed (*Potamogeton foliosus*) is also present and grows submerged in the irrigation canals.

Developed

This cover type is used to map existing development on the project site including unpaved roads, irrigation canal access roads, and the Midway Substation.

Sensitive Natural Communities

Three sensitive natural vegetation communities are present on the project site: arrow weed thickets, bush seepweed scrub, and mesquite thickets. These sensitive vegetation communities are described in detail above.

Wildlife Species

Wildlife and wildlife sign observed during the field survey includes species common in the region, such as mourning dove (*Zenaida macroura*), Gambel's quail (*Callipepla gambelii*), white-crowned sparrow (*Zonotrichia leucophrys*), great blue heron (*Ardea herodias*), black-tailed Jackrabbit (*Lepus californicus*), side-blotched lizard (*Uta stansburiana*), mosquito fish (*Gambusia affinis*), and carp (*Cyprinus carpio*). Other notable species observed on the project site include sage thrasher (*Oreoscoptes montanus*), double crested cormorant (*Phalacrocorax auritus*), sagebrush sparrow (*Amphispiza belli*), and cinnamon teal (*Anas cyanoptera*). Loggerhead shrike (*Lanius ludovicianus*) and black-tailed gnatcatcher (*Poliioptila melanura*) were the only two special-status species observed on the project site. Other wildlife species common in wetlands, riparian scrub, and alkali shrublands habitat throughout the region are also likely to occur on the project site, but were not observed. A complete list of all wildlife species observed or detected on the project site is included in the BTR (Appendix E of this EIR).

Special Status Wildlife Species

Special-status species are defined as plants and animals that are legally protected under the ESA, CESA, CDFW, or other regulations, and species that are considered sufficiently rare by the scientific community to qualify for such listing. These species are typically the focus of avoidance, minimization, and mitigation requirements under CEQA. As a result of the data search, endangered, threatened species, and CDFW species of special concern were evaluated for the potential to occur within the project site. Special-status species with potential to occur in the vicinity of the project site are detailed in the BTR (Appendix E of this EIR).

Razorback sucker (*Xyrauchen texanus*) is the only listed species with at least a moderate potential to be present on the project site. Loggerhead shrike (*Lanius ludovicianus*) is the only CDFW Species of Special Concern that was observed at the project site. Several other CDFW Species of Special Concern have at least a moderate potential to be present including burrowing owl (*Athene cunicularia*), Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), Crissal thrasher (*Toxostoma crissale*), and several species of bats. Several other special-status wildlife species have at least a moderate potential for occurrence on the project site including black-tailed gnatcatcher (*Poliioptila melanura*), which was observed on the project site during the field survey.

Federally- or State-Listed Wildlife Species

Razorback Sucker

The razorback sucker is listed as endangered under the ESA and CESA. It is also a California fully protected species. Razorback suckers are found throughout the larger rivers of the Colorado River Basin, from Sonora and Baja, California, into Arizona, Colorado, Nevada, New Mexico, and Wyoming. In California, they are limited to the Colorado River and historically extended west into the Salton Sea. They have been documented in irrigation canals of Imperial County, including the East Highline Canal near Niland, in the immediate vicinity of the project site. Presumably, they access the irrigation system from the All-American Canal, and persist there temporarily. They were last reported

in the East Highline Canal in 1974. The aquatic habitat within irrigation ditches on the project site provides suitable habitat and there is a moderate potential that razorback sucker could occasionally be present while the ditches are carrying water, but could not survive there long-term (Appendix E of this EIR).

The nearest designated critical habitat for razorback sucker is more than 43 miles east of the project site along the Colorado River. The project site is located more than 90 miles from the Colorado River via the All-American Canal and the East Highline Canal.

California Department of Fish and Wildlife Species of Special Concern

Burrowing Owl

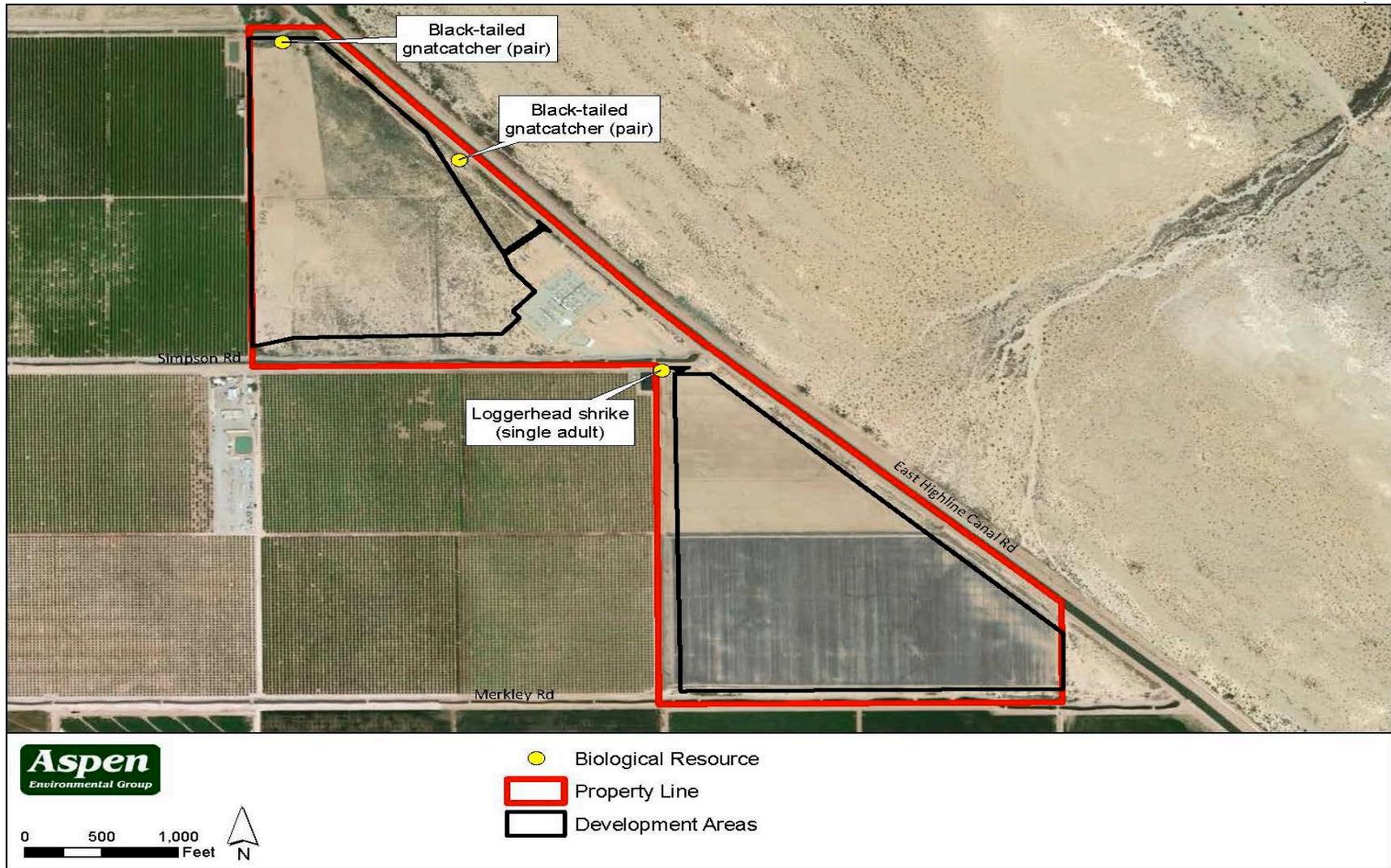
The burrowing owl is a CDFW Species of Special Concern and, as a native bird, is also protected by the MBTA and the California FGC. It is a small, terrestrial owl of open country. During the breeding season, it ranges throughout most of the western U.S. It occurs year-round in southern California, but may be more numerous during fall and winter, when migratory individuals from farther north join the regional resident population. The burrowing owl favors flat, open annual or perennial grassland or gentle slopes and sparse shrub or tree cover. It uses the burrows of ground squirrels and other rodents for shelter and nesting, and availability of suitable burrows is an important habitat component. Where ground squirrel burrows are not available, the owl may use alternate burrow sites or man-made features such as drain pipes, debris piles, or concrete slabs. Burrowing owl nesting season, as recognized by CDFW, is February 1 through August 31.

Burrowing owls were not observed at the project site during the reconnaissance-level survey. No burrowing owl sign was observed, but suitable habitat was observed throughout the project site. Burrowing owls may utilize the old irrigation ditches and dirt piles on the project site for nesting as well as the numerous ground squirrel burrows that were observed along the irrigation canals. Burrowing owls are abundant in the region and the highest concentrations of birds is near the more active, irrigated agriculture fields to the west that are productive for providing insects for prey. Burrowing owl has a moderate potential to be present on the project site.

Loggerhead Shrike

The loggerhead shrike is a CDFW Species of Special Concern. It is widespread in the United States and throughout California. It prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. It most often occurs in open-canopied forest and woodland habitats. It nests in well-concealed microsites in densely foliated trees or shrubs. It has also been observed nesting in thickets of large weedy annual plants such as Russian thistle. It feeds on large insects, but will also take small birds, mammals, amphibians, reptiles, fish, carrion, and various invertebrates. A single loggerhead shrike was observed on the project site during the reconnaissance-level survey (Figure 4.4-2). The bird was behaving as if it was establishing or defending a territory by staying in the same area throughout the survey and frequently returning to a patch of dead Russian thistle within the fallowed agricultural field. Loggerhead shrikes probably nest on the project site.

Figure 4.4-2. Wildlife Species Observed on the Project Site



Source: Appendix E of this EIR

Crissal Thrasher

Crissal thrasher is a CDFW Species of Special Concern. It is widespread in the deserts of the southwestern United States and south into Mexico. It prefers dense thickets of mesquite, ironwood, catclaw, acacia, and arrow weed along washes and streams for nesting. Crissal thrasher was not observed during the survey; however, the arrow weed thickets and mesquite thickets on the project site provide suitable habitat. There are numerous records of Crissal thrasher throughout the region including several within about 6 miles of the project site. Crissal thrasher has a moderate potential to be present on the project site.

Yuma Hispid Cotton Rat

The Yuma hispid cotton rat is a CDFW Species of Special Concern. It is restricted to the lower Colorado River from near Palo Verde south to Yuma, Arizona and west into Imperial County. It lives in backwater areas of the Colorado River where it creates nests and a network of raceways in dense patches of grasses and other herbaceous species. Within the western portion of its range, it occupies irrigation ditches dominated by arrow weed, common reed, saltcedar, and saltgrass. Yuma hispid cotton rat was not observed on the project site; however, it is very secretive and requires trapping to positively detect its presence. The irrigation canals within the project site provide suitable habitat and there are two records in similar habitat within 10 miles. Yuma hispid cotton rat has a moderate potential to be present in the lateral irrigation canals on the project site.

Bats

Six special-status bat species have a moderate potential to forage over the project site: California leaf-nosed bat (*Macrotus californicus*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*), hoary bat (*Lasiurus cinereus*), western yellow bat (*Lasiurus xanthinus*), and pocketed freetailed bat (*Nyctinomops femorosaccus*). The pallid bat and western mastiff bat forage in open areas over grasslands, agricultural areas, and other shrublands and roost in a variety of habitats including building, rock crevices, mines and caves. The California leaf-nosed bat forages on large insect prey that are captured on the ground or on vegetation. It roosts in rock crevices, mines and caves. The western yellow bat and hoary bat forage over open water and riparian habitats and roost in trees. The pocketed free-tailed bat forages over water and open shrublands and roosts in crevices in cliffs. There is no suitable roosting habitat for any of these species on the project site.

Other Special Status Wildlife

Black-tailed Gnatcatcher

The black-tailed gnatcatcher is recognized as a watch list species by CDFW. It is a small song bird that nests in desert shrublands, typically in areas with thickets of mesquite, palo verde, or acacia. It occurs from the deserts of southern California east through Texas and south into Mexico. Black-tailed gnatcatchers were observed at two locations on the project site (Figure 4.4-2). Both observations included a pair of birds that were behaving as though they were establishing or defending territories. This behavior indicates probable nesting in the area. It is likely that black-tailed gnatcatchers nest on the project site in the arrow weed thickets and mesquite thickets that provide dense nesting habitat.

Raptors

Several special-status birds of prey are found seasonally in the region, especially during winter and during migration. These include sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), merlin (*Falco columbarius*), prairie falcon (*Falco mexicanus*), and white-tailed kite (*Elanus leucurus*). Suitable winter or migratory season foraging habitat for these raptors is widely available throughout the region. These species, if present may forage on the project site, but would not nest because of a lack of suitable habitat.

Plant Species

Special Status Plant Species

No listed threatened or endangered plants or other special-status plants were observed at the project site.

Non-listed Special Status Plants

Salton Milk Vetch

Salton milk vetch (*Astragalus crotalariae*) has a California Rare Plant Program (CRPR) of 4.3 (limited distribution in California). It is the only special-status plant with at least a moderate potential to be present on the project site. It is a perennial herb in the pea (Fabaceae) family that blooms between January and April. It grows on sandy and gravelly soils throughout the Salton Sea basin in San Diego and Imperial Counties. It grows as a perennial and can die back to the ground and requires adequate rainfall to trigger flowering and fruiting. It is known from several records within 5 miles of the project site. It has a moderate potential to be present in the portions of the project site to the north and west of the Midway Substation in a year with at least average rainfall.

Jurisdictional Waters

Jurisdictional waters, including some wetlands and riparian habitats on the project site, may be regulated by the U.S. Army Corps of Engineers (USACE), the Colorado River RWQCB, and CDFW.

A formal jurisdictional delineation of the project site was not conducted. Based on the reconnaissance-level survey, the irrigation canals on the project site are likely to be under the jurisdiction of the USACE and Colorado River RWQCB. The irrigation canals originate at the Imperial Dam on the Colorado River and terminate in the Salton Sea. Both the Colorado River and Salton Sea are federally jurisdictional, and irrigation canals that convey perennial water from one body of water to another are generally recognized as federally jurisdictional (Appendix E of this EIR). Federally-regulated wetlands may also be present along sections of the lateral canals where perennial water and wetland vegetation are present.

Based on the reconnaissance-level survey, the irrigation canals on the project site are also likely to be under the jurisdiction of the CDFW. CDFW is likely to regulate these canals to the top of the banks or to the outer edge of the adjacent riparian vegetation. The arrow weed thickets along the canals are likely to be regulated by CDFW as adjacent riparian vegetation.

Wildlife Corridors and Habitat Connectivity

The ability for wildlife to move freely among populations and habitat areas is important to long-term genetic variation and demography. Fragmentation and isolation of natural habitat may cause loss of



native species diversity in fragmented habitats. In the short term, wildlife movement may also be important to individual animals' ability to occupy their home ranges, if their ranges extend across a potential movement barrier. These considerations are especially important for rare, threatened, or endangered species, and wide-ranging species such as large mammals, which exist in low population densities.

The California Essential Habitat Connectivity Project was commissioned by Caltrans and CDFW to create a statewide assessment of essential habitat connectivity to be used for conservation and infrastructure planning. One of its goals was to create the Essential Connectivity Map, which depicts large, relatively natural habitat blocks that support native biodiversity (natural landscape blocks) and areas essential for ecological connectivity between them (essential connectivity areas). This map does not reflect the needs of particular species, but is based on overall biological connectivity and ecological integrity.

The Essential Connectivity Map identifies the Chocolate Mountains, to the east of the project site, as a natural landscape block. It also identifies an essential connectivity area just over 2 miles to the east of the project site. The project site is located more than 2 miles from these essential wildlife areas and is isolated by two large irrigation canals, several railroad lines, and several unpaved roads.

The project site is located within an area with existing agricultural use that has significantly modified the natural habitat. The patches of natural habitat in the northern parcel are small and largely disconnected from adjacent natural areas further to the east. The project site is likely to be used by local wildlife to move between agricultural lands and open space in the area. It does not appear to provide connectivity between larger areas of open space such as the Chocolate Mountains or the Salton Sea because the distances are too great and the areas have been heavily modified by human land use (Appendix E of this EIR).

4.4.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to biological resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to biological resources are considered significant if any of the following occur:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW and USFWS
- Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the CWA (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

- Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Methodology

This analysis evaluates the potential for the project, as described in Chapter 3, Project Description, to interact with local biological resources in the project area. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, Aspen Environmental Group prepared a BTR for the proposed project. The BTR is included as Appendix E of this EIR. The information obtained from the sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with biological resources that could result from project construction and operational activities were evaluated qualitatively based on-site conditions; expected construction practices; and materials, locations, and duration of project construction and related activities.

Impact Analysis

Impact 4.4-1 Possible Habitat Modification.

The construction and operation of the proposed project could result in the indirect or direct habitat alteration on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or the CDFW or USFWS.

Impact on Special Status Wildlife Species

Razorback Sucker

The proposed project is not expected to impact razorback sucker. All direct and indirect impacts to the irrigation canals would be avoided. Therefore, no potential take or adverse impacts to razorback sucker are anticipated. Even if project construction necessitates temporary impacts to irrigation canals (e.g., temporary stoppage of flow), the potential for adverse impacts to razorback sucker is minimal, because the fish are unlikely to be present during project construction. Therefore, implementation of the proposed project would result in no significant impact to razorback sucker.

Burrowing Owl

Burrowing owls were not present on the project site during the biological surveys; however suitable nesting and foraging habitat is present and they may be present at the start of project construction. If burrowing owls are present, project construction could result in take or other direct impacts, including loss of foraging habitat. Indirect impacts to burrowing owls could also result if they are present in the lands surrounding the project site and project construction produces dust, noise, or other



disturbances to this species. Mitigation Measures BIO-1 and BIO-2 would avoid take and reduce potential impacts to this species to below a level of significance by requiring pre-construction surveys, establishing avoidance buffers, and reducing other construction related impacts. The loss of burrowing owl foraging habitat would be less than significant given the abundance of suitable foraging habitat in the lands surrounding the project site and throughout the region.

Bird Species (Loggerhead Shrike, Black-Tailed Gnatcatcher, Special-Status Birds)

Loggerhead shrike, black-tailed gnatcatcher, and several other special-status birds were observed on the project site or have a potential to be present. In addition, several common bird species could nest on the project site. If construction takes place outside the nesting season, then these birds, if present, would be expected to avoid direct disturbance by flying away from construction activities. However, if construction takes place while one or more of these species has active nest(s) on the site, project construction could result in take of the eggs or nestlings protected by the MBTA and FGC. Indirect impacts to special-status bird species could also result if they are present in the lands surrounding the project site and project construction produces dust, noise, or other disturbances to these species. Mitigation Measures BIO-1 and BIO-3 would reduce any potentially significant direct and indirect impacts to these species by requiring pre-construction surveys, establishing nest avoidance buffers, and reducing other construction related impacts. These measures would ensure avoidance of special-status birds and their nests. The loss of foraging habitat for these species is expected to be less than significant given the abundance of similar suitable foraging habitat in the lands surrounding the project site and throughout the region.

All electrical components on the project site shall be either undergrounded or protected so that there will be no exposure to wildlife and therefore no potential for electrocution. The gen-tie line would be constructed in such a manner that energized components do not present an opportunity for “skin to skin” or wing span contact. However, the Avian Powerline Interaction Committee’s (APLIC) 1996 report on power line electrocution in the United States reports that avian electrocution risk is highest along distribution lines (generally less than 69 kV) where the distance between energized phases, ground wires, transformers, and other components of an electrical distribution system are less than the length or skin-to-skin contact distance of birds. The distance between energized components along transmission lines (>69 kV) is generally insufficient to present avian electrocution risk. No impact to raptors is anticipated to occur due to electrocution along the proposed gen-tie line. Therefore, no mitigation would be required. However, a potentially significant impact may occur to avian mortality during O&M activities along the gen-tie line. To reduce the potential indirect impact on migratory birds, bats and raptors, the project will comply with the Avian Power Line Interaction Committee’s 2012 Guidelines for overhead utilities, as appropriate, to minimize avian collisions with transmission facilities (APLIC 2012). Implementation of Mitigation Measure BIO-4 would reduce impacts to a level less than significant.

Yuma Hispid Cotton Rat

Suitable habitat for Yuma hispid cotton rat is found along the margins of irrigation canals on the project site. If all direct and indirect impacts to the irrigation canals are avoided, then there would be no potential take or adverse impact to Yuma hispid cotton rat. However, if project activities cause habitat loss within or around the irrigation canals, there is a possibility that the project could cause adverse impacts, including take, to Yuma hispid cotton rat. The species conservation status (S2, not designated as a CDFW species of special concern) indicates that minimal take or habitat impacts would be less than significant. In addition, comparable irrigation canal habitat is abundant in the

region. Therefore, implementation of the proposed project would result in a less than significant impact to Yuma hispid cotton rat.

Bats

Suitable roosting habitat for special-status bats is not present on the project site and direct impacts are therefore not expected. Indirect impacts to foraging bats could result from project construction, if work takes place after approximately 7 p.m. in the evening. These indirect impacts would likely be limited to disturbance caused by construction lighting. With implementation of Mitigation Measure BIO-1, which requires directing night lighting into the interior of the project site, impacts to foraging bats would be less than significant. Loss of foraging habitat is expected to be less than significant given the abundance of similar suitable foraging habitat in the region and surrounding lands.

Impact on Special Status Plant Species

Salton Milk Vetch

One special-status plant, Salton milk vetch (CRPR 4) has a potential to be present on the project site. Although it could be affected, this plant's conservation status indicates that it is not rare and impacts, should they occur, would be less than significant.

Mitigation Measure(s)

BIO-1 Wildlife Impact Avoidance and Minimization Measures. The following measures will be applicable throughout the life of the project:

- To the extent feasible, initial site clearing will be conducted outside the nesting season to avoid potential take of nesting birds or eggs.
- No more than 7 days prior to initial site clearing, a project biologist will survey the development area to determine if burrowing owls, nesting birds, black-tailed gnatcatcher, or any other special-status species are present. If special-status species or active bird nests are present, then the additional avoidance and minimization measures for burrowing owl and other special-status species identified below in Mitigation Measures BIO-2 and BIO-3 will be implemented. During the pre-construction survey, the project biologist will also clearly mark arrow weed thickets and bush seepweed scrub that are outside the disturbance area for avoidance. The flagging must be clearly visible and construction crews must be clearly instructed to ensure that these areas are not directly impacted.
- Avoid or minimize night lighting by using shielded directional lighting pointed downward and towards the interior of the project site, thereby avoiding illumination of adjacent natural areas and the night sky.
- The boundaries of all areas to be newly disturbed (including solar facility areas, staging areas, access roads, and sites for temporary placement of construction materials and spoils) will be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment will be confined to the flagged areas.
- No potential wildlife entrapments (e.g., trenches, bores) will be left uncovered overnight. Any uncovered pitfalls will be excavated to 3:1 slopes at the ends

to provide wildlife escape ramps. Covered pitfalls will be covered completely to prevent access by small mammals or reptiles.

- To avoid wildlife entrapment (including birds), all pipes or other construction materials or supplies will be covered or capped in storage or laydown area, and at the end of each work day in construction, quarrying and processing/handling areas. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.
- No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the project site, on off-site project facilities and activities, or in support of any other project activities.
- Avoid wildlife attractants. All trash and food-related waste shall be placed in self-closing containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater or floodwater within quarries will be removed to avoid attracting wildlife to the active work areas.
- Any injured or dead wildlife encountered during project-related activities shall be reported to the project biologist, biological monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the best course of action. For special-status species, the Project Biologist shall notify the Bureau of Land Management, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery.

BIO-2 Burrowing Owl Mitigation. If one or more burrowing owls are present on the project site outside of the nesting season (September 1 to January 31) and construction activities are planned at the same location as the occupied burrow, then the CDFW will be consulted and the project biologist may be authorized to exclude the burrowing owl(s) from the site using passive exclusion methods described in the most recent CDFW staff report on burrowing owl mitigation (CDFW 2012). If burrowing owls are present on the project site during nesting season (February 1 through August 31), then project activities will either be postponed until nesting is completed, or the project biologist will monitor activities in the vicinity of the burrowing owl and will establish a buffer as needed to avoid direct impacts to the burrowing owls or occupied burrows.

BIO-3 Nesting Birds. Project activities that would disturb soil or vegetation will be completed outside the breeding season (i.e., no removal of potential nesting habitat from February 1 through August 31), or after a pre-construction nesting bird survey has been completed. The project biologist will determine if birds are nesting in or adjacent to areas to be disturbed. If native birds are nesting on the site, then construction will be postponed until nesting is completed or the project biologist will designate appropriate avoidance buffers around nests to protect nesting birds. No project related disturbance will be allowed within these buffers. The project biologist

will remove the buffers and allow project activities to continue once the nestlings have fledged or once the nest is no longer active.

BIO-4 Construction and O&M Mitigation Measures. To reduce the potential indirect impact on migratory birds, bats and raptors, the project will comply with the Avian Power Line Interaction Committee's 2012 Guidelines. The project applicant will implement construction and O&M conservation measures that reduce potential impacts on bird populations as identified below and in conjunction with the County.

Construction Conservation Measures:

- Minimizing disturbance to vegetation to the maximum extent practicable
- Clearing vegetation outside of the breeding season consistent with Mitigation Measure BIO-3 (Nesting Birds)
- Minimize wildfire potential
- Minimize activities that attract prey and predators
- Control of non-native plants

O&M Conservation Measures:

- Incorporate the APLIC's guidelines for overhead utilities as appropriate to minimize avian collisions with transmission facilities (APLIC 2012)
- Minimize noise
- Minimize use of outdoor lighting

Significance after Mitigation

Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts on burrowing owls to a level less than significant. Implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 would reduce the potential impacts on loggerhead shrike, black-tailed gnatcatcher, and nesting birds to levels less than significant. Implementation of Mitigation Measure BIO-4 would reduce impacts associated with avian mortality during O&M activities to a level less than significant.

Impact 4.4-2 Possible Impact on Riparian Habitats or Other Sensitive Natural Communities.

Construction and operation of the proposed project would not impact riparian or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the CDFW and USFWS.

As previously indicated above, three sensitive natural vegetation communities are present on the project site: arrow weed thickets, bush seepweed scrub, and mesquite thickets. The proposed project would result in the permanent removal of 0.1 acres of arrow weed thickets, 37.8 acres of bush seepweed scrub, and 0.2 acres of mesquite thickets. In addition, project construction could cause temporary impacts to sensitive natural communities if portions of the project site outside the designated development area are used for access, parking, logistics, lay-down, equipment staging, or other uses that cause vegetation removal, soil disturbance, or compaction.



A permanent loss of 0.1 acres of arrow weed thickets, as well as any additional loss of this community, would be less than significant given that arrow weed thickets are abundant in the vicinity of the project site. No mitigation is required for this impact.

A permanent loss of 0.2 acres of mesquite thickets, as well as any additional loss of this community, would be significant given that it is uncommon on the project site and on the surrounding lands. In addition, black-tailed gnatcatcher, a special-status bird species was nesting in this vegetation at the time of the survey. Mitigation Measure BIO-5 would require the restoration of mesquite thickets within undeveloped areas within the project site at a 3:1 ratio. This measure would compensate for the loss of mesquite thickets and rectify the impact over time, as the restored vegetation becomes established, reducing the impact to a level less than significant.

Based on a review of historical aerial imagery of the project site, the bush seepweed scrub on site was in use as agricultural fields as recently as 1996 and has recovered since that time. Permanent and temporary loss of this vegetation would be less than significant given the previous agricultural land use and the natural recovery upon cessation of agricultural activities.

Mitigation Measure(s)

BIO-5 Sensitive Natural Communities. Following the completion of project construction, mesquite thickets will be created or enhanced within the undeveloped portions of the project site at a ratio of 3:1 (i.e., 3 acres created or enhanced for each acre impacted by permanent or temporary project activities). Revegetation will include the installation of at least 40 screw bean mesquite container plants and appropriate seed (e.g., alkali goldenbush). The revegetation will be installed within 1 year of project construction. The plants will be irrigated and maintained (e.g., weeds will be controlled) until they become established to ensure that they develop adequate root systems. The vegetation will be protected and maintained for the life of the project.

Significance after Mitigation

Implementation of Mitigation Measure BIO-5 would reduce the impacts on mesquite thickets to a level less than significant.

Impact 4.4-3 Possible Impact on Wetlands.

Construction and operation of the proposed project would not impact jurisdictional resources as defined by Section 404 of the CWA (including, but not limited to: marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

State jurisdictional streambeds and federally jurisdictional waters and wetlands may be present on the project site. These jurisdictional features appear to be restricted to the irrigation canals. Project construction and O&M activities would not affect the irrigation canals on or adjacent to the project site. Therefore, no impacts to state or federally jurisdictional waters would occur with implementation of the proposed project.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.4-4 Possible Impact on Wildlife Movement and Nursery Sites.

Construction and operation of the proposed project within the project area would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

The patches of natural habitat in the northern parcel are small and largely disconnected from adjacent natural areas further to the east. The project site is likely to be used by local wildlife to move between agricultural lands and open space in the area. It does not appear to provide connectivity between larger areas of open space such as the Chocolate Mountains or the Salton Sea because the distances are too great and the areas have been heavily modified by human land use (Appendix E of this EIR).

Following construction of the project, ground-dwelling wildlife will be able to move locally through the area using the surrounding agricultural lands and margins of the irrigation canals. The proposed project is not expected to significantly impact wildlife movement through the project vicinity and a less than significant impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.4-5 Possible Conflict with Policies Protecting Biological Resources.

The project does not conflict with local policies, such as a tree preservation policy, or ordinances.

The project consists of the construction and operation of a solar energy facility and associated electrical transmission lines. Development of the solar facility is subject to the County's zoning ordinance. Pursuant to Title 9, Division 5, Chapter 9, "Solar Energy Plants" and "Transmission lines, including supporting towers, poles microwave towers, utility substations" are uses that are permitted in the A-3 Zone, subject to approval of a CUP. As demonstrated in Table 4.4-1, with implementation of a CUP, the project would be consistent with Imperial County General Plan biological resources policies. Therefore, implementation of the proposed project would not result in a significant impact associated the project's potential to conflict with local policies protecting biological resources.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.4-6 Possible Conflict with Local Conservation Plan(s).

Construction and operation of the proposed project does not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The project site is not located in a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Implementation of the proposed project would result in no impact associated with the potential to conflict with local conservation plans.



Mitigation Measure(s)

No mitigation measures are required.

4.4.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning activities will require construction vehicles to drive across the solar facility, transmission line, and access roads, which could result in ground disturbance and transportation of invasive weeds. Mitigation measures required to reduce potential impacts on sensitive wildlife species (e.g., burrowing owl, loggerhead shrike, and black-tailed gnatcatcher) would be applicable during the decommissioning phase of the project as well including the following Mitigation Measures: BIO-1 through BIO-5, and would reduce this impact on a level less than significant.

Residual

Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts on burrowing owls to a level less than significant. Implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 would reduce the potential impacts on loggerhead shrike, black-tailed gnatcatcher, and nesting birds to levels less than significant. Implementation of Mitigation Measure BIO-4 would reduce impacts associated with avian mortality during O&M activities to a level less than significant. Implementation of Mitigation Measure BIO-5 would reduce the impacts on mesquite thickets to a level less than significant. The project would not result in residual significant and unmitigable impacts related to biological resources.

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4.5 Cultural Resources

This section discusses cultural resources that may be impacted by the proposed project. The following identifies the existing cultural resources within the project site, analyzes potential impacts of the proposed project, and recommends mitigation measures to avoid or reduce potential impacts of the proposed project. Information for this section is summarized from the *Citizens Imperial Solar, LLC Project – Cultural Resources Report* prepared by Aspen Environmental Group. This report provides the results of a records search at the CHRIS SCIC, a Sacred Lands File (SLF) search conducted by the California Native American Heritage Commission (NAHC), desktop research of paleontological online resources, and a pedestrian survey, which have been completed for the project site pursuant to CEQA. This report is included in Appendix F of this EIR.

4.5.1 Environmental Setting

Cultural Setting

Prehistory

The prehistoric background of the Colorado Desert, including Imperial County, consists of three major periods: the Paleoindian (12,000 to 8,000 years before present [BP]), the Archaic (8,000 to 1,500 years BP), and the Late Prehistoric (1,500 years BP to European Contact). It was during the Late Prehistoric period that early forms of the Colorado Desert's modern ethnographic lifeways emerged. A series of dry and wet episodes characterize the climate during this period. In the Colorado Desert, sites vary from simple pot drops (clusters of broken pieces of pottery) to seasonal camps and more permanent residential bases. Settlement appears to have been more intensive along the northwest shoreline of Lake Cahuilla in the Coachella Valley as represented by large-scale multi-seasonal occupations and seasonal temporary camps. Sites along the eastern shoreline are less dense and smaller. As desert lakes dried during periods of low precipitation, people moved settlements away from the lakeshore to rivers, streams, and springs (Appendix F of this EIR).

Ethnohistoric Period

Three ethnolinguistic groups have inhabited the Imperial County area since before European contact: Cahuilla, Tipai, and Quechan. The Cahuilla people occupied a territory in south-central California, between the San Bernardino Mountains in the north to Borrego Springs and the Chocolate Mountains in the south, east to the Colorado Desert, and west into the San Jacinto Plain near Riverside and the Palomar Mountains. Numerous pre-European contact trade routes existed through the Cahuilla territory extending as far west as Santa Catalina and east as far as the Gila River. The Spanish established several *asistencias* (sub-missions) within the Cahuilla territory beginning in 1819. Since the introduction of the reservation system within the territory circa 1865, the Cahuilla people have typically lived within the reservations established in Riverside County.

The Tipai, previously called Diegueño or Kamia, occupied an area that roughly extended from the Pacific Coast at San Diego eastward to the Sand Hills of Imperial County as well as south into modern-day Mexico. Although the Tipai traded primarily among themselves and with the closely linked Ipai to the north, extensive trade routes through their territory expanded their interaction between other coastal groups and as far inland as New Mexico. The Tipai were historically part of the native populations rounded up and brought to the mission. In 1775, a Tipai-Ipai revolt resulted in the destruction of Mission San Diego de Alcalá. The mission was later rebuilt, and conversion

practices continued. The Tipai were continually treated poorly through the Mexican and American periods, though many of the small reservations founded towards the end of the nineteenth century remained within the vicinity of traditional villages.

The Quechan, also known as the Yuma, continue to occupy their traditional territory at the confluence of the Gila and Colorado rivers at the edge of the California, Arizona, and Mexican borders. From here, their territory stretched north along the Colorado River and to the east of the Gila River. Documentation of Quechan traditions and life began in the late seventeenth century; and Spanish relations with the group remained positive until 1780 and 1781 when a small contingency of priests, soldiers, and farming families established the settlements of Mission San Pedro y San Pablo de Bicuñer and Mission Puerto de Purísima Concepción within the territory. Both settlements were razed by Quechans shortly after being established. Continued attempts at settlements were made during the Mexican and American periods, with only Fort Yuma (established 1852) remaining. The Quechan reservation was established in 1884, while disputes over allotments continued until 1912.

Historic Period

The first Europeans arrived in Imperial County with the Hernando de Alcarón Expedition of 1540; however, the Spanish did not begin to colonize what was then known as Alta California until 1769 (Mission Period). During the Mexican Period, which occurred between 1821 and 1848, Imperial County was characterized by efforts to reestablish an overland route from Sonora to the California coast to encourage trade and settlement. Following several expeditions, the Sonora Road was established in 1825, following portions of the de Anza Trail through the County before turning westward through the Carrizo Corridor and branching towards both San Diego and Temecula. The Sonora Road would not gain in popularity until the late 1830s when the southwestern portion of the route shifted north of the U.S.-Mexico border. In 1846, U.S. General Stephen W. Kearny led his troops across the Yuha Desert and through the Carrizo Corridor during the Mexican-American War (1846 to 1848). Several weeks following Kearny's march, a portion of the Mormon Battalion was led by Colonel Phillip St. George Cooke from Iowa to San Diego with the plan to establish a wagon route to California.

The signing of the Treaty of Guadalupe Hidalgo in 1848 (American period to present) and the U.S. acquisition of California was immediately followed by the establishment of the Southern Emigrant Trail which largely followed the old Sonora Road. This route was extensively used by settlers, miners, and the military on their way to California. A mail route following the Southern Emigrant Trail from Yuma was established in 1848; the Butterfield Overland Mail (1858 to 1861) would also make use of the route. Camp Salvation, established near present-day Calexico, was one of many stops along the Southern Emigrant Trail to provide water to travelers along the trail (Office of Historic Preservation [OHP] 2014). The Southern Emigrant Route was used as the primary overland route into this region of California until the establishment of the Smith-Groom Country Road in 1865. These routes generally followed that of the Anza and Garces expedition. Until the twentieth century, few people permanently settled within Imperial County. Irrigation measures, vital to the development of the County during this period, were first made by the California Development Corporation using water from the Colorado River, which was then diverted to the Alamo River via the Alamo Canal.

Irrigation from the Alamo Canal Project soon prompted a large population boom in the area; the town sites of Imperial, Brawley, Calexico, Heber, and Silsbee were constructed as part of irrigation projects to entice settlers to become permanent residents. In 1904, heavy silting greatly reduced the amount of water reaching the Imperial Valley farmers. Under stress, the California Development



Company attempted to create a breach at the banks of the Colorado River; however, this action caused uncontrolled flooding of the Salton Sink through 1905 and resulted in the historic iteration of Lake Cahuilla, called the Salton Sea.

Railroad lines, including a branch of the Southern Pacific Railroad extending through the Imperial Valley to Calexico (1903), were constructed throughout portions of the County. The introduction of automobiles later prompted the development of new and better roads. One such road included Plank Road, a 7-mile-long, movable road built over the sand dunes between Imperial Valley and Yuma in 1914. Portions of the road were added and improved on through the 1920s and 1930s.

IID was formed in 1911 under a state charter to acquire properties of the bankrupt California Development Company. By 1922, the IID had acquired 13 water companies. The All-American Canal was built to replace the Alamo Imperial Canal. The All-American Canal is part of the Hoover Dam complex, and its 82-mile length extends from Imperial Dam about 20 miles northeast of Yuma to the Imperial Valley. Approval to construct the canal came from the Boulder Canyon Project Act in 1928. The All-American Canal was constructed through the 1930s, and the first water flowed into Imperial Valley in 1940. By 1942, the All-American Canal was the sole source of imported water for the Imperial Valley. When World War II broke out, the desert area of Imperial Valley had gone from being infrequently visited by Anglo-Americans to being settled and farmed by them. Today, there are 3,000 miles of irrigation and drainage canals serving 500,000 acres of cultivated land in Imperial Valley and its cities and towns, yielding nearly \$1 billion in crops. The advent of air conditioning, coupled with low utility rates, have drawn industry to the area. Geothermal power, aerospace, manufacturing, and agriculture now dominate the landscape in Imperial Valley.

Paleontological Setting

During the early Miocene, the evolution of the San Andreas Fault and East Pacific rise created a spreading zone between the North American and Pacific Plates. This change in the boundary orientation caused a graben to form between the plates. The subsidence of the resulting fault-bounded basin combined with a global oceanic high and caused much of the Imperial Valley to be inundated, forming an inland sea. Simultaneous uplift and erosion of proximal regions provided nearby sediment sources. This created an environment in which a massive influx of sediment was deposited unconformably on top of Cretaceous and older crystalline and metasedimentary basement rocks. Crustal thinning during the Miocene in this region also created conditions suitable for rift volcanism and igneous intrusion into sedimentary strata. Miocene age sediments in the Imperial Valley consist of progradational and retrogradational sequences of conglomerate, sandstone, and siltstone on wave-cut terraces.

The project site is in the Salton Basin near the shoreline of ancient Lake Cahuilla, which is divided by the Salton Sea into the Coachella Valley to the north and the Imperial Valley to the south. The Imperial Valley comprises roughly the southern two-thirds of a major north-northwest-oriented structural and topographic depression variously called the Colorado Desert, Salton Trough, Salton Sea Trough, Salton Sink, Salton Basin, Salton Sea Basin, Cahuilla Basin, Imperial Basin, or Imperial Depression. The Salton Trough Physiographic Province is between the Peninsular Range Physiographic Province on the west and the Basin and Range Physiographic Province on the east. The general project area is bounded on the west and north by the Salton Sea and on the east by a gently inclined alluvial fan, which heads in the Chocolate Mountains.

The San Andreas Fault trends roughly northwest-southeast within the Imperial Valley. This large fault zone was created by the relative tectonic movement of the North American and Pacific plates.

During the Miocene, about 25 to 29 million years ago, the Pacific and North American plates were moving towards each other. The Pacific plate became completely overridden, creating a subduction zone along the western coast of what is now the United States. The plates continued to converge until the Pacific plate's mid-ocean ridge reached the subduction zone and the ridge became the transform fault known today as the San Andreas. The Pacific plate began moving northwest in relation to the North American plate and today it is believed that about 350 miles of total displacement has occurred. In addition to displacement, the strike-slip movement of the Pacific and North American plates has created dramatic topography. As the Pacific plate pushes north into the North American plate, the compressional forces trap sediments and push them upward. The Salton Trough is now within a zone of transition from the ocean-floor spreading regime of the East Pacific Rise in the Gulf of California and the transform tectonic environment of the San Andreas Fault system. As the Orocopia and Chocolate Mountains to the northwest are pushed up, they also slowly erode, and alluvial sediments are deposited on top of the fault zones and on the valley floor.

4.5.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

National Historic Preservation Act

Federal regulations (36 Code of Federal Regulations [CFR] Part 800.2) define historic properties as "any prehistoric or historic district, site, building, structure, or object included, or eligible for inclusion in, in the National Register of Historic Places." Section 106 of the National Historic Preservation Act (NHPA) (Public Law 89-665; 80 Stat 915; U.S. Code [USC] 470, as amended) requires a federal agency with jurisdiction over a project to take into account the effect of the project on properties included in or eligible for the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The term "cultural resource" is used to denote a historic or prehistoric district, site, building, structure, or object, regardless of whether it is eligible for the NRHP.

Native American Graves Protection and Repatriation Act (1990); Title 25, United States Code Section 3001, et seq.

The statute defines "cultural items," "sacred objects," and "objects of cultural patrimony;" establishes an ownership hierarchy; provides for review; allows excavation of human remains, but stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for the return of specified cultural items.

State

State Office of Historic Preservation

The OHP administers state and federal historic preservation programs and provides technical assistance to federal, state, and local government agencies, organizations, and the general public with regard to historic preservation programs designed to identify, evaluate, register, and protect California's historic resources.

Section 15064.5 of the CEQA Guidelines also requires that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to museums, historical commissions, associations, and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (Health and Safety Code [HSC] Section 7050.5, PRC Sections 5097.94 et seq.).

Assembly Bill 52

Assembly Bill (AB) 52 amends PRC 5097.94, and adds eight new sections to the PRC relating to Native Americans. AB 52 was passed in 2014 and took effect on July 1, 2015. It establishes a new category of environmental resource that must be considered under CEQA called tribal cultural resources (PRC 21074) and establishes a process for consulting with Native American tribes and groups regarding those resources. Under AB 52, a project that may substantially change the significance of a tribal cultural resource is a project that may have a significant impact on the environment. If a project may cause a significant impact on a tribal cultural resource, the lead agency shall implement measures to avoid the impacts when feasible. Environmental documents must incorporate a discussion of the impacts, mitigation measures, and notification and consultation conducted with tribes affiliated with the geographic area.

Public Resources Code Section 21074

This code defines a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, and any object with cultural value to a California Native American Tribe. A tribal cultural resource must be on or eligible for the California Register of Historical Resources (CRHR) or must be included in a local register of historical resources. The lead agency can determine if a tribal cultural resource is significant even if it has not been evaluated for the CRHR or is not included on a local register.

Assembly Bill 4239

AB 4239 established NAHC as the primary government agency responsible for identifying and cataloging Native American cultural resources. The bill authorized the Commission to act in order to prevent damage to and insure Native American access to sacred sites and authorized the Commission to prepare an inventory of Native American sacred sites located on public lands.

Public Resources Code 5097.97

No public agency and no private party using or occupying public property or operating on public property under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the U.S. Constitution and the California Constitution; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

Public Resources Code 5097.98 (b) and (e)

PRC 5097.98 (b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified most likely descendants (MLD) to consider treatment options. In the absence of

MLDs or of a treatment acceptable to all parties, the landowner is required to reenter the remains elsewhere on the property in a location not subject to further disturbance.

California Health and Safety Code, Section 7050.5

This code makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the County Coroner.

Local

Imperial County General Plan

The Imperial County General Plan provides goals, objectives, and policies for the identification and protection of significant cultural resources. The Conservation and Open Space Element of the General Plan includes goals, objectives, and policies for the protection of cultural resources and scientific sites that emphasize identification, documentation, and protection of cultural resources. While Section 4.10, Land Use and Planning, of this EIR analyzes the project’s consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors and Planning Commission ultimately make a determination as to the project’s consistency with the General Plan. Goals and Objectives applicable to the proposed project are summarized in Table 4.5-1.

Table 4.5-1. Project Consistency with Applicable General Plan Cultural Resources Goals and Objectives

General Plan Policies	Consistency with General Plan	Analysis
Objective 1.4: Ensure the conservation and management of the County’s natural and cultural resources.	Consistent	A cultural resources report was prepared for the project site. The report provides the results of a records search at the CHRIS SCIC, a SLF search conducted by the NAHC, desktop research of paleontological online resources, and a pedestrian survey, which have been completed for the project site pursuant to CEQA. As discussed below, the proposed project has the potential to encounter undocumented archaeological resources, paleontological resources, and human remains.
Objective 3.1: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	Implementation of Mitigation Measure CR-1 would reduce potentially significant impacts on unknown historic or unique archaeological materials during construction of the project site. Implementation of Mitigation Measure CR-2 would ensure that the potential impacts on paleontological resources do not rise to the level of significance pursuant to CEQA. Implementation of Mitigation Measure CR-3 would reduce potential impacts on human remains to a level less than significant.

Source: County of Imperial 1993

CEQA – California Environmental Quality Act; CHRIS – California Historical Resources Information System; CRHR - California Register of Historical Resources; SCIC – South Coastal Information Center; SLF – sacred lands file

4.5.3 Existing Conditions

The project site encompasses approximately 223 acres comprised of two parcels of land owned by the IID. Of the total 223 acres, approximately 159 acres (area within the fence line) would be developed with a ground mounted PV solar power generating system, supporting structures, on-site substation, access driveways, and transmission structures. For the purposes of this EIR, the 223-acre property is referred to as the project site. The 159 acres on which development is proposed is referred to as the development area.

Records Search

A records search was conducted at the CHRIS SCIC on February 28, 2018. The SCIC is the official repository for all cultural resources site records and reports for Imperial County. The records search at the CHRIS SCIC identified two previously completed survey reports located outside, but adjacent to the project site within a .025-mile of the project site. No sensitive historical resources, unique archaeological resources, or tribal cultural resources were identified within the project site or within the 0.25-mile surrounding radius.

Sacred Lands File Database

The NAHC was contacted on March 1, 2018 to request a search of the SLF database. On March 21, 2018, the NAHC responded with confirmation that no known sacred sites or tribal cultural resources as defined by CEQA are documented within the project site or surrounding 0.25-mile radius.

Reconnaissance Level Pedestrian Field Survey

On June 6 and 7, 2018, Aspen conducted an intensive reconnaissance level pedestrian field survey of the development area. The survey was conducted by walking 30-meter- (100-foot-) wide transects. All areas were accessible. Ground-surface visibility was excellent with 100 percent open. The ground surface was examined for the presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris or debitage, stone milling tools), historic-era artifacts (e.g., metal, glass, ceramics), sediment discolorations that could indicate the presence of cultural features (e.g., midden, hearths), and depressions or other features which could indicate the presence of structures or foundations (e.g., post holes, foundations).

The pedestrian survey did not identify evidence of cultural resources from any time period. Most of the area surveyed appeared disturbed from leveling and earthmoving activities associated with agriculture.

Paleontological Resources

Paleontological resources (fossils) are the remains of prehistoric plant and animal life. Fossil remains, such as bones teeth, shell, and wood, are found in geologic deposits (rock formations) within which they were originally buried.

Many paleontological fossil sites are recorded in Imperial County and have been discovered during construction activities. Paleontological resources are typically impacted when earthwork activities, such as mass excavation cut into geological deposits (formations) with buried fossils. One area in which paleontological resources appear to be concentrated in this region is the shoreline of ancient Lake Cahuilla, which would have encompassed the present-day Salton Sea. The lake covered much

of the Imperial Valley and created an extensive lacustrine environment. Lake Cahuilla experienced several fill recession episodes before it finally dried up about 300 years ago. In 1905, the Colorado River overflowed into the Salton Basin creating the present-day Salton Sea.

The geologic maps reviewed during desktop research indicate that the project site is underlain by the following geologic units, in approximate ascending age: (1) lacustrine deposits of the Lake Cahuilla Beds and (2) overlying deposits referable to the Brawley Formation. The younger Cahuilla Lake Beds form a relatively thin sedimentary deposit over the older Brawley Formation. Thus, although the Cahuilla Lake Beds are mapped as being present at the surface over most of the project site, the older Brawley Formation may be encountered in deep excavations. Sediments of both these formations have yielded fossilized remains of continental vertebrates, invertebrates, and plants at numerous previously recorded fossil sites in the Imperial Valley. Therefore, the paleontological sensitivity of these formations within the project site is considered to be high.

4.5.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to cultural resources, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to cultural resources are considered significant if any of the following occur:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature
- Disturb any human remains, including those interred outside of formal cemeteries
- Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in PRC §21074

Methodology

This analysis evaluates the potential for the project, as described in Chapter 3, Project Description, to interact with cultural resources in the project site. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, a cultural resources report was prepared for the project site. The report provides the results of a records search at the CHRIS SCIC, a SLF search conducted by the NAHC, desktop research of paleontological online resources, and a pedestrian survey, which have been completed for the project site pursuant to CEQA. This report is included in Appendix F of this EIR. The information from the cultural resources report was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with cultural resources that

could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, and duration of project construction and related activities.

Impact Analysis

Impact 4.5-1 Impact on Historical Resources.

The proposed project would not cause a substantial adverse change in the significance of a historical resource.

To be considered historically significant, a resource must meet one of four criteria for listing outlined in the CRHR (CEQA Guidelines 15064.3 (a)(3)). In addition to meeting one of the criteria outlined in the CRHS, a resource must retain enough intact and undisturbed deposits to make a meaningful data contribution to regional research issues (CCR Title 14, Chapter 1.5 Section 4852 [c]). Further, based on CEQA Guidelines Section 15064.5 (b), substantial adverse change would include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired. This can occur when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR, NRHP, a local register, or historic resources.
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its identification in an historical resources survey meeting the requirements of PRC §5024.1(g), unless the public agency establishes by a preponderance of the evidence that the resource is not historically or culturally significant.

As previously indicated above, a records search at the CHRIS SCIC identified two previously completed survey reports located outside, but adjacent to the project site within a 0.25-mile of the project site. No sensitive historical resources were identified within the project site or within the 0.25-mile surrounding radius. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.5-2 Impact on Archaeological Resources.

The proposed project could cause a substantial adverse change in the significance of an archaeological resource.

Pursuant to CEQA Guidelines §15064.5(c)(1) and (2), an archaeological resource includes an archaeological site that qualifies as a significant historical resource as described for Impact 4.5-1. If an archaeological site does not meet any of the criteria outlined in the provisions under Impact 4.5-1, but meets the definition of a “unique archaeological resource” in PRC 21083.2, the site shall be treated in accordance with the provisions of PRC 21083.2, unless the project applicant and public agency elect to comply with all other applicable provisions of CEQA with regards to archaeological resources. “Unique archaeological resource” means an archaeological artifact, object, or site about

which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions that there is a demonstrable public interest in that information
2. Has a special and particular quality, such as being the oldest of its type or the best available example of its type
3. Is directly associated with a scientifically recognized important historic event or person

CEQA Guidelines 15064.5(c)(4) confirms that if an archaeological resource is neither a unique archaeological nor an historic resource, the effects of the projects on those resources shall not be considered a significant effect on the environment.

As previously indicated above, a records search at the CHRIS SCIC did not identify unique archaeological resources within the project site or within the 0.25-mile surrounding radius. Furthermore, the pedestrian survey did not identify evidence of cultural resources from any time period. Most of the area surveyed appeared disturbed from leveling and earthmoving activities associated with agriculture. Continued agricultural activities have likely heavily disturbed the surface and subsurface of the project site, destroying any intact potential prehistoric or historic-era cultural resources up to 2 feet deep. However, prehistoric archaeological sites in California can be buried as much as 6 feet deep, depending on their age and location. The potential of finding a buried archaeological site during construction is considered low. However, like all construction projects in the state, the possibility exists. This potential impact is considered significant. Implementation of Mitigation Measures CR-1 and CR-2 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant.

Mitigation Measure(s)

CR-1 Pursuant to CEQA Guidelines §15064.5(f), in the event that previously unidentified unique archaeological resources are encountered during construction or operational repairs, archaeological monitors will be authorized to temporarily divert construction work within 100 feet of the area of discovery until significance and the appropriate mitigation measures are determined by a qualified archaeologist familiar with the resources of the region. Applicant shall notify the County within 24 hours. Applicant shall provide contingency funding sufficient to allow for implementation of avoidance measures or appropriate mitigation.

CR-2 In the event of the discovery of previously unidentified archaeological materials, the contractor shall immediately cease all work activities within approximately 100 feet of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, and scrapers) or tool making debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation, the contractor shall immediately contact the Imperial County Department of Planning and Development Services. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and



Repatriation Act, the discovery of any cultural resource within the project area shall not be grounds for a “stop work” notice or otherwise interfere with the project’s continuation except as set forth in this paragraph.

In the event of an unanticipated discovery of archaeological materials during construction, the applicant shall retain the services of a qualified professional archaeologist, meeting the Secretary of the Interior’s Standards for a Qualified Archaeologist, to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the applicant shall implement an archaeological data recovery program.

Impact 4.5-3 Impact on Paleontological Resources.

The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

The geologic maps reviewed during desktop research indicate that the project site is underlain by formations that have yielded fossilized remains of continental vertebrates, invertebrates, and plants at numerous previously recorded fossil sites in the Imperial Valley. The paleontological sensitivity of these formations within the project site is considered to be high. However these units exist at depths that exceed the proposed project construction activities (i.e., sensitive layers exist at 30 feet and deeper). Therefore, the possibility of encountering paleontological resources during construction is low. Mitigation Measure CR-3 would ensure that the potential impacts on paleontological resources do not rise to the level of significance pursuant to CEQA.

Mitigation Measure(s)

CR-3 In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing activities, work must cease within 50 feet of the discovery and a paleontologist shall be hired to assess the scientific significance of the find. The consulting paleontologist shall have knowledge of local paleontology and the minimum levels of experience and expertise as defined by the Society of Vertebrate Paleontology’s Standard Procedures (2010) for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. If any paleontological resources or unique geologic features are found within the project site, the consulting paleontologist shall prepare a paleontological Treatment and Monitoring Plan to include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation of specimens into an accredited repository, and preparation of a report at the conclusion of the monitoring program.

Impact 4.5-4 Impact on Human Remains.

The proposed project could disturb and human remains, including those interred outside of formal cemeteries.

During the construction and operational phases of the proposed project, grading, excavation and trenching will be required. Although the potential for encountering subsurface human remains within the project site is low, there remains a possibility that human remains are present beneath the ground surface, and that such remains could be exposed during project construction. The potential to encounter human remains is considered a significant impact. Mitigation Measure CR-3 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA. Implementation of Mitigation Measure CR-4 will reduce the potential impact associated with inadvertent discovery of human remains to a level less than significant.

Mitigation Measure(s)

CR-4 In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery will be halted or diverted and the Imperial County Coroner will be notified (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the NAHC, which will designate an MLD for the project (Section 5097.98 of the PRC). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).

Impact 4.5-5 Impact on Tribal Cultural Resources.

The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource.

The NAHC maintains the confidential SLF which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on March 1, 2018 to request a search of the SLF database. On March 21, 2018, the NAHC responded with confirmation that no known sacred sites or tribal cultural resources as defined by CEQA are documented within the project site or surrounding 0.25-mile radius.

AB 52 was passed in 2014 and took effect on July 1, 2015. It establishes a new category of environmental resources that must be considered under CEQA called tribal cultural resources (PRC 1074) and establishes a process for consulting with Native American tribes and groups regarding those resources. AB 52 requires a lead agency to begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic areas of the proposed project. In accordance with AB 52, the County provided notification of the proposed project to Native American tribes that the County understands to be traditionally and culturally affiliated with

the geographic areas of the proposed projects. The County has requested for tribes to provide any information regarding any Traditional Cultural Properties, Sacred Sites, resource collecting areas, or any other areas of concern known to occur in the project area. The Augustine Band of Cahuilla Indians submitted a response letter on April 9, 2018 indicating that they are unaware of specific cultural resources that may be affected by the proposed project. Mitigation Measure CR-5 would ensure that the potential impacts on unidentified tribal cultural resources do not rise to the level of significance.

Mitigation Measure(s)

CR-5 If previously unidentified tribal cultural resources are identified during construction activities, construction work within 100 feet of the find shall be halted and directed away from the discovery until a Secretary of the Interior qualified archaeologist and tribal representative assesses the significance of the resource. The archaeologist, in consultation with Imperial County and any interested Tribes, shall make the necessary plans for treatment of the find(s) and for the evaluation and mitigation of impacts if the finds are determined to be a tribal cultural resource as defined in PRC Section 21074.

4.5.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

No impact is anticipated from restoration activities as the ground disturbance and associated impacts on cultural resources will have occurred during the construction phase of the project.

Residual

Implementation of Mitigation Measures CR-1 and CR-2 would reduce potentially significant impacts on unknown archaeological materials during construction of the project site. Implementation of Mitigation Measure CR-3 would ensure that the potential impacts on paleontological resources do not rise to the level of significance pursuant to CEQA. Implementation of Mitigation Measure CR-4 would reduce potential impacts on human remains to a level less than significant. Mitigation Measure CR-5 would ensure that the potential impacts on unidentified tribal cultural resources do not rise to the level of significance. No unmitigable impacts on cultural resources would occur with implementation of the project.

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4.6 Geology and Soils

This section provides an evaluation of the project in relation to existing geologic and soils conditions within the project site. Information contained in this section is summarized from the *Preliminary Geological and Geotechnical Hazard Evaluation Report* prepared by HDR. The geotechnical report prepared for the project is included in Appendix G of this EIR.

4.6.1 Environmental Setting

The project site is located in the Imperial Valley portion of the Salton Trough physiographic province. With surface elevations as low as 275 feet below sea level, the Salton Trough formed as a structural depression resulting from tectonic boundary adjustment between the Pacific and the North American plates. The Salton Trough is bounded on the east and northeast by the San Andreas Fault and on the west by the San Jacinto Fault Zone. The structural trough is filled with more than 15,000 feet of Miocene and younger, marine and non-marine sediments capped by approximately 100 feet of Pleistocene and later lacustrine deposits that have been deposited by intermittent filling derived from periodic flooding of the Colorado River and Lake Cahuilla.

The geologic conditions present within the County contribute to a wide variety of hazards that can result in loss of life, bodily injury, and property damage. Fault displacement is the principal geologic hazard affecting public safety in Imperial County. The primary seismic hazard at the project site is the potential for strong ground shaking because of potential fault movements along the Brawley, Elmore Ranch, and San Andreas (Coachella Section) Faults. Secondary geologic hazards that have a potential to occur include soil liquefaction and lateral spreading.

4.6.2 Regulatory Setting

This section identifies and summarizes state and local laws, policies, and regulations that are applicable to the project.

State

Alquist-Priolo Special Studies Zone Act

The Alquist-Priolo (AP) Special Studies Zone Act was passed into law following the destructive February 9, 1971 San Fernando earthquake. The AP Special Studies Zone Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Special Studies Zone Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The state geologist (Chief of the California Division of Mines and Geology) is required to identify “earthquake fault zones” along known active faults in California. Counties and cities must withhold development permits for human occupancy projects within these zones unless geologic studies demonstrate that there would be no issues associated with the development of projects. Based on a review of the current AP Earthquake Fault Zone Maps produced by the California Geologic Survey, the project site is not located in an AP earthquake fault zone.

California Building Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. CCR Title 24 is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment, known as building standards. The California Building Code (CBC) is based on the Federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The California HSC Section and 18980 HSC Section 18902 give CCR Title 24 the name of California Building Standards Code.

Local

County Land Use Ordinance

Title 9 Division 15 (Geological Hazards) of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, construction of buildings intended for human occupancy are prohibited across the trace of an active fault. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a person to undue hazard created by the construction. The proposed project does not include any residential structures nor are any active faults located across the project site.

County of Imperial General Plan

The Seismic and Public Safety Element identifies goals and policies that will minimize the risks associated with natural and human-made hazards. The purpose of the Seismic and Public Safety Element is directly concerned with reducing the loss of life, injury, and property damage that might result from disaster or accident. Additionally, known as the Imperial Irrigation District Lifelines, the IID has formal Disaster Readiness Standard Operating Procedure for the Water Department, Power Department, and the entire District staff for response to earthquakes and other emergencies. The Water Department cooperates with the Imperial County OES and lowers the level in canals after a need has been determined, and only to the extent necessary.

Table 4.6-1 analyzes the consistency of the project with specific policies contained in the County of Imperial General Plan associated with geology, soils, and seismicity. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 4.6-1. Project Consistency with Applicable General Plan Seismic and Public Safety Policies

General Plan Policies	Consistency with General Plan	Analysis
Goal 1. Include public health and safety considerations in land use planning.	Consistent	Division 5 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, construction of buildings intended for human occupancy which are located across the trace of an active fault are prohibited. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a person to undue hazard created by the construction.
Objective 1.1. Ensure that data on geological hazards is incorporated into the land use review process, and future development process.		
Objective 1.3. Regulate development adjacent to or near all mineral deposits and geothermal operations.		
Objective 1.4. Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service.		
Objective 1.7. Require developers to provide information related to geologic and seismic hazards when siting a proposed project.		
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.		Since the project site is located in a seismically active area, the project is required to be designed in accordance with the CBC for near source factors derived from a design basis earthquake based on a peak ground acceleration of 0.50 gravity (g) (Appendix G of this EIR). It should be noted that the project would be remotely operated and would not require any habitable structures on site. In considering these factors in conjunction with mitigation requirements outlined in the impact analysis, the risks associated with seismic hazards would be minimized.
Objective 2.2. Reduce risk and damage due to seismic hazards by appropriate regulation.		A preliminary geotechnical report has been prepared for the proposed project. The preliminary geotechnical report has been referenced in this environmental document. Additionally, a design-level geotechnical investigation would be conducted to evaluate the potential for site specific hazards associated with seismic activity.
Objective 2.5 Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		
Objective 2.8 Prevent and reduce death, injuries, property damage, and economic and social dislocation resulting from natural hazards including flooding, land subsidence, earthquakes, other geologic phenomena, levee or dam failure, urban and wildland fires and building collapse by appropriate planning and emergency measures.		

Source: County of Imperial 1993

CBC – California Building Code; EIR – environmental impact report

4.6.3 Existing Conditions

Surface Subgrade Soils and Groundwater Conditions

The project site is generally underlain by stratified alluvial deposits, predominately consisting of interbedded layers of silt, sand, and clay. The near-surface soils are predominantly comprised of fine sand, gravelly sand, and occasionally clay and silty clay.

The groundwater levels are anticipated at depths between 5 to 10 feet below the existing ground surface. Seasonal fluctuations of shallow groundwater is expected during periods of rainfall, irrigation of adjacent properties, and site grading.

Seismicity

Earthquakes are the result of an abrupt release of energy stored in the earth. This energy is generated from the forces which cause the continents to change their relative position on the earth's surface, a process called "continental drift." The earth's outer shell is composed of a number of relatively rigid plates which move slowly over the comparatively fluid molten layer below. The boundaries between plates are where the more active geologic processes take place. Earthquakes are an incidental product of these processes. As a result, southern California is located in a considerably seismically active region as the Pacific Plate moves northward relative to the North American Plate at their boundary along the San Andreas Fault System.

The project site is located in the seismically active southern California region, within the influence of several fault systems that are considered to be active or potentially active. As shown in Table 4.6-2, several active or potentially active faults are located in the vicinity of the project site. The largest maximum earthquake that could impact the project may be generated by the San Andreas Fault (Coachella Section) having an estimated maximum magnitude of 7.9.

Table 4.6-2. Nearby Faults

Fault Name	Distance (Kilometers)	Maximum Magnitude
Unnamed Faults East of Coachella Canal	15.8	6.4
Brawley (Seismic Zone)	18.0	6.5
Elmore Ranch	21.4	6.6
San Andreas (Coachella)	32.3	7.9
San Jacinto (Superstition Mountains)	42.8	7.7

Source: Appendix G of this EIR

Ground Shaking

Ground shaking is the byproduct of an earthquake and is the energy created as rocks break and slip along a fault. The amount of ground shaking that an area may be subject to during an earthquake is related to the proximity of the area to the fault, the depth of the hypocenter (focal depth), location of the epicenter and the size (magnitude) of the earthquake. Soil type also plays a role in the intensity of shaking. Bedrock or other dense or consolidated materials are less prone to intense ground shaking than soils formed from alluvial deposition.

The project site is located in the seismically active southern California region, within the influence of several fault systems that are considered to be active or potentially active. Accordingly, the potential for moderate to severe seismic shaking to occur at the project site is considered to be high.

Surface Rupture

Surface rupture occurs when movement along a fault results in actual cracking or breaking of the ground along a fault during an earthquake; however, it is important to note that not all earthquakes result in surface rupture. Surface rupture almost always follows preexisting fault traces, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Fault creep is the slow rupture of the earth's crust. Sudden displacements are more damaging to structures because they are accompanied by shaking.

No faults mapped under the AP Special Studies Zone Act traverse the project site. Therefore, the potential for surface fault rupture is considered to be low at the project site.

Liquefaction

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as those produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations.

Four conditions are generally required for liquefaction to occur: (1) the soil must be saturated (relatively shallow groundwater); (2) the soil must be loosely packed (low to medium relative density); (3) the soil must be relatively cohesionless (not clayey); and (4) ground shaking of sufficient intensity must occur to function as a trigger of mechanism.

Because of the anticipated relatively shallow depth to groundwater and the soil types present, there is a potential for liquefaction to occur on the project site.

Landslides

A landslide refers to a slow to very rapid descent of rock or debris caused by natural factors, such as the pull of gravity, fractured or weak bedrock, heavy rainfall, erosion, and earthquakes. The project site is located on relative flat topography with a low range in elevation.

Lateral Spreading

Liquefaction-induced lateral spreading is defined as the lateral displacement of ground as a result of pore pressure build-up or liquefaction in shallow underlying soils during an earthquake. Lateral spreading can occur on sloping ground or where nearby slopes are present. The factors known to influence the magnitude of lateral spreading include earthquake magnitude, peak ground acceleration, distance between the site and the seismic event, the slope height and gradient, thickness of the liquefied layer, fines content, soil particle gradation, and residual strength of the liquefied soil.

Based on available soil and groundwater data, the risk for lateral spreading may exist at the project site, particularly near the existing canals (Appendix G of this EIR).

Land Subsidence

Subsidence is the sinking of the ground surface caused by the compression of earth materials or the loss of subsurface soil because of underground mining, tunneling, or erosion. The major causes of subsidence include fluid withdrawal from the ground, decomposing organics, underground mining or tunneling, and placing large fills over compressible earth materials. The effective stress on underlying soils is increased resulting in consolidation and settlement. Subsidence may also be caused by tectonic processes.

The project site is not located in an area of known ground subsidence or within any delineated zones of subsidence because of groundwater pumping or oil extraction (Appendix G of this EIR). Accordingly, the potential for subsidence to occur at the project site is considered to be low.

Soil-related Hazards

The physical properties of the soil base can greatly influence improvements constructed upon them. As an example, expansive soils are largely comprised of clays, which greatly increase in volume when water is absorbed and shrink when dried. This movement may result in the cracking of foundations for aboveground, paved roads, and concrete slabs. The onsite near-surface soil deposits primarily consist of sand, gravelly sand and clay/silty clay (Appendix G of this EIR). Generally, sands are not considered expansive soils and clays may exhibit moderate to high expansion potential because of variation in moisture content. The on-site soils, particularly clay/silty clay, are known to be corrosive. Corrosive soils can damage underground utilities including pipelines and cables, or weaken roadway structures. These soil hazards are discussed further in the impact analysis.

4.6.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to geologic and soil conditions, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to geology and soils are considered significant if any of the following occur:

- Expose people or structures to potential substantive adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent AP Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault; (Refer to Division of Mines and Geology Special Publication 42)
 - Strong seismic ground shaking
 - Seismic related ground failure, including liquefaction
 - Landslides
- Result in substantial soil erosion or the loss of topsoil

- 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
- Be located on expansive soil, as defined in the latest Uniform Building Code, creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water

Methodology

This analysis evaluates the potential for the project, as described in Chapter 3, Project Description, to interact with local geologic and soil conditions on the project site. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

Impact Analysis

Impact 4.6-1 Possible Risks to People and Structures Caused by Strong Seismic Ground Shaking.

The project site is located in an area of moderate to high seismic activity and, therefore, project-related structures could be subject to damage from seismic ground shaking and related secondary geologic hazards.

The project site is located in the seismically active Imperial Valley of southern California with numerous mapped faults of the San Andreas Fault System traversing the region. As shown in Table 4.6-2, several active or potentially active faults are located in the vicinity of the project site. The closest mapped faults to the project site are unnamed faults east of Coachella Canal located (approximately 9.82 miles) and the Brawley (Seismic Zone) fault (approximately 11.18 miles). In the event of an earthquake along one of these fault sources, seismic hazards related to ground motion could occur in susceptible areas within the project site. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. The primary seismic hazard at the project site is the potential for strong ground shaking during earthquakes along the Brawley, Elmore Ranch, and San Andreas (Coachella Section) Faults. The project is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region.

Even with the integration of building standards, ground shaking within the project site could cause some structural damage to the facility structures or, at least, cause unsecured objects to fall. During a stronger seismic event, ground shaking could expose employees to injury from structural damage or collapse of electrical distribution facilities. Given the potentially hazardous nature of the project facilities (e.g., danger from electrocution), the potential impact of ground motion during an earthquake is considered a significant impact, as proposed structures, such as the substation and transmission lines could be damaged.

As stated above, liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations. Liquefaction may pose a risk to people or structures around the project sites. Four conditions are generally required for liquefaction to occur, including 1) saturated soil (relatively shallow groundwater), 2) loosely packed soil, 3) relatively cohesionless

soil, and 4) ground shaking of sufficient intensity must occur to trigger the mechanism. Because of the anticipated relatively shallow depth to groundwater (approximately 5 to 10 feet below the existing ground surface) and the soil types present, there is a potential for liquefaction to occur on the project site. Additional geotechnical investigation would be required in order to assess the risk of liquefaction on the project site. The potential impact on liquefaction is considered a significant impact. Implementation of Mitigation Measure GEO-1 would reduce the potential liquefaction impact on a level less than significant.

No portion of the project site is located on an active fault or within a designated AP Zone and, therefore, the potential for ground rupture to occur within the project site is unlikely. Similarly, in the context of the flat topography within the project site, the potential for earthquake induced landslides to occur at the site is unlikely. For these reasons, no significant impact has been identified associated with these geologic issues.

Mitigation Measure(s)

GEO-1 Prepare Geotechnical Report(s) as Part of Final Engineering for the Project and Implement Required Measures. Facility design for all project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by the project applicant. The final geotechnical and/or civil engineering report shall address and make recommendations on the following:

- Site preparation
- Soil bearing capacity
- Appropriate sources and types of fill
- Potential need for soil amendments
- Structural foundations
- Grading practices
- Soil corrosion of concrete and steel
- Erosion/winterization
- Seismic ground shaking
- Liquefaction
- Expansive/unstable soils

In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include subsurface testing of soil and groundwater conditions, and shall determine appropriate foundation designs that are consistent with the version of the CBC that is applicable at the time building and grading permits are applied for. All recommendations contained in the final geotechnical engineering report shall be implemented by the project applicant.



Significance after Mitigation

With implementation of Mitigation Measure GEO-1, potential impacts associated with strong seismic ground shaking and liquefaction would be reduced to a less than significant level with the implementation of recommendations made by a licensed geotechnical engineer in compliance with the CBC prepared as part of a formal geotechnical investigation.

Impact 4.6-2 Unstable Geologic Conditions.

The project would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project.

A phenomenon associated with liquefaction is lateral spreading. Liquefaction of shallow layers of soil causes a loss of shear strength, allowing the surface to move laterally across gentle slopes. Areas with lateral spreading potential are typically located adjacent to drainage where slopes are steepest and water may be more likely to accumulate. Based on available soil and groundwater data, the risk for lateral spreading may exist at the project site, particularly near the existing canals (Appendix G of this EIR). A site specific geotechnical investigation would be required at the project site to determine the extent and effect of lateral spreading. Implementation of Mitigation Measure GEO-1 would reduce the potential geologic hazards associated with lateral spreading to a level less than significant. This mitigation measure requires a licensed geotechnical or soils engineer investigate the site-specific soil conditions and recommendations for the design of the facilities to withstand lateral spreading, in accordance with the CBC be implemented.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure GEO-1 are required.

Significance after Mitigation

With implementation of Mitigation Measure GEO-1, potential impacts associated with lateral spreading would be reduced to a less than significant level with the implementation of recommendations made by a licensed geotechnical engineer in compliance with the CBC prepared as part of a formal geotechnical investigation.

Impact 4.6-3 Construction-related Erosion.

Construction activities during project implementation would involve grading and movement of earth in soils subject to wind and water erosion as well as topsoil loss.

During the site grading and construction phases, large areas of unvegetated soil would be exposed to erosive forces by water for extended periods of time. Unvegetated soils are much more likely to erode from precipitation than vegetated areas because plants act to disperse, infiltrate, and retain water. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters. Construction could produce sediment-laden stormwater runoff (nonpoint source pollution), a major contributor to the degradation of water quality. If precautions are not taken to contain contaminants, construction related erosion impacts are considered a significant impact.

The project is not expected to result in substantial soil erosion or the loss of topsoil over the long term. Ground cover would be planted between the arrays for the life-span of the solar facility

operations. The ground cover would reduce the amount of soil surface exposed to erosion. A vegetation cover reduces erosion potential by: 1) shielding the soil surface from the direct erosive impact of raindrops; 2) improving the soil's water storage porosity and capacity so more water can infiltrate into the ground; 3) slowing the runoff and allowing the sediment to drop out or deposit; and 4) physically holding the soil in place with plant roots.

Further, the project applicant would be required to implement on-site erosion control measures in accordance with County standards, which require the preparation, review, and approval of a grading plan by the County Engineer. Given these considerations and the fact that the encountered soil types have a low erosion potential, the project's long-term impact in terms of soil erosion and loss of topsoil would be less than significant. In addition, with implementation of Mitigation Measure HYD-1, the potential impact associated with erosion from construction activities would be reduced to a less than significant level with the preparation and implementation of a SWPPP, including best BMPs to reduce erosion from the construction site.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure HYD-1 are required.

Significance after Mitigation

With implementation of Mitigation Measure HYD-1 in Section 4.9, Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a less than significant level with the preparation of a SWPPP and implementation of BMPs to reduce erosion from the construction site.

Impact 4.6-4 Exposure to Potential Hazards from Problematic Soils.

The project could encounter expansive or corrosive soils thereby subjecting related structures to potential risk of failure.

As provided in the environmental setting, soil materials within the project site may exhibit a moderate to high potential for shrink-swell. Unless properly mitigated, shrink-swell soils could exert additional pressure on buried structures and electrical connections producing shrinkage cracks that could allow water infiltration and compromise the integrity of backfill material. These conditions could be worsened if structural facilities are constructed directly on expansive soil materials. These impacts would be a significant impact as structures could be damaged by these types of soils. In addition, the on-site soils, particularly clay/silty clay, are known to be corrosive. Corrosive soils can damage underground utilities including pipelines and cables, or weaken roadway structures. A site specific geotechnical investigation would be required at the project site to determine the extent and effect of problematic soils. Implementation of Mitigation Measure GEO-1 would reduce the impact associated with exposure of potential hazards from problematic soils to a level less than significant.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure GEO-1 are required.



Significance after Mitigation

With implementation of Mitigation Measure GEO-1, potential impacts associated with problematic soils would be reduced to a less than significant level with the implementation of recommendations made by a licensed geotechnical engineer as part of a formal geotechnical investigation.

Impact 4.6-5 On-site Wastewater Treatment and Disposal.

The project would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems.

The proposed project would not require an operations and maintenance building. The proposed solar facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Therefore, no septic or other wastewater disposal systems would be required for the project and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

4.6.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration of the project site at the end of its use as a solar facility would involve the removal of structures and restoration to prior (pre-solar project) conditions. No geologic or soil impacts associated with the restoration activities would be anticipated, and, therefore, no impact is identified.

Residual

With implementation of Mitigation Measures GEO-1 and HYD-1, impacts related to strong seismic ground-shaking, liquefaction, lateral spreading, construction-related erosion, and soil hazards related to expansive soils and corrosion, would be reduced to less than significant levels. The project would not result in residual significant and unmitigable impacts related to geology and soil resources.

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4.7 Greenhouse Gas Emissions

This section provides an overview of existing GHG emissions within the project area and identifies applicable federal, state, and local policies related to global climate change. The impact assessment provides an evaluation of potential adverse effects with regards to GHG emissions based on criteria derived from CEQA Guidelines in conjunction with actions proposed in Chapter 3, Project Description. HDR prepared an *Air Quality/Greenhouse Gas Report* for the Citizens Imperial Solar, LLC Project. This report is included in Appendix D of this EIR.

4.7.1 Environmental Setting

Constituent gases that trap heat in the Earth's atmosphere are GHGs, analogous to the way a greenhouse retains heat. GHGs play a critical role in the Earth's radiation budget by trapping infrared radiation emitted from the Earth's surface, which would otherwise have escaped into space. Prominent GHGs contributing to this process include CO₂, CH₄, nitrous oxide (N₂O), and chlorofluorocarbons (CFC). Without the natural heat-trapping effect of GHG, the earth's surface would be about 34° cooler. This is a natural phenomenon known as the "Greenhouse Effect," which is responsible for maintaining a habitable climate; however, anthropogenic emissions of these GHGs in excess of natural ambient concentrations are responsible for the enhancement of the "Greenhouse Effect," and have led to a trend of unnatural warming of the Earth's natural climate known as global warming or climate change, or more accurately Global Climate Disruption. Emissions of these gases that induce global climate disruption are attributable to human activities associated with industrial/manufacturing/commercial, utilities, transportation, residential and agricultural sectors.

The global warming potential (GWP) is the potential of gas or aerosol to trap heat in the atmosphere. Individual GHG compounds have varying GWP and atmospheric lifetimes. The reference gas for the GWP is CO₂; CO₂ has a GWP of one. The calculation of the CO₂ equivalent (CO₂e) is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent metric. CH₄'s warming potential of 25 indicates that CH₄ has a 25 times greater warming effect than CO₂ on a molecular basis. The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that period. The period usually used for GWPs is 100 years. A CO₂e is the mass emissions of an individual GHG multiplied by its GWP. GHGs are often presented in units called metric tons of CO₂e (MTCO₂e).

State law defines GHGs as any of the following compounds CO₂, CH₄, N₂O, hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexafluoride (SF₆) (California HSC Section 38505(g)).

Carbon Dioxide (CO₂) is a colorless, odorless gas consisting of molecules made up of two oxygen atoms and one carbon atom. CO₂ is produced when an organic carbon compound, such as wood, or fossilized organic matter, such as coal, oil, or natural gas, is burned in the presence of oxygen. CO₂ is removed from the atmosphere by CO₂ "sinks", such as absorption by seawater and photosynthesis by ocean dwelling plankton and land plants, including forests and grasslands; however, seawater is also a source of CO₂ to the atmosphere, along with land plants, animals, and soils, when CO₂ is released during respiration. Whereas the natural production and absorption of CO₂ is achieved through the terrestrial biosphere and the ocean, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, each of these activities has increased in scale and distribution. Prior to the industrial revolution, concentrations CO₂ were stable at a range of 275 to 285 parts per million (ppm). The

National Oceanic and Atmospheric Administration Earth System Research Laboratory indicates that global concentration of CO₂ were 396.72 ppm in April 2013. In addition, the CO₂ levels at Mauna Loa averaged over 400 ppm for the first time during the week of May 26, 2013. These concentrations of CO₂ exceed by far the natural range over the last 650,000 years (180 to 300 ppm) as determined from ice cores.

Methane (CH₄) is a colorless, odorless non-toxic gas consisting of molecules made up of four hydrogen atoms and one carbon atom. CH₄ is combustible, and it is the main constituent of natural gas—a fossil fuel. CH₄ is released when organic matter decomposes in low oxygen environments. Natural sources include wetlands, swamps and marshes, termites, and oceans. Human sources include the mining of fossil fuels and transportation of natural gas, digestive processes in ruminant animals, such as cattle, rice paddies and the buried waste in landfills. Over the last 50 years, human activities, such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH₄. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide (N₂O) is a colorless, non-flammable gas with a sweetish odor, commonly known as "laughing gas", and sometimes used as an anesthetic. N₂O is naturally produced in the oceans and in rainforests. Man-made sources of N₂O include the use of fertilizers in agriculture, nylon and nitric acid production, cars with catalytic converters and the burning of organic matter. Concentrations of N₂O also began to rise at the beginning of the industrial revolution.

Chlorofluorocarbons (CFC) are gases formed synthetically by replacing all hydrogen atoms in CH₄ or ethane with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically un-reactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Because of the discovery that they are able to destroy stratospheric O₃, an ongoing global effort to halt their production was undertaken and has been extremely successful, so much so that levels of the major CFCs are now remaining steady or declining; however, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons (HFC) are synthesized chemicals that are used as a substitute for CFCs. Out of all of the GHGs; HFCs are one of three groups with the highest GWP. HFCs are synthesized for applications, such as automobile air conditioners and refrigerants.

Perfluorocarbons (PFC) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride (SF₆) is an extremely potent GHG. SF₆ is very persistent, with an atmospheric lifetime of more than 1,000 years. Thus, a relatively small amount of SF₆ can have a significant long-term impact on global climate change. SF₆ is human-made, and the primary user of SF₆ is the electric power industry. Because of its inertness and dielectric properties, it is the industry's preferred gas for electrical insulation, current interruption, and arc quenching (to prevent fires) in the transmission and distribution of electricity. SF₆ is used extensively in high voltage circuit breakers and switchgear, and in the magnesium metal casting industry.

The State of California GHG Inventory performed by the CARB, compiled statewide anthropogenic GHG emissions and sinks. It includes estimates for CO₂, CH₄, N₂O, SF₆, HFCs, and PFCs. The current inventory covers the years 2000 to 2015 and is summarized in Table 4.7-1. Data sources

used to calculate this GHG inventory include California and Federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the Intergovernmental Panel on Climate Change (IPCC). The 2000 emissions level is the sum total of sources from all sectors and categories in the inventory. The inventory is divided into seven broad sectors and categories in the inventory. These sectors include: agriculture, commercial and residential, electric power, industrial, transportation, recycling and waste, and high GWP gases.

When accounting for GHGs, all types of GHG emissions are expressed in terms of CO₂e and are typically quantified in metric tons (MT) or million metric tons (MMT).

GHGs have varying GWP. The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas. The reference gas for GWP is CO₂; therefore, CO₂ has a GWP of 1. The other main GHGs that have been attributed to human activity include CH₄, which has a GWP of 21, and N₂O, which has a GWP of 310.

Table 4.7-1. California Greenhouse Gas Emissions Inventory 2000 to 2015

Sector	Total 2000 Emissions (MMTCO ₂ e)	Total 2015 Emissions (MMTCO ₂ e)
Agriculture	31.95	34.65
Commercial and Residential	43.18	37.92
Electric Power	104.84	83.67
Industrial	96.24	91.71
Transportation	176.49	164.63
Recycling and Waste	7.35	8.73
High GWP Gases	7.14	19.05

Source: CARB 2017

GWP – global warming potential; MMTCO₂e – million metric tons of CO₂ equivalent

4.7.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

In June of 2013, the President enacted a national Climate Action Plan that consisted of a wide variety of executive actions and had three pillars: 1) cut carbon in America, 2) prepare the U.S. for impacts of climate change, and 3) lead international efforts to combat global climate change and prepare for its impacts. The Climate Action Plan outlines 75 goals within the three main pillars.

Cut Carbon in America. The Climate Action Plan consists of actions to help cut carbon by deploying clean energy, such as cutting carbon from power plants, promoting renewable energy, and unlocking long-term investment in clean energy innovation. In addition, the Plan includes actions designed to help build a 21st century transportation sector; cut energy waste in homes, businesses, and factories; and reducing other GHG emissions, such as HFCs and CH₄. The Plan commits to lead in clean energy and energy efficiency at a federal level.

Prepare the U.S. for Impacts of Climate Change. The Climate Action Plan consists of actions to help prepare for the impacts through building stronger and safer communities and infrastructure by supporting climate resilient investments, supporting communities and tribal areas as they prepare for impacts, and boosting resilience of building and infrastructure; protecting the economy and natural resources by identifying vulnerabilities, promoting insurance leadership, conserving land and water resources, managing drought, reducing wildfire risks, and preparing for future floods; and using sound science to manage climate impacts.

Lead International Efforts. The Climate Action Plan consists of actions to help the U.S. lead international efforts through working with other countries to take action by enhancing multilateral engagements with major economies, expanding bilateral cooperation with major emerging economies, combating short-lived climate pollutants, reducing deforestation and degradation, expanding clean energy use and cutting energy waste, global free trade in environmental goods and services, and phasing out subsidies that encourage wasteful use of fossil fuels and by leading efforts to address climate change through international negotiations.

In June of 2014, the Center for Climate and Energy Solutions published a 1-year review of progress in implementation of the Plan. The Center for Climate and Energy Solutions found that the administration had made marked progress in its initial implementation. The administration made at least some progress on most of the Plan's 75 goals; many of the specific tasks outlined had been completed. Notable areas of progress included steps to limit carbon pollution from power plants; improve energy efficiency; reduce CH₄ and HFC emissions; help communities and industry become more resilient to climate change impacts; and end U.S. lending for coal-fired power plants overseas.

State

Executive Order S-3-05 – Statewide GHG Emissions Targets

On June 1, 2005, the Governor issued EO S-3-05 which set the following GHG mission reduction targets:

- 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

This EO also directed the secretary of the California Environmental Protection Agency to oversee the efforts made to reach these targets, and to prepare biannual biennial reports on the progress made toward meeting the targets and on the impacts on California related to global warming. The first such Climate Action Team Assessment Report was produced in March 2006 and has been updated every 2 years thereafter.

California Global Warming Solutions Act (Assembly Bill 32)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as AB 32. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. CARB is the state agency charged with monitoring and regulating sources of emissions of GHGs that cause global warming in order to reduce emissions of GHGs. AB 32 also requires that by January 1, 2008, the CARB must determine what the statewide GHG emissions level was in 1990, and it must approve a statewide GHG



emissions limit so it may be applied to the 2020 benchmark. CARB approved a 1990 GHG emissions level of 427 MTCO_{2e}, on December 6, 2007, in its staff report. Therefore, in 2020, emissions in California are required to be at or below 427 MTCO_{2e}.

Under the “business as usual” (BAU) scenario established in 2008, statewide emissions were increasing at a rate of approximately 1 percent per year as noted below. It was estimated that the 2020 estimated BAU of 596 MTCO_{2e} would have required a 28 percent reduction to reach the 1990 level of 427 MTCO_{2e}.

Executive Order B-30-15

On April 20, 2015 Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor’s EO aligns California’s GHG reduction targets with those of leading international governments, such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed its legislated target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, summarized above). California’s new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2°C, the warming threshold at which there will likely be major climate disruptions, such as super droughts and rising sea levels. The targets stated in EO B-30-15 have not been adopted by the state legislature.

Climate Change Scoping Plan

The Scoping Plan released by CARB in 2008 outlined the state’s strategy to achieve the AB32 goals. This Scoping Plan, developed by CARB in coordination with the Climate Action Team, proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It was adopted by CARB at its meeting in December 2008. According to the Scoping Plan, the 2020 target of 427 MTCO_{2e} requires the reduction of 169 MTCO_{2e}, or approximately 28.3 percent, from the state’s projected 2020 BAU emissions level of 596 MTCO_{2e}.

However, in August 2011, the Scoping Plan was re-approved by the Board and includes the Final Supplement to the Scoping Plan Functional Equivalent Document. This document includes expanded analysis of project alternatives as well as updates the 2020 emission projections in light of the current economic forecasts. Considering the updated 2020 BAU estimate of 507 MTCO_{2e}, only a 16 percent reduction below the estimated new BAU levels would be necessary to return to 1990 levels by 2020. The 2011 Scoping Plan expands the list of 9 Early Action Measures into a list of 39 Recommended Actions.

In May 2014, CARB developed; in collaboration with the Climate Action Team, the First Update to California’s Climate Change Scoping Plan (Update), which shows that California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB32. In accordance with the United Nations Framework Convention on Climate Change (UNFCCC), CARB is beginning to transition to the use of the AR4’s 100-year GWPs in its climate change programs. CARB has recalculated the 1990 GHG emissions level with the AR4 GWPs to be 431 MTCO_{2e}; therefore, the 2020 GHG emissions limit established in response to AB32 is now slightly higher than the 427 MTCO_{2e} in the initial Scoping Plan.

GHG Reduction Strategies. The majority of the Scoping Plan's GHG reduction strategies are directed at the two sectors with the largest GHG emissions contributions: transportation and electricity generation. The GHG reduction strategies for these sectors involve statutory mandates affecting vehicle or fuel manufacture, public transit, and public utilities. The reduction strategies employed by CARB are designed to reduce emissions from existing sources as well as future sources. The most relevant are outlined in the following sections.

EO S-01-07. This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a low carbon fuel standard (LCFS) for transportation fuels be established for California and directs the CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. The CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. On December 29, 2011, District Judge Lawrence O'Neill in the Eastern District of California issued a preliminary injunction blocking the CARB from implementing LCFS for the remainder of the Rocky Mountain Farmers Union litigation. The injunction was lifted in April 2012 so that CARB can continue enforcing the LCFS pending CARB's appeal of the federal district court ruling.

Renewable Portfolio Standard. The RPS promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "initial RPS"), the goals have been accelerated and increased by EOs S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, the Governor signed SB 2 (1X) codifying California's 33 percent RPS goal; Section 399.19 requires the California Public Utilities Commission, in consultation with the California Energy Commission, to report to the Legislature on the progress and status of RPS procurement and other benchmarks. The purpose of the RPS upon full implementation is to provide 33 percent of the state's electricity needs through renewable energy sources. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

The RPS is included in CARB's Scoping Plan list of GHG reduction measures to reduce energy sector emissions. It is designed to accelerate the transformation of the electricity sector through such means as investment in the energy transmission infrastructure and systems to allow integration of large quantities of intermittent wind and solar generation. Increased use of renewables would decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector. In 2008, as part of the Scoping Plan original estimates, CARB estimated that full achievement of the RPS would decrease statewide GHG emissions by 21.3 million metric tons of CO₂e (MMTCO₂e). In 2010, CARB revised this number upwards to 24.0 MMTCO₂e.

Senate Bill 97

SB 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs Office of Planning and Research (OPR) to develop draft CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" by July 1, 2009, and directs the Resources Agency to certify and adopt the CEQA Guidelines by January 1, 2010.



On December 30, 2009, the Natural Resources Agency adopted amendments to the CEQA Guidelines in the CCR. The amendments went into effect on March 18, 2010, and are summarized below:

- Climate action plans and other GHG reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the GHG emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. In addition, consideration of several qualitative factors may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. The Guidelines do not set or dictate specific thresholds of significance.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of GHG emissions in Appendix G of the CEQA Guidelines.
- The Guidelines are clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation.”
- The Guidelines promote the advantages of analyzing GHG impacts on an institutional, programmatic level, and, therefore, approve tiering of environmental analyses and highlights some benefits of such an approach.
- EIRs must specifically consider a project's energy use and energy efficiency potential, pursuant to Appendix F of the CEQA Guidelines.

Senate Bill 375 – Regional Emissions Targets

SB 375 requires that regions within the state which have a metropolitan planning organization must adopt a sustainable communities' strategy as part of their regional transportation plans. The strategy must be designed to achieve certain goals for the reduction of GHG emissions. The bill finds that GHG from autos and light trucks can be substantially reduced by new vehicle technology, but even so, “it will be necessary to achieve significant additional GHG reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32.” SB 375 provides that new CEQA provisions be enacted to encourage developers to submit applications and local governments to make land use decisions that will help the state achieve its goals under AB 32,” and that “current planning models and analytical techniques used for making transportation infrastructure decisions and for air quality planning should be able to assess the effects of policy choices, such as residential development patterns, expanded transit service and accessibility, the walkability of communities, and the use of economic incentives and disincentives.”

California Code of Regulations Title 24

Although not originally intended to reduce GHG emissions, CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are

updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions. Therefore, increased energy efficiency results in decreased GHG emissions.

County of Imperial

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the CEQA Guidelines to provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and GCC impacts. Formal CEQA thresholds for lead agencies must always be established through a public hearing process. Imperial County has not established formal quantitative or qualitative thresholds through a public rulemaking process, but CEQA permits the lead agency to establish a project-specific threshold of significance if backed by substantial evidence, until such time as a formal threshold is approved.

4.7.3 Existing Conditions

GHGs are gases that trap heat in the atmosphere. These emissions occur from natural processes as well as human activities. The accumulation of GHGs in the atmosphere regulates the earth's temperature. Worldwide, average temperatures are likely to increase by 3 ° to 7 ° Fahrenheit by the end of the 21st century; however, a global temperature increase does not directly translate to a uniform increase in temperature in all locations on the earth. Regional climate changes are dependent on multiple variables, such as topography. One region of the Earth may experience increased temperature, increased incidents of drought, and similar warming effects, whereas another region may experience a relative cooling. According to the IPCC's Working Group II Report, climate change impacts on North America may include diminishing snowpack, increasing evaporation, exacerbated shoreline erosion, exacerbated inundation from sea level rising, increased risk and frequency of wildfire, increased risk of insect outbreaks, increased experiences of heat waves, and rearrangement of ecosystems, as species and ecosystem zones shift northward and to higher elevations (IPCC 2014).

Even though climate change is a global problem and GHGs are global pollutants, the specific potential effects of climate change on California have been studied. The third assessment produced by the California Natural Resources Agency explores local and statewide vulnerabilities to climate change, highlighting opportunities for taking concrete actions to reduce climate-change impacts. Projected changes for the remainder of this century in California include:

- **Temperatures:** By 2050, California is projected to warm by approximately 2.7 ° Fahrenheit above 2000 averages, a threefold increase in the rate of warming over the last century and springtime warming — a critical influence on snowmelt — will be particularly pronounced.
- **Rainfall:** Even though model projections continue to show the Mediterranean pattern of wet winters and dry summers with seasonal, year-to-year, and decade-to-decade variability, improved climate models shift towards drier conditions by the mid-to-late 21st century in Central, and most notably, Southern California.

- **Wildfire:** Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning, with human activities continuing to be the biggest factor in ignition risk. Models are showing that estimated that property damage from wildfire risk could be as much as 35 percent lower if smart growth policies were adopted and followed than if there is no change in growth policies and patterns.

4.7.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to GHGs, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to GHG emissions are considered significant if any of the following occur:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1. Use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
2. Rely on a qualitative analysis or performance based standards.

A lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of

GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The *Air Quality/Greenhouse Gas Report* (Appendix D of this EIR) proposes the use of the “Tier 3” quantitative thresholds for residential and commercial projects as recommended by the South Coast Air Quality Management District (SCAQMD). The SCAQMD proposes that if a project generates GHG emissions below 3,000 metric tons of MTCO_{2e}, it could be concluded that the project’s GHG contribution is not cumulatively considerable and is, therefore, considered less than significant under CEQA. If the project generates GHG emissions above the threshold, the analysis must identify mitigation measures to reduce GHG emissions.

Methodology

Projects that meet the criteria for conducting a climate change analysis are required to conduct a GHG inventory and disclose GHG emissions associated with project implementation and operation under BAU conditions. BAU is defined as the emissions that would have occurred in the absence of reductions mandated under AB 32.

The main source of GHG emissions associated with the project would be combustion of fossil fuels during construction of the project. Emissions of GHGs were calculated using the same approach as emissions for overall construction emissions discussed in Chapter 4.3, Air Quality of this EIR. Emission calculations are provided in the *Air Quality/Greenhouse Gas Report* in Appendix D of this EIR. The potential effects of proposed GHG emissions are by nature global, and have cumulative impacts. As individual sources, GHG emissions are not large enough to have an appreciable effect on climate change. Therefore, the impact of proposed GHG emissions to climate change is discussed in the context of cumulative impacts.

Impact Analysis

Impact 4.7-1 Generate GHG Emissions, either Directly or Indirectly, that may have a Significant Impact on the Environment.

Construction of the project would result in a temporary increase in GHG emissions.

Construction and operation of the project would result in a relatively small amount of GHG emissions. The project would generate GHG emissions during construction and routine operational activities at the site. During construction, GHG emissions would be generated from operation of both on-road and off-road equipment. Once operational, GHG emissions would be limited to vehicle trips associated with routine maintenance and monitoring activities at the project site.

Solar projects are an integral part of CARB’s emission reduction strategy presented in the Scoping Plans. The 2008 Scoping Plan specifically addresses critical complementary measures directed at emission sources that are included in the cap-and-trade program that are designed to achieve cost-effective emissions reductions while accelerating the necessary transition to the low-carbon economy. One of these measures was the RPS, which was to promote multiple objectives, including diversifying the electricity supply by accelerating the transformation of the Electricity sector, including investment in the transmission infrastructure and system changes to allow integration of massive quantities of intermittent wind and solar generation. Therefore, the project complies with an

approved GHG emission reduction plan and is presumed to have a less than significant GHG impact.

The total GHG emissions generated within each of the construction phases are listed in Table 4.7-2. As shown in Table 4.7-2, construction of the proposed project would generate 382 metric tons of CO₂e. Amortized over a 30-year period, the approximate life of the project, the yearly contribution to GHG from the construction of the project would be 12.7 MT of CO₂e. Therefore, the construction emissions are less than the SCAQMD’s screening threshold of 3,000 MT of CO₂e per year.

Table 4.7-2. Construction Greenhouse Gas Emissions by Phase

(Metric Tons)

Construction Phase	CO ₂	CH ₄	N ₂ O	CO ₂ e
Phase 1. Site Preparation	115.1	0.002	0.0	115.2
Phase 2. Facility Installation	248.5	0.005	0.0	248.6
Phase 3. Commissioning/Finishing	17.7	0.000	0.0	17.7
Total	381.3	0.007	0.0	381.5
Amortized over 30 years				12.7

Source: Appendix D of this EIR

CO₂ - carbon dioxide; CO₂e – carbon dioxide equivalent; CH₄ – methane; N₂O – nitrous oxide

The proposed project would have no major stationary emission sources and would require minimal vehicular trips. Therefore, operation of the proposed solar facility would result in substantially lower emissions than project construction. In addition, once operational, the proposed solar facility would offset GHG emissions generated by electricity produced through the burning of fossil fuels. Therefore, implementation of the proposed project would result in a less than significant impact associated with the generation of GHG emissions.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.7-2 Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of GHG.

The project would generate additional solar power in order to meet the state of California’s goals for the Renewable Portfolio Standard, which has been identified by the state as a means of meeting the goals of AB 32 to reduce emissions to 1990 levels by the year 2020. Therefore, the project would not conflict with applicable plans, policies, or regulations.

As discussed in Impact 4.7-1, the project would generate a relatively small amount of GHG emissions. One of the critical complementary measures directed at emission sources that are included in the cap-and-trade program is the RPS, which places an obligation on electricity supply companies to produce 33 percent of their electricity from renewable energy sources by 2020. A key prerequisite to reaching the target would be to provide sufficient electric transmission lines to renewable resource zones and system changes to allow integration of massive quantities of

intermittent wind and solar generation. The project would help the state meet this goal by generating up to 30 MW of power to California's current renewable portfolio. Therefore, in this regard, the project would help the state meet its goals under AB 32. Neither the County of Imperial or ICAPCD have any specific plans, policies, nor regulations adopted for reducing the emissions of GHGs; however, since the long-term operational GHG emissions are minimal and the construction emissions are short-term, the project would not conflict with any applicable plan, policy, or regulation adopted for reducing the emissions of GHGs. Implementation of the proposed project would result in a less than significant impact associated with the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHG.

Mitigation Measure(s)

No mitigation measures are required.

4.7.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Similar to construction activities, decommissioning and restoration would result in CO₂e emissions below allowable thresholds. Construction activities during decommissioning and restoration would adhere to Mitigation Measures AQ-1 and AQ-2 outlined in Chapter 4.3, Air Quality of this EIR, further reducing GHG emissions. Therefore, the impact is considered less than significant.

Residual

As described in this section, the project would result in a less than significant GHG emissions impact. Operation of the project, subject to the provision of a CUP, would generally be consistent with AB 32. Based on these circumstances, the project would not result in any residual significant and unavoidable impacts with regards to global climate change.

4.8 Hazards and Hazardous Materials

Information contained in this section is summarized from the Phase I ESA prepared for the project by GS Lyon Consultants, Inc. The Phase I ESA prepared for the project site was used to assess the potential hazards and hazardous materials found on-site or adjacent to the project site. This report is included in Appendix H of this EIR. This section addresses potential hazards and hazardous materials for construction and operational impacts.

4.8.1 Environmental Setting

The project site is located within a rural agricultural area of northeastern Imperial Valley approximately 6 miles northeast of the City of Calipatria. Agricultural operations include the use of ASTs and USTs for fuel storage, transmission facilities, intricate canal systems, the confluence of major surface arteries and rail systems, and the use of fertilizers and herbicides. Although a hazardous material accident can occur almost anywhere, particular regions are more vulnerable. The potential for an accident is increased in regions near major arterial roadways or railways that transport hazardous materials and in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous material.

Records Review

A review of historic aerial photographs, historic topographic maps, historic Sanborn Fire Insurance maps, governmental regulatory databases, and other regulatory and agency databases was performed to evaluate potential adverse environmental conditions resulting from previous ownership and uses of the project site.

GS Lyon Consultants, Inc. contracted Environmental Data Resources, Inc. of Shelton, Connecticut which queries and maintains comprehensive environmental databases and historical information, including proprietary databases, aerial photography, topographic maps, Sanborn Maps, and city directories to generate a compilation of federal, state and tribal regulatory lists containing information regarding hazardous materials occurrences on or within the prescribed radii of American Society of Testing and Materials Practice E 1527-13. The search of each database was conducted using the approximate minimum search distances from the subject property defined by the Standard. The purpose of the records review is to obtain and review reasonably ascertainable records that would help identify recognized environmental conditions or historical recognized environmental conditions in connection with the project site. The project site is not identified in the Environmental Data Resources, Inc. report as being located on a hazardous materials site pursuant to Government Code Section 65962.5. The results of the background review are presented in the Phase I ESA (Appendix H of this EIR).

Aerial photographs dating back to 1937 and the IID archives dating back to 1949 were reviewed for historical development of the project site. The 1937 aerial photograph shows the project site as vacant desert lands. The 1940, 1948, 1953, 1976, and 1984 aerial photographs show the project site under agricultural cultivation. The 1992, 1996, 2002, and 2008 aerial photographs show the southern parcel of the project site under agricultural cultivation. The northern parcel of the project site was taken out of agricultural production and a 230 kV electrical substation (Midway Substation) was constructed at the southeast corner between 1984 and 1992. The 2014 aerial photographs show the project site as fallowed agricultural land.

Because of the rural undeveloped nature of the project site and vicinity, no Sanborn Fire Insurance Maps were available for the project site. Historical telephone and street directories were reviewed and no service stations, chemical manufacturers, petroleum manufacturers, distributors, or automotive repair facilities were noted at or in the immediate vicinity of the project site.

Site Reconnaissance

A site reconnaissance of the project site was performed on March 1, 2017. The site visit consisted of driving the perimeter of the site and randomly crossing the site. The reconnaissance included visual observations of surficial conditions at the site and observation of adjoining properties to the extent that they were visible from public areas. The site reconnaissance was limited to visual and/or physical observation of the exterior and interior of the subject property and its improvements, the current uses of the property and adjoining properties, and the current condition of the property.

The site visit evaluated the subject property and adjoining properties for potential hazardous materials/waste and petroleum product use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; mechanical or electrical equipment likely to contain liquids; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination. The site visit did not evaluate the presence of asbestos-containing materials, radon, lead-based paint, mold, indoor air quality, or structural defects, or other items identified as “non-scope items” in the Phase I ESA (Appendix H of this EIR).

4.8.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over 5 years, \$1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. The Comprehensive Environmental Response, Compensation, and Liability Act established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified.

Emergency Planning Community Right-to-Know Act of 1986 (42 United States Code 11001 et seq.)

The Emergency Planning Community Right-to-Know Act was included under the Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III. Emergency Planning Community Right-to-Know was passed in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. These concerns were triggered by the disaster in Bhopal, India, in which more than 2,000 people suffered

death or serious injury from the accidental release of methyl isocyanate. To reduce the likelihood of such a disaster in the U.S., Congress imposed requirements on both states and regulated facilities.

Emergency Planning Community Right-to-Know establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and “Community Right-to-Know” reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR 355). The Emergency Planning Community Right-to-Know provisions help increase the public’s knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. In California, SARA Title III is implemented through the California Accidental Release Prevention.

Federal Insecticide, Fungicide, and Rodenticide Act

The objective of Federal Insecticide, Fungicide, and Rodenticide Act is to provide federal control of pesticide distribution, sale, and use. All pesticides used in the U.S. must be registered (licensed) by the EPA. Registration assures that pesticides would be properly labeled and that, if used in accordance with specifications, they would not cause unreasonable harm to the environment. Use of each registered pesticide must be consistent with use directions contained on the label or labeling.

Federal Water Pollution Control Act (Clean Water Act)

The objective of the Federal Water Pollution Control Act, commonly referred to as the CWA, is to restore and maintain the chemical, physical, and biological integrity of the nation’s waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. The oil SPCC Program of the CWA specifically seeks to prevent oil discharges from reaching waters of the U.S. or adjoining shorelines. Further, farms are subject to the SPCC rule if they:

- Store, transfer, use, or consume oil or oil products
- Could reasonably be expected to discharge oil to waters of the U.S. or adjoining shorelines. Farms that meet these criteria are subject to the SPCC rule if they meet at least one of the following capacity thresholds:
 - Aboveground oil storage capacity greater than 1,320 gallons
 - Completely buried oil storage capacity greater than 42,000 gallons

However, the following are exemptions to the SPCC rule:

- Completely buried storage tanks subject to all the technical requirements of the underground storage tank regulations
- Containers with a storage capacity less than 55 gallons of oil
- Wastewater treatment facilities
- Permanently closed containers
- Motive power containers (e.g., automotive or truck fuel tanks)

Hazardous Materials Transport Act – Code of Federal Regulations

The Hazardous Materials Transportation Act was published in 1975. Its primary objective is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous material in commerce by improving the regulatory and enforcement authority of the Secretary of Transportation. A hazardous material, as defined by the Secretary of Transportation is, any “particular quantity or form” of a material that “may pose an unreasonable risk to health and safety or property.”

Occupational Safety and Health Administration

Occupational Safety and Health Administration’s (OSHA) mission is to ensure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA standards are listed in 29 CFR Part 1910.

The OSHA Process Safety Management of Highly Hazardous Chemicals (29 CFR Part 110.119) is intended to prevent or minimize the consequences of a catastrophic release of toxic, reactive, flammable, or explosive highly hazardous chemicals by regulating their use, storage, manufacturing, and handling. The standard intends to accomplish its goal by requiring a comprehensive management program integrating technologies, procedures, and management practices.

Resource Conservation and Recovery Act

The goal of the Resource Conservation and Recovery Act, a federal statute passed in 1976, is the protection of human health and the environment, the reduction of waste, the conservation of energy and natural resources, and the elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. The corresponding regulations in 40 CFR 260-299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste.

State

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources

The Division of Oil, Gas, and Geothermal Resources was formed in 1915 to address the needs of the state, local governments, and industry by regulating statewide oil and gas activities with uniform laws and regulations. The Division supervises the drilling, operation, maintenance, and plugging and abandonment of onshore and offshore oil, gas, and geothermal wells, preventing damage to: (1) life, health, property, and natural resources; (2) underground and surface waters suitable for irrigation or domestic use; and (3) oil, gas, and geothermal reservoirs. The Division’s programs include: well permitting and testing; safety inspections; oversight of production and injection projects; environmental lease inspections; idle-well testing; inspecting oilfield tanks, pipelines, and sumps; hazardous and orphan well plugging and abandonment contracts; and subsidence monitoring.

California Department of Toxic Substances Control

DTSC regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. Approximately 1,000 scientists, engineers, and specialized support staff are responsible for ensuring that companies and individuals handle, transport, store, treat, dispose of, and clean-up hazardous wastes appropriately. Through these measures, DTSC contributes to greater safety for all Californians, and less hazardous waste reaches the environment.

On January 1, 2003, the Registered Environmental Assessor program joined DTSC. The program certifies environmental experts and specialists as being qualified to perform a number of environmental assessment activities. Those activities include private site management, Phase I ESAs, risk assessment, and more.

California Division of Occupational Safety and Health

The California Division of Occupational Safety and Health protects workers and the public from safety hazards through its programs and provides consultative assistance to employers. California Division of Occupational Safety and Health issues permits, provides employee training workshops, conducts inspections of facilities, investigates health and safety complaints, and develops and enforces employer health and safety policies and procedures.

California Environmental Protection Agency

California Environmental Protection Agency and the SWRCB establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law.

California Emergency Response Plan

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the State Office of Emergency Services, which coordinates the responses of other agencies including Cal-EPA, the California Highway Patrol, CDFW, RWQCB, Imperial County Sheriff's Department, ICFD, and the City of Imperial Police Department.

Local

Imperial County General Plan

The Seismic and Public Safety Element identifies goals and policies that will minimize the risks associated with natural and human-made hazards, and specify the land use planning procedures that should be implemented to avoid hazardous situations. The purpose of the Seismic and Public Safety Element is to reduce the loss of life, injury, and property damage that might result from disaster or accident. In addition, the Element specifies land use planning procedures that should be implemented to avoid hazardous situations. The policies listed in the Seismic and Public Safety Element are not applicable to the proposed project, as they address human occupancy development. The proposed project is a solar project and does not propose residential uses.

Imperial County Public Health Department

Hazardous Materials and Medical Waste Management

DTSC was appointed the Certified Unified Program Agency (CUPA) for Imperial County in January 2005. The Unified Program is the consolidation of 6 state environmental programs into one program under the authority of a CUPA. The CUPA inspects businesses or facilities that handle or store hazardous materials, generate hazardous waste, own or operate ASTs or USTs, and comply with the California Accidental Release Prevention Program. The CUPA Program is instrumental in accomplishing this goal through education, community and industry outreach, inspections and enforcement.

4.8.3 Existing Conditions

The project site encompasses approximately 223 acres, comprised of two parcels of land identified as APNs 025-260-024 (northern parcel) and 025-280-003 (southern parcel) (Figure 3-2 in Chapter 3, Project Description).

The northern parcel is located at the northwest corner of Simpson Road and the IID's East Highline Canal. The existing Midway Substation is located on the southeast corner of the northern parcel of the project site. The northern parcel is bound by IID's 'M' Lateral on the south, 'N' Lateral on the north, and the East Highline Canal diagonally along the east. The southern parcel is irregular in shape with the southwest corner located 1 mile east of the Wiest and Merkley Roads intersection and consists of two fallowed agricultural fields.

The southern parcel is bounded by IID's 'L' Lateral (irrigation supply canal) on the south, 'M' Lateral on the north, and the East Highline Canal diagonally along the east.

Adjacent properties consist of agricultural fields and citrus orchards, the IID's East Highline Canal, and a farm shop (P&T Enterprises) located south across the 'M' Lateral from the southwest corner of the northern parcel of the project site. Properties in the project vicinity include the existing Sonora Solar facility located approximately 0.80 miles southwest of project site, Calipatria State Prison located 3 miles southwest of the project site, and another farm shop with hay compress, hay storage yard and above ground fuel tanks (Aldahara Farms) located approximately 1 mile southwest of the project site.

Existing Environmental Hazards

Hazardous Substances and Petroleum Products

No evidence of operations that use, treat, store, dispose of, or generate hazardous materials or petroleum products were observed on the project site. The 230kV transformer within the fenced Midway Substation is filled with oil; however, the transformer has a containment wall encompassing the foundation should the transformer leak.

Storage Tanks, Drums, and Containers

There was no visual evidence of current USTs or historical presence of ASTs observed on the project site. There was also no evidence of drums or storage containers on the project site.

Suspect Polychlorinated Biphenyl Containing Equipment

Polychlorinated biphenyls (PCBs) were manufactured from 1932 until the manufacture of the product was banned in 1978. Because of its versatility (non-flammability, chemical stability, high boiling point, and electrical insulation properties), PCBs were used in various industrial and commercial applications: electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications. Although no longer used in the U.S., there is the potential for PCBs to be found in electrical transformers manufactured before 1979.

Sealed electrical transformers owned and maintained by the IID are located on the northern parcel of the project site. The IID has replaced all transformers that contained PCB's. No leaks were noted during the site visit. The large transformers(s) within the substation have foundation(s) with containment walls should the transformers leak.

Wastewater

No wastewater is generated on the project site. Excess agricultural irrigation water flows into the large earthen drains that border the project site.

Wells

No evidence of wells (dry wells, drinking water, observation wells, groundwater monitoring wells, irrigation wells, injection wells, or abandoned wells) was observed on the project site.

Septic Systems

No septic systems are present on the project site.

Hazardous Building Materials and Pesticides

Hazardous building materials and pesticides are associated with any older buildings because of their age and the agricultural land uses. Because of the lack of site structures and site development on the project site, the potential for asbestos-containing materials and lead based paint residues existing at the project site is very low. Concrete linings of old irrigation ditches and scattered concrete pipe may contain asbestos containing materials. Based on the review of environmental records, historical documents, and site conditions, the property has been in agricultural use since the late 1940s. Residues of currently available pesticides and currently banned pesticides, such as

Dichlorodiphenyltrichloroethane/ Dichlorodiphenyldichloroethylene (DDT/DDE), may be present in near surface soils in limited concentrations.

The project site was previously used for agricultural production. Consequently, there is a potential for the project site to contain hazards related to pesticide and herbicide use from aerial and/or ground application. Although many agricultural fields are burned after crop removal (wheat stubble, asparagus, etc.) pesticide residue can still be found in soils. In addition, pesticides and herbicides can migrate via surface run-off. The concentrations of these pesticides found on other Imperial Valley agricultural sites are typically less than 25 percent of the current regulatory threshold limits and are not considered a significant environmental hazard. The presence and concentration of near surface pesticides at the project site can be accurately characterized only by site-specific sampling and testing.

Airports

The nearest airport to the project site is the Cliff Hatfield Memorial Airport, located approximately 7 miles southwest of the project site. According to Figure 3C of the ALUCP, no portion of the project site is located within the Cliff Hatfield Municipal Memorial Airport's land use compatibility zones (County of Imperial 1996).

Fire Hazard

The project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan, the potential for a major fire in the unincorporated areas of the County is generally low.

4.8.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project-related impacts related to hazards and hazardous materials, the methodology employed for the evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to hazards and hazardous materials are considered significant if any of the following occur:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- 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
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment

- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- 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

Methodology

This analysis evaluates the potential for the project, as described in Chapter 3, Project Description to result in significant impacts related to hazards and hazardous materials on or within the 1-mile buffer zone of the project site. This analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, a Phase I ESA has been prepared for the project site. The information obtained from the Phase I ESA was reviewed and summarized to present the existing conditions, in addition to identifying potential environmental impacts, based on the significance criteria presented above. Impacts associated with hazards and hazardous materials that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, duration of project construction, and related activities. The conceptual site plan (Figure 3-3) for the project was also used to evaluate potential impacts.

Impact Analysis

Impact 4.8-1 Possible Risk to the Public or Environment through Routine Transport, Use, or Disposal of Hazardous Materials.

The project would not result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction of the project would involve the limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and county regulations. No extremely hazardous substances are anticipated to be produced, used, stored, transported, or disposed of as a result of project construction. Material Safety Data Sheets for all applicable materials present on-site would be made readily available to on-site personnel. Construction materials would be sorted on-site throughout construction and transported to appropriate waste management facilities. Recyclable materials would be separated from non-recyclable items and stored until they could be transported to a designated recycling facility.

If the on-site storage of hazardous materials necessitate, at any time during construction and/or operations and long term maintenance, quantities in excess of 55-gallons, a hazardous material

management program would be required. The hazardous material management program developed for the project would include, at a minimum, procedures for:

- Hazardous materials handling, use and storage
- Emergency response
- Spill control and prevention
- Employee training
- Record keeping and reporting

Spill response plans would be developed prior to project construction and operation or prior to the storage on-site of an excess of 55 gallons of hazardous materials, and personnel would be made aware of the procedures for spill cleanup and the procedures to report a spill. Spill cleanup materials and equipment appropriate to the type and quantity of chemicals and petroleum products expected would be located onsite and personnel shall be made aware of their location.

The small quantities of chemicals to be stored at the project site during construction include equipment and facilities maintenance chemicals. These materials would be stored in their appropriate containers in an enclosed and secured location, such as portable outdoor hazardous materials storage cabinets equipped with secondary containment to prevent contact with rainwater. The portable chemical storage cabinets may be moved to different locations around the project site as construction activity locations shift. The chemical storage area would not be located immediately adjacent to any drainage. Disposal of excess materials and wastes would be performed in accordance with local, state, and federal regulations.

Additionally, hazardous material storage and management would be conducted in accordance with requirements set forth by the ICFD, Imperial County Office of Emergency Services, DTSC, and CUPA for storage and handling of hazardous materials. Further, construction activities would occur according to OSHA regulatory requirements; therefore, it is not anticipated that the construction activities for the proposed project would release hazardous emissions or result in the handling of hazardous or acutely hazardous materials, substances, or waste. This could include the release of hazardous emissions, materials, substances, or wastes during operational activities. With implementation of and adherence to a hazardous material management program, as well as adherence to requirements set forth by the ICFD, Imperial County Office of Emergency Services, DTSC, OSHA regulatory requirements and CUPA the impact associated with the possible risk to the public or environment through routine transport, use, or disposal of hazardous materials would be considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.8-2 Possible Risk to the Public or Environment through Release of Hazardous Materials.

The project may result in an accidental release of hazardous materials into the environment from project-related activities.

Pesticides/Fertilizers

The project site was previously used for agricultural production. Consequently, there is a potential for the project site to contain hazards related to pesticide and herbicide use from aerial and/or ground application. Although many agricultural fields are burned after crop removal (wheat stubble, asparagus, etc.) pesticide residue can still be found in soils. In addition, pesticides and herbicides can migrate via surface run-off. The concentrations of these pesticides found on other Imperial Valley agricultural sites are typically less than 25 percent of the current regulatory threshold limits and are not considered a significant environmental hazard (Appendix H of this EIR).

FIFRA provides federal control of pesticide distribution, sale, and use. All pesticides used in the U.S. must be registered (licensed) by the EPA. Registration assures that pesticides would be properly labeled and that, if used in accordance with specifications, they would not cause unreasonable harm to the environment. Use of each registered pesticide must be consistent with use directions contained on the label or labeling. The construction phase, operations and long term maintenance of the facility would not result in additional application of pesticides or fertilizers. Therefore, the potential impact associated with the possible risk to the public or environment through release of hazardous materials is considered less than significant.

Hazardous Materials

The Phase I ESA prepared for the proposed project did not identify any on-site RECs, ASTs, or USTs. Because of the lack of site structures and site development on the project site, the potential for asbestos-containing materials and lead based paint residues existing at the project site is very low. Therefore, a less than significant impact associated with the potential impact associated with an accidental release of hazardous materials into the environment from project-related activities would occur with implementation of the proposed project.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.8-3 Hazardous Emissions or Hazardous Materials Substances, or Waste within 0.25 mile of an Existing or Proposed School.

The project would not pose a risk to nearby (within 0.25 mile) schools or proposed school facilities.

The project site is not located within 0.25 mile of an existing or proposed school. Therefore, the proposed project would not pose a risk to nearby schools and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.8-4 Project Located on a Site Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5.

The project is not located on a site included on a list of hazardous materials sites pursuant to Government Code Section 65962.5.

The project site is not identified in the Environmental Data Resources, Inc. report as being located on a hazardous materials site pursuant to Government Code Section 65962.5. Implementation of the proposed project would not result in a significant impact related to the project site being located on a listed hazardous materials site.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.8-5 Possible Safety Hazard to the Public Residing or Working Within an Airport Land Use Plan or Within 2 Miles of a Public Airport or Public Use Airport.

The project is not located within an airport land use plan or within 2 miles of a public airport.

The nearest airport to the project site is the Cliff Hatfield Memorial Airport, located approximately 7 miles southwest of the project site. According to Figure 3C of the ALUCP, no portion of the project site is located within the Cliff Hatfield Municipal Memorial Airport's land use compatibility zones (County of Imperial 1996). Furthermore, the project applicant filed a Notice of Proposed Construction Alteration with the Federal Aviation Administration. Therefore, no impact associated with potential safety hazards to the public residing or working within proximity to a public airport would occur with implementation of the proposed project.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.8-6 Possible Safety Hazard to the Public Residing or Working Within Proximity to a Private Airstrip.

The project site is not located within proximity to a private airstrip and would not create safety hazards.

There are no private airstrips located in close proximity to the project site. Therefore, no impact associated with potential safety hazards to the public residing or working within proximity to a private airstrip would occur with implementation of the proposed project.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.8-7 Possible Impediment to Emergency Plans.

The project would not interfere with an adopted emergency response plan or emergency evacuation plan.

The 2007 Imperial County Draft Operational Area Emergency Operations Plan does not identify specific emergency roadway routes as part of its emergency operations plan. The City of Calexico General Plan, Section 8.0, Safety Element, identifies the major evacuation routes as SR 11, SR 98, and I-8. The project is not expected to impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

The project applicant would be required, through the conditions of approval, to prepare a street improvement plan for the project that would include emergency access points and safe vehicular travel. In addition, local building codes would be followed to minimize flood, seismic, and fire hazard. Therefore, the proposed project would result in a less than significant impact associated with the possible impediment to emergency plans.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.8-8 Possible Risk to People or Structures Caused by Wildland Fires.

The project sites are not located in an area susceptible to wildland fires.

The project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan, the potential for a major fire in the unincorporated areas of the County is generally low. Chapter 4.12, Public Services, addresses the proposed project's increased need for fire protection services and project design features proposed to reduce the risk of fire. Because the proposed project is not located in proximity to an area susceptible to wildland fires, implementation of the proposed project would result in a less than significant impact related to the possible risk to people or structures caused by wildland fires.

Mitigation Measure(s)

No mitigation measures are required.

4.8.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

During decommissioning and restoration of the project site, the applicant or its successor in interest would be responsible for the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on the project site. The project applicant anticipates using the best available recycling measures at the time of decommissioning. Any potentially hazardous materials located on the project site would be disposed of, and/or remediated in compliance with local and state regulations, including DTSC regulations prior to construction of the solar facility.

The operation of the solar facility would not generate hazardous wastes and, therefore, implementation of applicable regulations identified for construction and operations would ensure restoration of the project site to preexisting (pre-project) conditions during the decommissioning

process in a manner that would be less than significant. Furthermore, decommissioning/restoration activities would not result in a potential impact associated with wildfires (the project site is not susceptible to wildfires) or impediment to an emergency plan (agricultural uses do not conflict with emergency plans).

Residual

Implementation of a hazardous material management program and adherence to requirements set forth by the ICFD, Imperial County Office of Emergency Services, DTSC, OSHA regulatory requirements, and CUPA would reduce the impact associated with the possible risk to the public or environment through routine transport, use, or disposal of hazardous materials to a level of less than significant. Therefore, the proposed project would not result in residual significant and unmitigable impacts related to hazards and hazardous materials.

4.9 Hydrology/Water Quality

This section provides a description of existing water resources within the project area and pertinent local, state, and federal plans and policies. Each subsection includes descriptions of existing hydrology/drainage, existing flooding hazards, and the environmental impacts on hydrology and water quality resulting from implementation of the proposed project, and mitigation measures where appropriate. The impact assessment provides an evaluation of potential adverse effects to water quality based on criteria derived from CEQA Guidelines in conjunction with actions proposed in Chapter 3, Project Description. Fuscoe Engineering, Inc. prepared the *Conceptual Drainage Study and Storm Water Quality Analysis* for the proposed project. This report is included in Appendix I of this EIR.

4.9.1 Environmental Setting

The project site is located in the Imperial Valley Planning Area of the Colorado River Basin. The Colorado River Basin Region covers approximately 13 million acres (20,000 square miles) in the southeastern portion of California. It includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. The Colorado River Basin Region is divided into seven major planning areas on the basis of different economic and hydrologic characteristics. The Imperial Valley Planning Area consists of the following HUs: Imperial (723.00) comprised of 2,500 square miles in the southern portion of the Colorado River Basin Region, with the majority located in Imperial County; Davies (724.00), and Amos-Ogilby (726.00). The project site is located within the Imperial HU.

The Imperial Hydrologic Unit consists of the majority of the Imperial Valley, encompassing over 1.3 million acres of land. The watershed includes vast acreages of agricultural land; towns such as El Centro, Calexico, and Brawley, along with a large network of IID operated canals and drains. The watershed is atypical of most watersheds in California, as it currently and historically has been shaped by man-made forces. The watershed's primary watercourses, the New and Alamo rivers, flow north, from the Mexican border toward their final destination, the Salton Sea. The Salton Sea, a 376 square mile closed inland lake was created in 1905 through a routing mistake and subsequent flood on the Colorado River. The sea has been fed primarily by agricultural runoff from the New and Alamo Rivers ever since that time.

Imperial Valley has a subtropical desert climate characterized by hot, dry summers and mild winters. Summer temperatures typically exceed 100° Fahrenheit, while winter low temperatures rarely drop below 32° Fahrenheit. The remainder of the year has a relatively mild climate with temperatures averaging in the mid-1970s. For the 30 years from 1995 to 2014, average annual air temperature was 72.9° Fahrenheit, and average annual rainfall period was 2.67 inches. The majority of rainfall occurs from November through March, along with periodic summer thunderstorms.

4.9.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

Federal

Clean Water Act

The EPA is the lead federal agency responsible for managing water quality. The CWA of 1972 is the primary federal law that governs and authorizes the EPA and the states to implement activities to control water quality. The various elements of the CWA that address water quality and that are applicable to the project are discussed below. Wetland protection elements administered by the USACE under Section 404 of the CWA, including permits for the discharge of dredged and/or fill material into waters of the United States, are discussed in Section 4.4, Biological Resources.

Under federal law, the EPA has published water quality regulations under Volume 40 of the CFR. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the U.S. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question; and (2) criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. The EPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The EPA has delegated the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the U.S. must obtain a water quality certification from the SWRCB in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate.

CWA Section 402 establishes the National Pollution Discharge Elimination System (NPDES) permit program to control point source discharges from industrial, municipal, and other facilities if their discharges go directly to surface waters. The 1987 amendments to the CWA created a new section of the CWA devoted to regulating storm water or nonpoint source discharges (Section 402[p]). The EPA has granted California primacy in administering and enforcing the provisions of the CWA and the NPDES program through the SWRCB. The SWRCB is responsible for issuing both general and individual permits for discharges from certain activities. At the local and regional levels, general and individual permits are administered by RWQCBs.

Clean Water Act Section 303(d) Impaired Waters List

CWA Section 303(d) requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers. Section 303(d) requires states to develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. A TMDL is the amount of loading that the water body can receive and still be in compliance with applicable water quality objectives and applied beneficial uses. TMDLs can also act as a planning framework for reducing loadings of a specific pollutant from various sources to achieve compliance with water quality objectives. TMDLs prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows links between loading reductions and the attainment of water quality objectives.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRM) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection covered by the FIRMs is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 (0.01) annual exceedance probability) (i.e., the 100-year flood event).

No portion of the project site is subject to inundation by the 100-year storm event. The project site is located within FEMA Zone X. The FEMA un-shaded Zone X designation is an area determined to be outside the 0.2 percent annual chance floodplain.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of Water Quality Control Plans and establishment of water quality objectives. Unlike the CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) prepared by the Colorado River RWQCB (Region 7) identifies beneficial uses of surface waters within the Colorado River Basin region, establishes quantitative and qualitative water quality objectives for protection of beneficial uses, and establishes policies to guide the implementation of these water quality objectives.

Water bodies that have beneficial uses that may be affected by construction activity and post-construction activity include Imperial Valley Drains, Alamo River, and Salton Sea. Table 4.9-1 identifies the designated beneficial uses established for the project site's receiving waters.

The following are definitions of the applicable beneficial uses:

- Aquaculture (AQUA) – Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.
- Freshwater Replenishment (FRSH) – Uses of water for natural or artificial maintenance of surface water quantity or quality.
- Industrial Service Supply (IND) – Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.
- Water Contact Recreation (REC I) – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.

- Non-contact Water Recreation (REC II) – Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Warm Freshwater Habitat (WARM) – Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- Wildlife Habitat (WILD) – Uses of water that support terrestrial ecosystems including, but not limited to, the preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- Hydropower Generation (POW) – Uses of water for hydropower generation.
- Preservation of Rare, Threatened, or Endangered Species (RARE) – Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.

Table 4.9-1. Beneficial Uses of Receiving Waters

Beneficial Uses	Imperial Valley Drains	Alamo River	Salton Sea
AQUA	--	--	X
FRSH	X	X	
IND	--	--	P
REC I	X	X	X
REC II	X	X	X
WARM	X	X	X
WILD	X	X	X
POW	--	P	--
RARE	X	X	X

Source: Appendix I of this EIR

AQUA - aquaculture; FRSH - freshwater replenishment; IND - industrial service supply; P = Potential Uses; POW - Hydropower Generation; RARE - Preservation of Rare, Threatened, or Endangered Species; REC 1 - water contact recreation; REC II - non-contact water recreation; WARM - Warm Freshwater Habitat; WILD - Wildlife Habitat; X = existing beneficial uses

National Pollution Discharge Elimination System General Industrial and Construction Permits

The NPDES General Industrial Permit requirements apply to the discharge of stormwater associated with industrial sites. The permit requires implementation of management measures that will achieve the performance standard of the best available technology economically achievable and best conventional pollutant control technology. Under the statute, operators of new facilities must implement industrial BMPs in the projects' SWPPP and perform monitoring of stormwater discharges and unauthorized non-stormwater discharges.

Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit) which covers stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds 1 acre. Coverage under a General Construction Permit requires the preparation of a SWPPP and submittal of a Notice of Intent (NOI) to comply with the General Construction Permit. The SWPPP includes a description of BMPs to minimize the discharge of pollutants from the sites during construction. Typical BMPs include temporary soil stabilization measures (e.g., mulching and seeding), storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or stormwater, and using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical postconstruction management practices include street sweeping and cleaning stormwater drain inlet structures. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

Local

County of Imperial General Plan

Because of the economic, biological, and agricultural significance water plays in the Imperial County, the Water Element and the Conservation and Open Space Element of the General Plan contain policies and programs, created to ensure water resources are preserved and protected. Table 4.9-2 identifies General Plan policies and programs for water quality and flood hazards that are relevant to the project and summarizes the project's consistency with the General Plan. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

County of Imperial Land Use Ordinance, Title 9

The County's Ordinance Code provides specific direction for the protection of water resources. Applicable ordinance requirements are contained in Division 10, Building, Sewer and Grading Regulations, and summarized below.

Chapter 10 – Grading Regulations. Section 91010.02 of the Ordinance Code outlines conditions required for issuance of a Grading Permit. These specific conditions include:

1. If the proposed grading, excavation or earthwork construction is of irrigatable land, said grading will not cause said land to be unfit for agricultural use.
2. The depth of the grading, excavation or earthwork construction will not preclude the use of drain tiles in irrigated lands.
3. The grading, excavation or earthwork construction will not extend below the water table of the immediate area.
4. Where the transition between the grading plane and adjacent ground has a slope less than the ratio of 1.5 feet on the horizontal plane to 1 foot on the vertical plane, the plans and specifications will provide for adequate safety precautions.

Imperial Irrigation District

IID is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the California Water Code. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley, operation and maintenance of the drainage canals and facilities, including those in the project area, and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements and contracts
- The Quantification Settlement Agreement and Transfer Agreements
- The Definite Plan, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments
- The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights
- Existing IID standards and guidelines for evaluation of new development and define IID's role as a responsible agency and wholesaler of water

Integrated Water Resources Management Plan

In relation to the project, IID maintains regulation over the drainage of water into their drains, including the design requirements of stormwater retention basins. IID requires that retention basins be sized to handle an entire rainfall event in case the IID system is at capacity. Additionally, IID requires that outlets to IID facilities be no larger than 12 inches in diameter and must contain a backflow prevention device (IID 2009).

Imperial County Engineering Guidelines Manual

Based on the guidance contained in the County's Engineering Guidelines Manual, the following drainage requirements would be applicable to the project.

III A. GENERAL REQUIREMENTS

1. All drainage design and requirements are recommended to be in accordance with the IID "Draft" Hydrology Manual or other recognized source with approval by the County Engineer and based on full development of upstream tributary basins. Another source is the Caltrans I-D-F curves for the Imperial Valley.
3. Permanent drainage facilities and ROW, including access, shall be provided from development to point of satisfactory disposal.
8. The developer shall submit a drainage study and specifications for improvements of all drainage easements, culverts, drainage structures, and drainage channels to the Department of Public Works for approval. Unless specifically waived herein, required plans and specifications shall provide a drainage system capable of handling and disposing of all surface waters originating within the subdivision and all surface waters that may flow onto the subdivision from adjacent lands. Said drainage system shall include any easements and structures required by the Department of Public Works or the affected Utility Agency to properly handle the drainage on-site and off-site. The report should detail any vegetation and trash/debris removal, as well as address any standing water.



9. Hydrology and hydraulic calculations for determining the storm system design shall be provided to the satisfaction of the Director, Department of Public Works. When appropriate, water surface profiles and adequate field survey cross-section data may also be required.
10. An airtight or screened oil/water separator or equivalent is required prior to permitting on-site lot drainage from entering any street ROW or public storm drain system for all industrial/commercial or multi residential uses. A maximum 6-inch drain lateral can be used to tie into existing adjacent street curb inlets with some exceptions. Approval from the Director of Public Works is required.
11. The County is implementing a storm water quality program as required by the State Water Resources Control Board, which may modify or add to the requirements and guidelines presented elsewhere in this document. This can include ongoing monitoring of water quality of storm drain runoff, implementation of BMPs to reduce storm water quality impacts downstream or along adjacent properties. Attention is directed to the need to reduce any potential of vectors, mosquitoes, or standing water.
12. A Drainage Report is required for all developments in the County. It shall include a project description, project setting including discussions of existing and proposed conditions, any drainage issues related to the site, summary of the findings or conclusions, off-site hydrology, onsite hydrology, hydraulic calculations and a hydrology map.

Table 4.9-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
Objective 6.2: Ensure proper drainage and provide accommodation for storm runoff from urban and other developed areas in manners compatible with requirements to provide necessary agricultural drainage.	Consistent	Runoff from the project would be controlled by shallow ponding areas to not exceed existing peak storm water flow rates. Because of the implementation of infiltration, it is anticipated that the annual runoff from the proposed project site would decrease when compared to the existing condition. Therefore, the proposed project would not 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. Therefore, the proposed project is consistent with this objective.
Objective 6.3: Protect and improve water quality and quantity for all water bodies in Imperial County.	Consistent	The proposed project would protect water quality during construction through compliance with NPDES General Construction Permit, SWPPP, and BMPs. Design features and BMPs have also been identified to address water quality for the project. Water quantity would be maintained for the proposed project by retaining the majority of the project site with pervious surfaces. Although the proposed project may not improve water quality and quantity, it would protect existing conditions and satisfy County requirements. Therefore, the proposed project is consistent with this objective.

Table 4.9-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Program: Structural development normally shall be prohibited in the designated floodways. Only structures which comply with specific development standards should be permitted in the floodplain.	Consistent	The project does not contain a residential component nor would it place housing or other structures within a 100-year flood hazard area.
Water Element		
Program: The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all groundwater and surface water resources in the County.	Consistent	Mitigation measures will require that the applicant of the project prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.
Program: All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity, and shall be required to implement appropriate mitigation measures for any significant impacts.	Consistent	See response for Water Element Policy 1 above.

Source: County of Imperial 1993

BMP – best management practice; IID – Imperial Irrigation District; NPDES – National Pollution Discharge Elimination System; SWPPP – stormwater pollution prevention plan

Existing Conditions

Localized Drainage Conditions

The perimeter of the project site is surrounded by public roads, IID Canals, and IID Drains. The only offsite flow that enters the project site originates from adjacent unpaved roads; flow from adjacent agricultural fields and flow from east of the East Highline Canal does not enter the project site.

IID facilities that currently accept flow from the project site include the “N” Drain, “M” Drain and “L” Drain. These drains discharge to the Alamo River approximately 8.5 miles west of the project site. The IID Drain system was not designed to convey runoff from large storm events. Rather, the primary purpose of the drains is to convey agricultural runoff. The drains typically have the capacity to convey peak flow from the 5-year to 10-year storm event. Runoff from larger storm events (for example the 100-year event) is detained within low lying areas of agricultural fields until the peak of the storm has passed, after which the detained runoff is slowly infiltrates into underlying soils.

Flooding

According to the FEMA FIRM, the project site is located in Zone X and outside the limits of the 100-year flood zone. Zone X delineates areas of 2 percent annual chance flood; areas of 1 percent chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood.

Surface Water Quality

The surface waters of the Imperial Valley depend primarily on the inflow of irrigation water from the Colorado River via the All American Canal. Excessive salinity concentrations have long been one of the major water quality problems of the Colorado River, a municipal and industrial water source to millions of people, and a source of irrigation water for agriculture. The heavy salt load in the Colorado River results from both natural and human activities. Land use and water resources are unequivocally linked. A variety of natural and human factors can affect the quality and use of streams, lakes, and rivers. Surface waters may be impacted from a variety of point and non-point discharges. Examples of point sources may include wastewater treatment plants, industrial discharges, or any other type of discharge from a specific location (commonly a large-diameter pipe) into a stream or water body. In contrast, non-point source pollutant sources are generally more diffuse in nature and connected to a cumulative contribution of multiple smaller sources.

The following constituents have commonly been found on agricultural areas and may be present on the project site:

- Organic compounds found in pesticides used on agricultural fields
- Agricultural waste
- Loose sediments
- Excess nutrients from fertilizers

According to the California 2006 303(d) list published by the SWRCB and as shown in Table 4.9-3, the project’s receiving waters have beneficial use impairments.

Table 4.9-3. List of 303(d) Impairments

Receiving Water	Hydrologic Unit Code	303(d) Impairment(s)	Distance From Project Site (miles)
Imperial Valley Drains (Mount Signal Drain, Greeson Drain)	723.10	DDT Dieldrin Endosulfan PCBs Selenium Toxaphene	<0.1 miles
Alamo River	723.10	Chlorpyrifos DDT Dieldrin PCBs Selenium Toxaphene	8.5 miles
Salton Sea	728.00	Nutrients Salinity Selenium	10 miles

Source: Appendix I of this EIR

DDT- dichlorodiphenyltrichloroethane; PCB - polychlorinated biphenyl

TMDLs established for receiving waters of the project are summarized in Table 4.9-4. The Imperial Valley Drains' 2005 Sediment/Siltation TMDL sets numeric targets on the Imperial Valley Drains for total suspended solids (TSS). The target is 200 mg/L which would achieve a low to moderate level of protection. According to the 2005 TMDL implementation plan, an overall 63 percent reduction from the current TSS level is required to meet the minimum targets set forth by the TMDL.

High sedimentation in the Imperial Valley Drains has led to increased mobilization of agricultural pesticides and a highly turbid environment for sensitive aquatic species.

Table 4.9-4. TMDLs for Receiving Waters

Receiving Water	Hydrologic Unit Code	TMDLs	Distance from Project (miles)
Imperial Valley Drains	723.10	Sediment/Siltation	<0.1 mile

Source: Appendix I of this EIR

Groundwater Hydrology

The project site is located within the Imperial Valley Groundwater Basin (Basin No: 7-30), which covers approximately 1,870 surface square miles. The physical groundwater basin extends in the southeastern portion of California at the border with Mexico. The basin lies within the southern part of the Colorado Desert Hydrologic Region, south of the Salton Sea. The basin has two major aquifers, separated at depth by a semi-permeable aquitard that averages 60 feet thick and reaches a maximum thickness of 280 feet. The average thickness of the upper aquifer is 200 feet with a maximum thickness of 450 feet. The data regarding faults controlling groundwater movement is uncertain; however, as much as 80 feet of fine-grained, low permeability prehistoric lake deposits have accumulated on the valley floor, which result in locally confined aquifer conditions.

Groundwater recharge within the basin is primarily from irrigation return. Other recharge sources are deep percolation of rainfall and surface runoff, underflow into the basin, and seepage from unlined canals which traverse the valley. Groundwater levels within a majority of the basin have remained stable from 1970 to 1990 because of relatively constant recharge and an extensive network of subsurface drains.

Groundwater quality varies extensively throughout the basin; however, is generally unusable for domestic and irrigation purposes without treatment (California Department of Water Resources 2004).

4.9.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to hydrology and water quality, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to hydrology/water quality are considered significant if any of the following occur:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater water quality

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would decline to a level which would not support existing land uses or planned uses for which permits have been granted)
- Alter the existing surface hydrology
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, or flooding on or off site
- 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
- Place within a 100-year (0.01 annual exceedance probability) flood hazard area structures that would impede or redirect flood flows
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam
- Result in inundation by seiche, tsunami, or mudflow

Methodology

The drainage design will be conducted in accordance with the County of Imperial's design criteria, which establishes that 100 percent of the 100-year storm (3 inches of rain) will be stored on-site and released into the IID drainage system using existing drainage connections.

Impact Analysis

Impact 4.9-1 Violation of Water Quality Standards

The project could generate discharges to surface water resources that could potentially violate water quality standards or waste discharge requirements.

Construction

Construction of the project includes site preparation, foundation construction, erection of major equipment and structures, installation of piping, electrical systems, control systems, and startup/testing. In addition, the construction of transmission lines, utility pole pads, conductors, and associated structures will be required.

During the construction phase, sedimentation and erosion can occur because of tracking from earthmoving equipment, erosion and subsequent runoff of soil, and improperly designed stockpiles. The utilization of proper erosion and sediment control BMPs is critical in preventing discharge to surface waters/drains. The project proposes to employ proper SWPPP practices to minimize any discharges in order to meet the Best Available Technology/Best Conventional Technology standard set forth in the Construction General Permit.

Although the project site is relatively flat, the large amount of potential disturbed area results in the potential for erosion/sediment issues.

In addition to erosion and sedimentation, the use of materials such as fuels, solvents, and paints has the potential to affect surface water quality. Many different types of hazardous compounds will be used during the construction phase, with proper containment being of high importance. Poorly managed construction materials can lead to the possibility for exposure of potential contaminants to precipitation. When this occurs, these visible and/or non-visible constituents become entrained in storm water runoff. If they are not intercepted or are left uncontrolled, the polluted runoff would otherwise freely sheet flow from the project to the IID Drains and could cause pollution accumulation in the receiving waters. This is considered a significant impact.

Construction of the project could, at times, also require dewatering of shallow, perched groundwater in the immediate vicinity of excavations and installation of underground features at a limited number of areas where groundwater depths are shallow. As stated in the Existing Conditions section, the groundwater in the Imperial Valley Groundwater Basin is unusable for domestic and irrigation purposes without treatment because of poor water quality. Groundwater withdrawn from the construction area could be subsequently discharged to local drainage ditches or via land application. These discharges may contain sediments, dissolved solids, salts, and other water quality constituents found in the shallow groundwater, which could degrade the quality of receiving waters. Degradation of local receiving waters from the introduction of shallow groundwater during construction dewatering could result in a significant impact on receiving waters. This is considered a significant impact. Implementation of Mitigation Measures HYD-1 and HYD-2 would reduce the impact to a level less than significant.

Prior to construction and grading activities, the project applicant is required to file an NOI with the SWRCB to comply with the General NPDES Construction Permit and prepare a SWPPP, which addresses the measures that would be included during construction or the project to minimize and control construction and post-construction runoff to the “maximum extent practicable.” In addition, NPDES permits require the implementation of BMPs that achieve a level of pollution control to the maximum extent practical, which may not necessarily be completely protective of aquatic life or address water quality impairments for local waterways. This represents a significant, direct, and indirect impact. For these reasons, the implementation of the prescribed mitigation would be required to ensure that the project’s SWPPP and Grading Plan include measures necessary to minimize water quality impacts as a result of construction and post-construction runoff from the project. Implementation of Mitigation Measures HYD-1 and HYD2 would reduce impacts to a level less than significant. In addition, given that site decommissioning would result in similar activities as identified for construction, these impacts could also occur in the future during site restoration activities.

Operation

As runoff flows over developed surfaces, water can entrain a variety of potential pollutants including, but not limited to, oil and grease, pesticides, trace metals, and nutrients. These pollutants can become suspended in runoff and carried to receiving waters. These effects are commonly referred to as non-point source water quality impacts.

Long-term operation of the solar facility poses a limited threat to surface water quality after the completion of construction. The project would be subject to the County’s Grading Regulations as specified in Section 91010.02 of the Ordinance Code. However, since the project site is located in unincorporated Imperial County and not subject to a Municipal Separate Storm Sewer System or NPDES General Industrial Permit, there is no regulatory mechanism in place to address post-construction water quality concerns. Based on this consideration, the project has the potential to



result in both direct and indirect water quality impacts that could be significant. Implementation of Mitigation Measure HYD-3 would reduce the impact to a level less than significant.

Long-term point discharges from the project would be minimal; however, reductions in water quality could occur where the water released is of lower quality than ambient conditions. These discharges would be infrequent, but could include landscape irrigation, uncontaminated pumped ground water, and discharges of potable water during water tank cleaning [as defined in 40 CFR 35.2005(21)]. In this context, long-term water quality impacts from point sources would be less than significant.

Mitigation Measure(s)

HYD-1 Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The project applicant or its contractor shall prepare a SWPPP specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the project. The SWPPP(s) shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching)
- Dewatering and/or flow diversion practices, if required (Mitigation Measure HYD-2)
- Sediment control practices (temporary sediment basins, fiber rolls)
- Temporary and post-construction on- and off-site runoff controls
- Special considerations and BMPs for water crossings, wetlands, and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and

grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

HYD-2 Properly Dispose of Construction Dewatering in Accordance with the Construction General Permit (SWRCB Order No. 2009-0009-DWQ and Associated Amendments). If required, all construction dewatering shall be discharged or utilized for dust control in accordance with the Construction General Permit. The Storm Water Pollution Prevention Plan shall provide Best Management Practices to be implemented if groundwater is encountered during construction.

HYD-3 Incorporate Post-Construction Runoff BMPs into Project Drainage Plan. The project Drainage Plan shall adhere to County and IID guidelines to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.

Significance after Mitigation

With the implementation of Mitigation Measures HYD-1 and HYD-2, impacts on surface water quality as attributable to the project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction.

With the implementation of Mitigation Measure HYD-3, potential water quality impacts resulting from post-construction discharges during operation for the project would be reduced to a less than significant level. With the proposed mitigation, any stormwater runoff generated from the project site would be subject to on-site treatment and retention and, therefore, would not pose a significant threat to local surface water features or shallow groundwater resources. Potable water discharges generated during operations would be of limited quantity and sufficient quality that they would pose a less than significant threat to the environment.

Impact 4.9-2 Impacts on Groundwater Recharge, Supply, and Adjacent Wells.

The project would not involve the use of groundwater, which could otherwise carry the potential for interference with current groundwater recharge, possible depletion of groundwater supplies, or interference with adjacent wells.

Groundwater recharge in the area will not be significantly affected because of the fact that the majority of the project site will feature a pervious landscape in both the existing and proposed conditions. Retention basins will also provide infiltration and groundwater recharge. During the construction phase, a significant amount of construction dewatering is not expected to be required. Potential construction that may require dewatering includes footings and foundations for the project substation and overhead collection system poles. Dewatering associated with these portions of construction will

be localized to transmission pole locations or the substation and will not result in a significant decrease in production rates of existing or planned wells. In the post construction condition, no pumping of groundwater is anticipated.

Groundwater at/near the project site is not used for beneficial uses, such as municipal, domestic, or industrial supply. Water needs would be provided by adjacent IID Canals, and are expected to be much less than the needs of the existing agricultural land (Appendix I of this EIR). As a result, no significant impacts on groundwater levels are expected.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.9-3 Alternation of Drainage Patterns and Substantial Erosion or Siltation

The project would not result in the alteration of existing drainage patterns thereby resulting in substantial erosion or siltation on- or off-site.

The proposed drainage patterns and general drainage system would be similar to the existing site conditions. Drainage from the construction zone would be routed to the detention basins for detention and infiltration. The remainder of the site would follow existing drainage patterns with storm flows conveyed toward existing IID Drains. Because of the postponement of agricultural irrigation during the life of the project, it is anticipated that the annual runoff from the project site would decrease when compared to the existing condition, which is similar to when agricultural fields are fallowed and/or abandoned. Therefore, the proposed project would result in no significant impacts associated with the alteration of drainage patterns resulting in substantial erosion or siltation on- or off-site.

Impact 4.9-4 Alternation of Drainage Patterns and Off-site Flooding.

The project would not result in the alteration of existing drainage patterns thereby increasing the rate or amount of surface runoff in a manner that could result in on or off-site flooding.

Existing drainage patterns would not be substantially altered because of the proposed project. The majority of the site would sheet flow through the pervious native soils, toward the shallow ponding areas. Peak flow runoff from the project would be collected in shallow ponding areas. The project facilities would be designed in anticipation of this ponding, and there is no potential for increased flooding onsite or in offsite IID drains. Because of the use of infiltration, it is anticipated that the annual runoff from the project site would decrease when compared to the existing condition. The project will be designed to meet County of Imperial storage requirements for storm water runoff, which will result in an impoundment of runoff in excess of the anticipated volume of runoff to be generated by the 100-year storm event. Therefore, the proposed project would result in no significant impacts associated with the alteration of drainage patterns resulting in on- or off-site flooding.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.9-5 Create or Contribute Runoff Water Exceeding the Capacity or Stormwater Drainage Systems

The project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

As shown on Figure 4.9-1 and Figure 4.9-2, the project site has been delineated into tributary drainage basins for the existing and proposed conditions. In the existing condition, the project site is divided by existing roads, berms, local brow ditches into seven watersheds that infiltrate into underlying soils and/or tributary into IID Drains. In the northern parcel, Drainage Area E tributary to the earthen brow ditch. Then the flow confluent with the flow from Drainage Area D and Drainage Area A, collects at the southwest corner and enters "M" IID Drain. Drainage Areas B and C tributary directly to the "M" Drain (Figure 4.9-1).

In the southern parcel, Drainage Areas E and G tributary first to the local brow ditches and then discharges into the IID "L" Drain (Figure 4.9-2). Ultimately, the "M" and "L" IID Drains discharge to the Alamo River approximately 8.5 miles west of the project site.

Volumes of storm water runoff for the existing condition are provided in Table 4.9-5. The volume reported as "County Storage" is the volume based on 3" of runoff. The volume reported as "100-year Runoff" is the estimated volume anticipated based on a "C" factor of 0.3 and 100-year 24-hour precipitation of 3.90 inches.

Figure 4.9-1. Existing Condition – Northern Parcel Drainage Basin Map

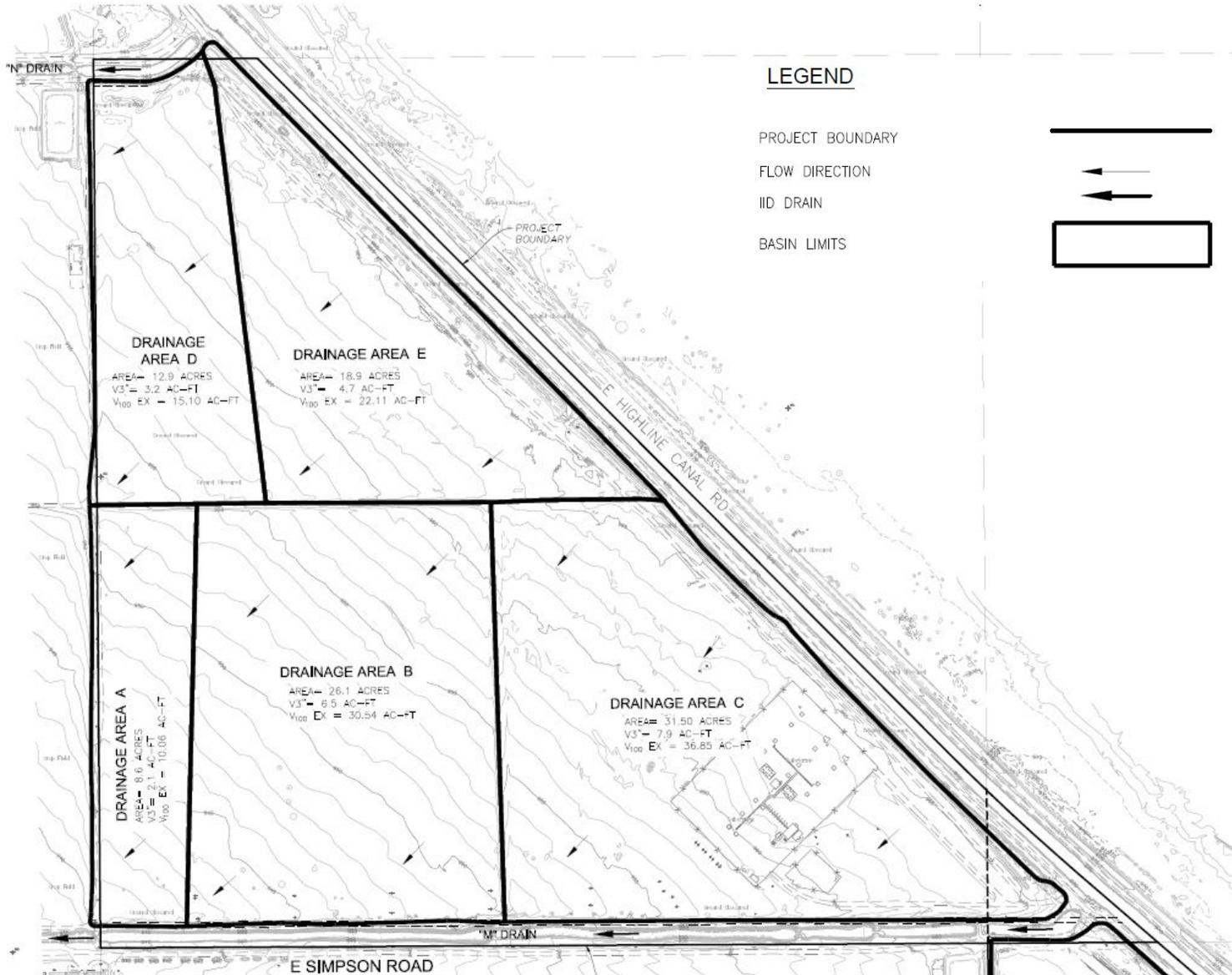


Figure 4.9-2. Existing Condition – Southern Parcel Drainage Basin Map

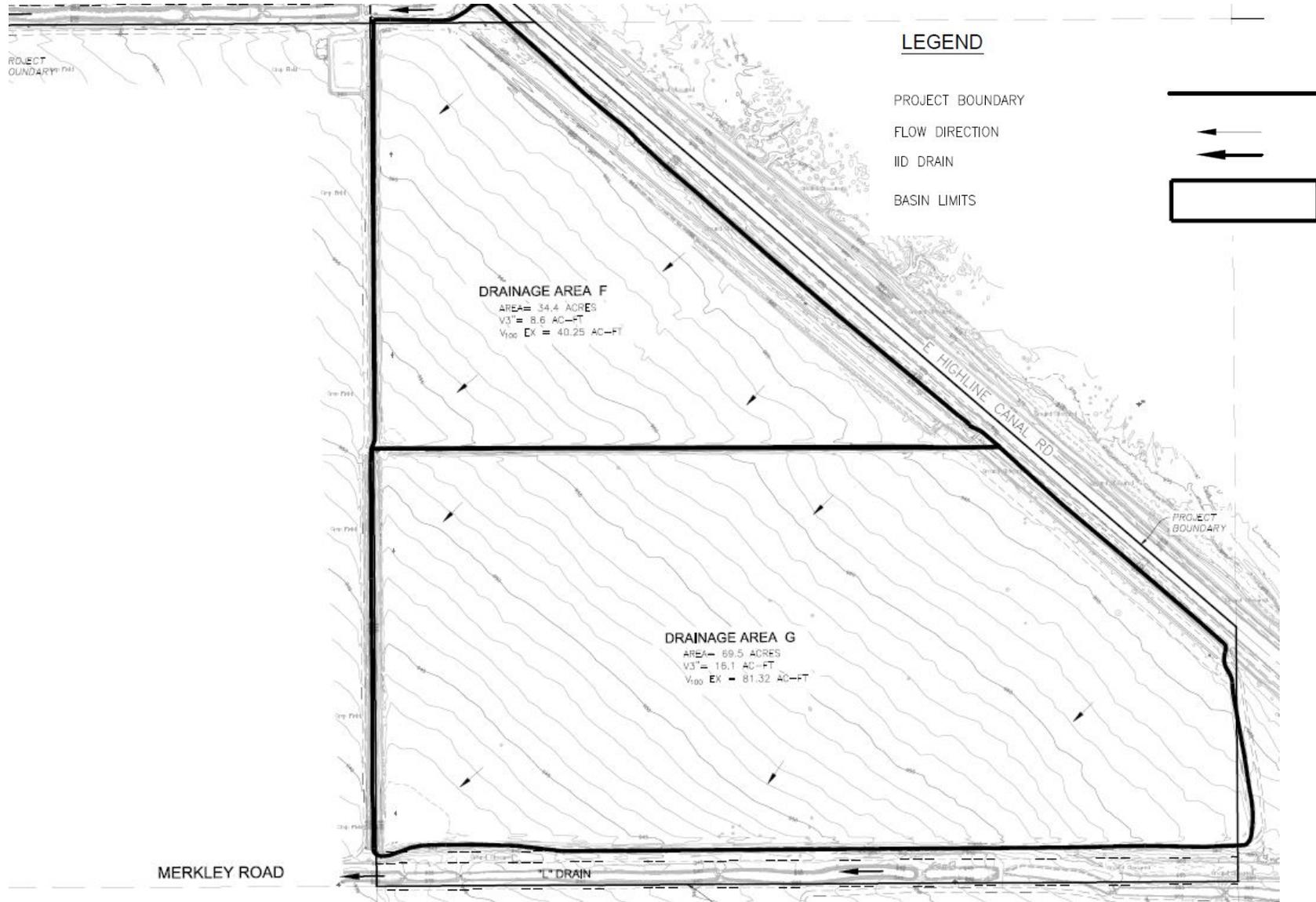




Table 4.9-5. Existing Condition Storm Water Runoff

Drainage Area	Area (acres)	County Storage (AF)	100-Year Runoff (AF)
Receiving Drain: "M" Drain			
A	8.6	2.1	0.9
B	26.1	6.5	2.5
C	31.5	7.9	3.1
D	12.9	3.2	1.3
E	18.9	4.7	1.8
Total	98.0	24.4	9.6
Receiving Drain: "L" Drain			
F	34.4	8.6	3.4
G	69.5	17.4	6.8
Total	103.9	26.0	10.2

Source: Appendix I of this EIR

AF – acre-feet

Under proposed conditions, the existing drainage characteristics of the project site would remain substantially the same (Figure 4.9-3 and Figure 4.9-4). The general flow of water from northeast to southwest would remain unchanged. Because of the presence of internal and perimeter roadways between and around arrays, there is opportunity for a higher number of locations to store runoff in the proposed condition, when compared to the existing condition. The on-site soils appear to have the potential to infiltrate runoff. Therefore, there would be no resultant discharge of runoff to IID Drains from the proposed project.

To enable the development of the solar arrays, private dirt roads and ditches within the project would be re-graded as necessary, and, if necessary, cultivated areas may be re-graded to provide smooth transitions across arrays and to produce positive surface drainage to the designated shallow ponding areas, which would provide storm water detention. A private perimeter access road would be constructed around the arrays and internal access roads would be constructed between arrays. The conceptual study calculates the volume of runoff that shall be retained in accordance with the County standard of 3" of runoff from the project site. Retention requirements over the project site will be satisfied by shallow ponding areas within the project footprint. Ultimate locations, volumes, and limits of retention areas will be determined at the time of final engineering. Table 4.9-6 provides the required and proposed volumes of retention to meet both the County standard of 3" of runoff from the project and the 100-year runoff. The 100-year runoff is the estimated volume based on a "C" factor of 0.60 and a 100-year 24-hour precipitation of 3.90 inches.

Runoff from the project would be controlled by shallow ponding areas to not exceed existing peak storm water flow rates. Because of the implementation of infiltration, it is anticipated that the annual runoff from the proposed project site would decrease when compared to the existing condition. Therefore, the proposed project would not 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. This is considered a less than significant impact. Further, as a condition of approval of the project, the applicant will be required to furnish a drainage and grading plan/study to provide for property grading and drainage control, which shall also include prevention of sedimentation of damage to off-site properties.

Figure 4.9-3. Proposed Condition – Northern Parcel Drainage Basin Map

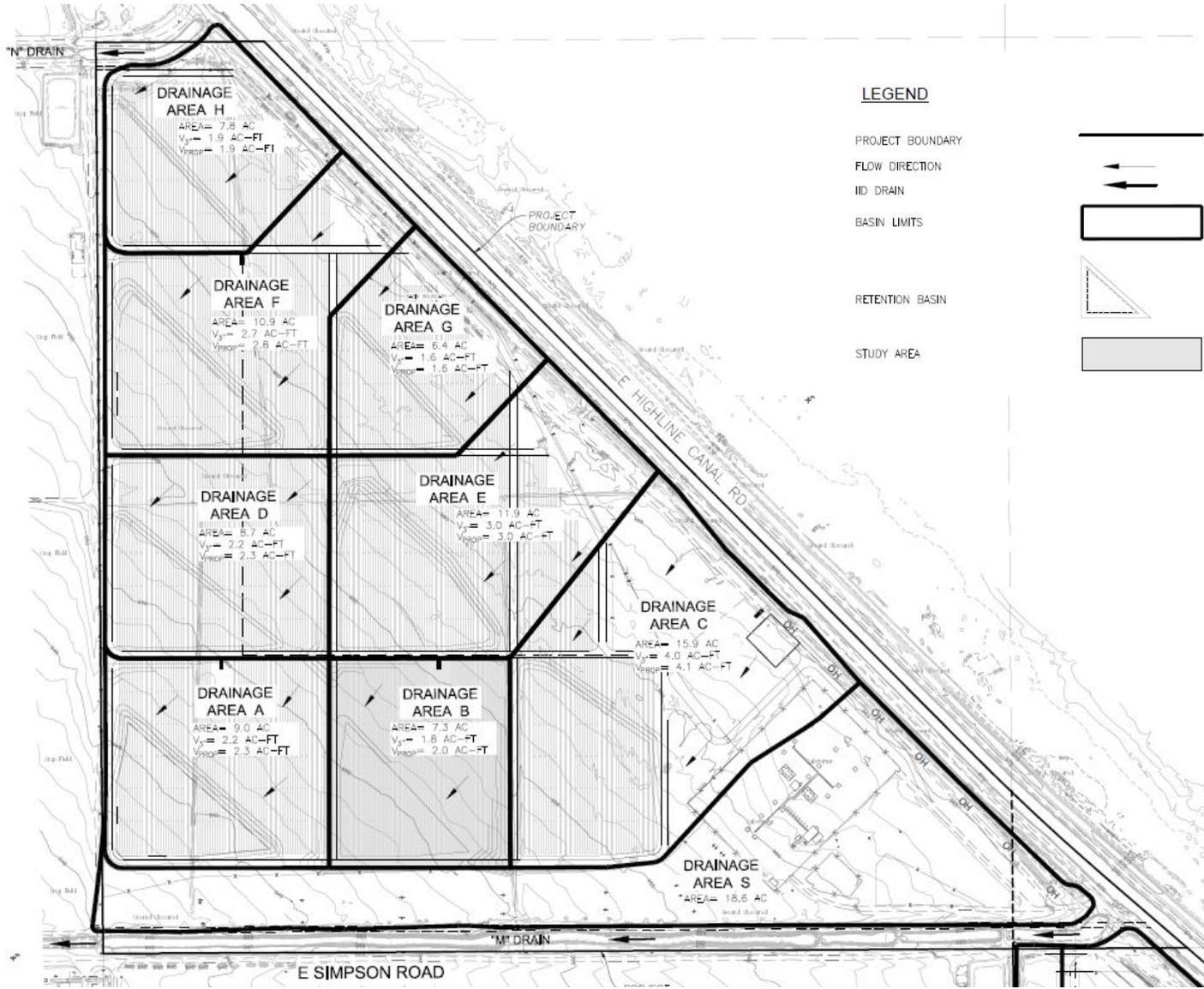


Figure 4.9-4. Proposed Condition – Southern Parcel Drainage Basin Map

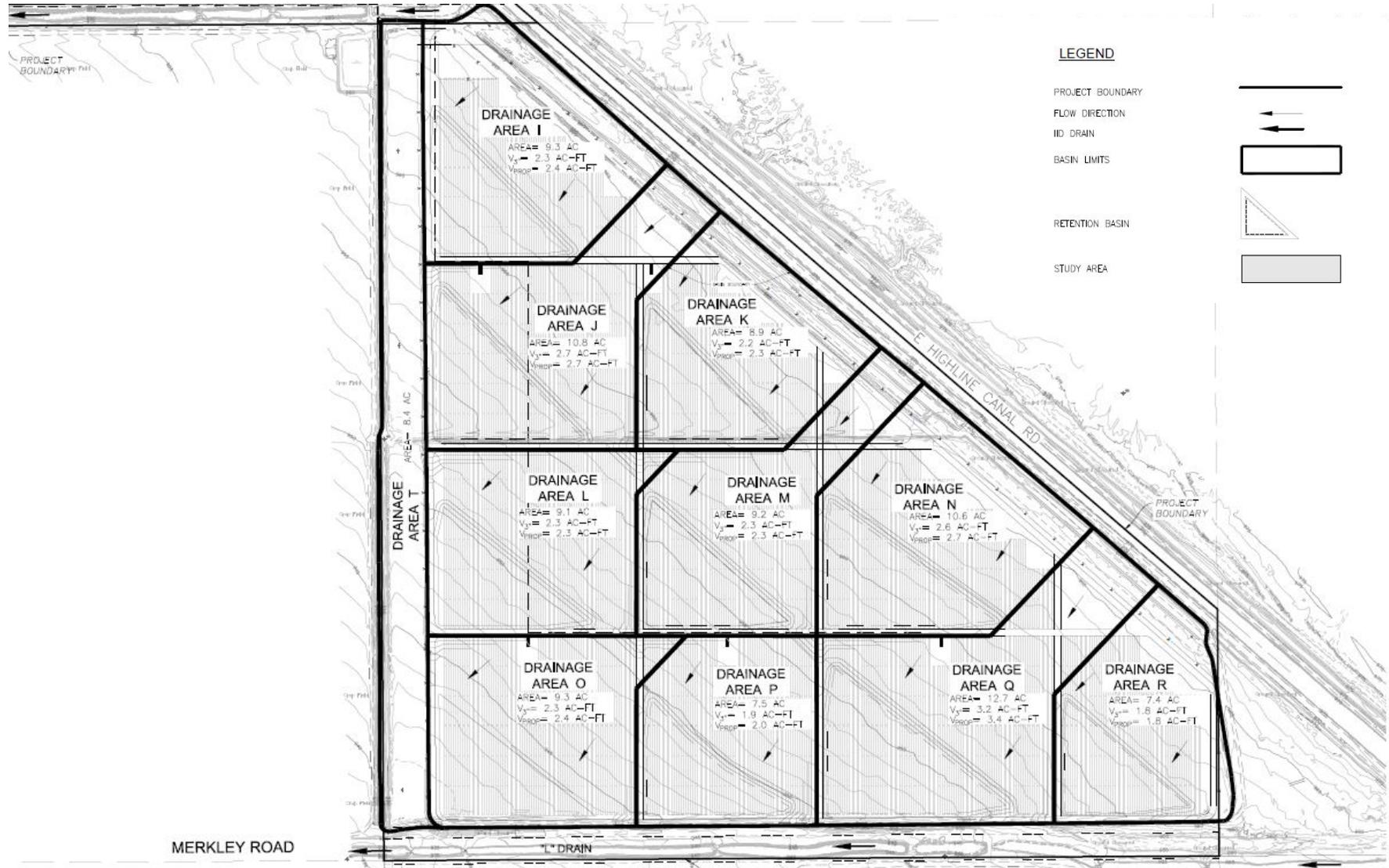




Table 4.9-6. Proposed Condition Storm Water Runoff

Drainage Area	Area (acres)	County Storage (AF)	100-Year Runoff (AF)	Proposed Storage (AF)
Receiving Drain: "M" Drain				
A	9.0	2.2	4.8	2.3
B	7.3	1.8	1.4	2.0
C	15.9	4.0	3.1	4.1
D	8.7	2.2	1.7	2.3
E	11.9	3.0	2.3	3.0
F	10.9	2.7	2.1	2.8
G	6.4	1.6	1.2	1.6
H	7.8	1.9	1.5	1.9
S	18.6	NA	NA	NA
Total	96.5	19.4	15.1	20.0
Receiving Drain: "L" Drain				
I	9.3	2.3	1.8	2.4
J	10.8	2.7	2.1	2.7
K	8.9	2.2	1.7	2.3
L	9.1	2.3	1.8	2.3
M	9.2	2.3	1.8	2.3
N	10.6	2.6	2.1	2.7
O	9.3	1.6	1.8	2.4
P	7.5	1.9	1.5	2.0
Q	12.7	3.2	2.4	3.4
R	7.4	1.8	1.4	1.8
T	8.4	NA	NA	NA
Total	103.2	22.9	18.5	24.3

Source: Appendix I of this EIR

AF – acre-feet

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.9-6 Placement of Housing within a 100-Year Floodplain.

The project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

The proposed project would not involve the construction of residential housing and, therefore, would not place housing within a 100-year flood hazard area as mapped on the most recent FIRM for the project site. Therefore, no impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.9-7 Impede or Redirect Flood Flows.

The project would not require the placement of structures within a 100-year flood hazard area, which would impede or redirect flood flows.

The project site is contained within Zone X and outside the limits of the 100-year flood zone. The project's facilities would not be constructed within a delineated 100-year flood hazard area or floodway. As a result, the construction and operation of the project would not place structures within a 100-year flood hazard area as mapped on the most recent federal FIRM. Therefore, no impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.9-8 Inundation from Flooding or Mudflows.

The project would not expose people or structures to a significant risk of loss, injury or death involving inundation by flooding, including flooding as a result of the failure of a levee or dam, seiche, or tsunami or inundation by mudflows.

The project site is located approximately 10 miles from the Salton Sea, which is the nearest large water body. Because of the distance, the Salton Sea does not pose a particularly significant danger of inundation from seiche or tsunami as related to the project site.

The project site is located approximately 11 miles from the nearest raised and significantly sloped terrain, located northeast of the project site. The East Highline Canal protects the site from offsite flow. For this reason, no significant impact would occur.

Mitigation Measure(s)

No mitigation measures are required.



4.9.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration activities would result in similar impacts on hydrology and water quality as would occur during construction of the proposed project. The primary water quality issue associated with decommissioning/restoration would be potential impacts on surface water quality, as the decommissioning activities would be similar to construction activities, and would be considered a significant impact. However, with implementation of Mitigation Measures HYD-1 and HYD-2, impacts on surface water quality would be reduced to a level less than significant through the inclusion of focused BMPs for the protection of surface water resources. Impacts on other water resource issues, including alteration of drainage patterns, contributing to off-site flooding, impacts on groundwater recharge and supply, would be less than significant. There would be no impact associated with placement of housing within a 100-year floodplain, impeding or redirecting flows, or inundation from flooding or mudflows.

Residual

With implementation of the mitigation measures listed above, implementation of the project would not result in any residual significant impacts related to increased risk of flooding from stormwater runoff, from water quality effects from long-term urban runoff, or from short-term alteration of drainages and associated surface water quality and sedimentation. With the implementation of the required mitigation measures during construction and decommissioning of the project, water quality impacts would be minimized to a less than significant level. Based on these circumstances, the project would not result in any residential significant and unmitigable adverse impacts on surface water hydrology and water quality.

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4.10 Land Use/Planning

This section provides information regarding current land use, land use designations, and land use policies within and in the vicinity of the project site. Section 15125(d) of the CEQA Guidelines states that “[t]he EIR shall discuss any inconsistencies between the project and applicable general plans and regional plans.” This section fulfills this requirement for the project. In this context, this section reviews the land use assumptions, designations, and policies of the County General Plan and other applicable federal, state, and local requirements, which governs land use within the project area and evaluates the project’s potential to conflict with policies adopted for the purpose of avoiding or mitigating significant environmental effects. Where appropriate, mitigation is applied and the resulting level of impact identified.

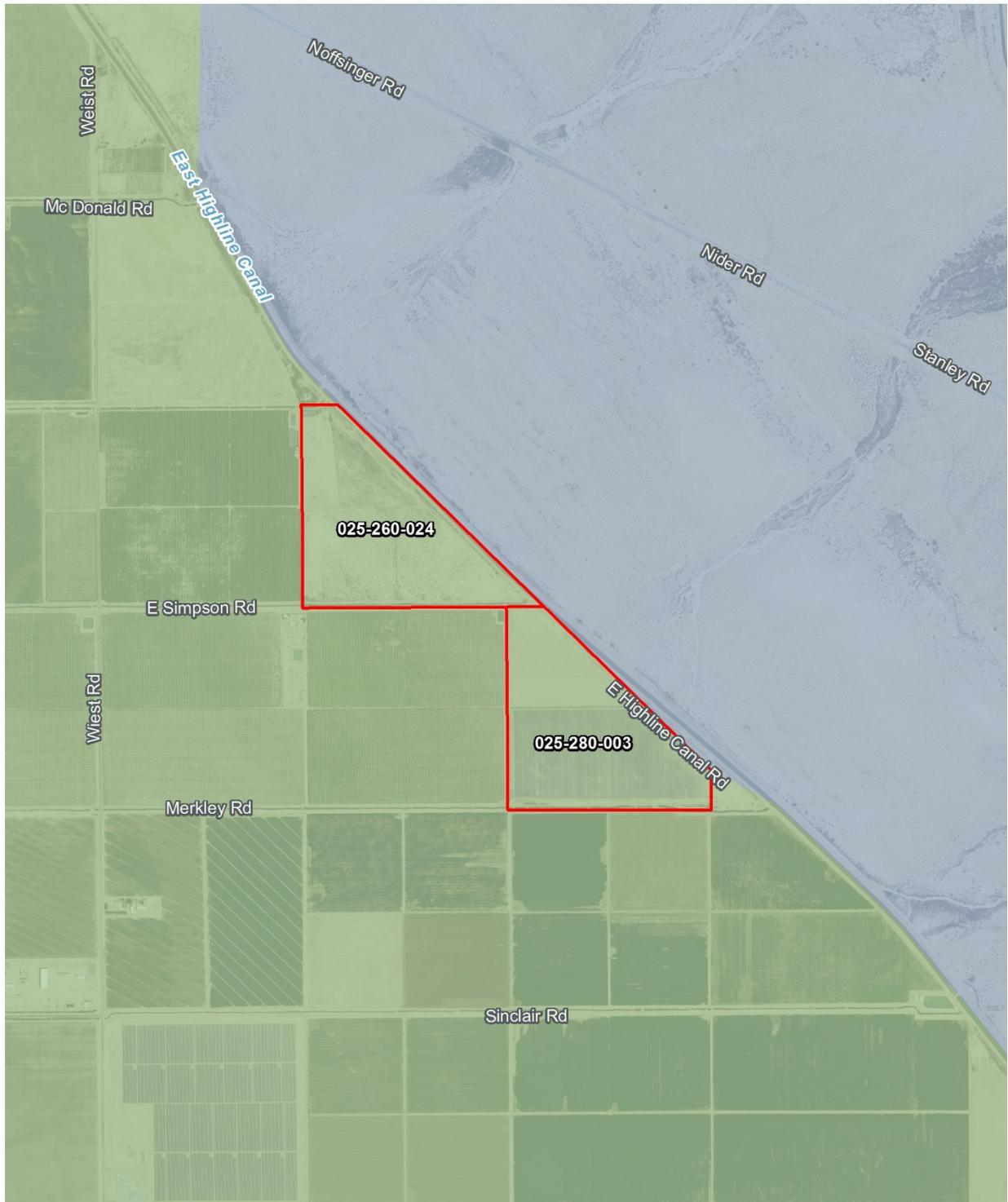
4.10.1 Environmental Setting

The proposed project is located approximately 6 miles northeast of the City of Calipatria and 5 miles southeast of Niland, a census-designated place, in the unincorporated area of Imperial County (Figure 3-1). The project site encompasses approximately 223 acres, comprised of two parcels of land identified as APNs 025-260-024 (northern parcel) and 025-280-003 (southern parcel) (Chapter 3, Figure 3-2). Of the total 223 acres that encompasses the project site, approximately 12.02 acres are currently developed with the Midway Substation. The East Highline Canal is located on the project site’s eastern boundary, with desert lands immediately beyond. The project site is surrounded to the north, west, and south by privately-owned agricultural lands. Adjacent roadways, which are currently developed for agricultural uses, include Merkley Road and Simpson Road.

As shown on Figure 4.10-1, the project site is designated as Agriculture under the County’s General Plan. As depicted on Figure 4.10-2, the project site is located on two privately-owned legal parcels zoned A-3 (Heavy Agriculture).

As discussed in Chapter 3, the County adopted the RE and Transmission Element, which includes a RE Zone (RE Overlay Map). The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As shown on Figure 3-1 (Chapter 3), the project site is located within the RE Energy Zone. The RE and Transmission Element is discussed in detail under Section 4.10.2.

Figure 4.10-1. General Plan Land Use Designations



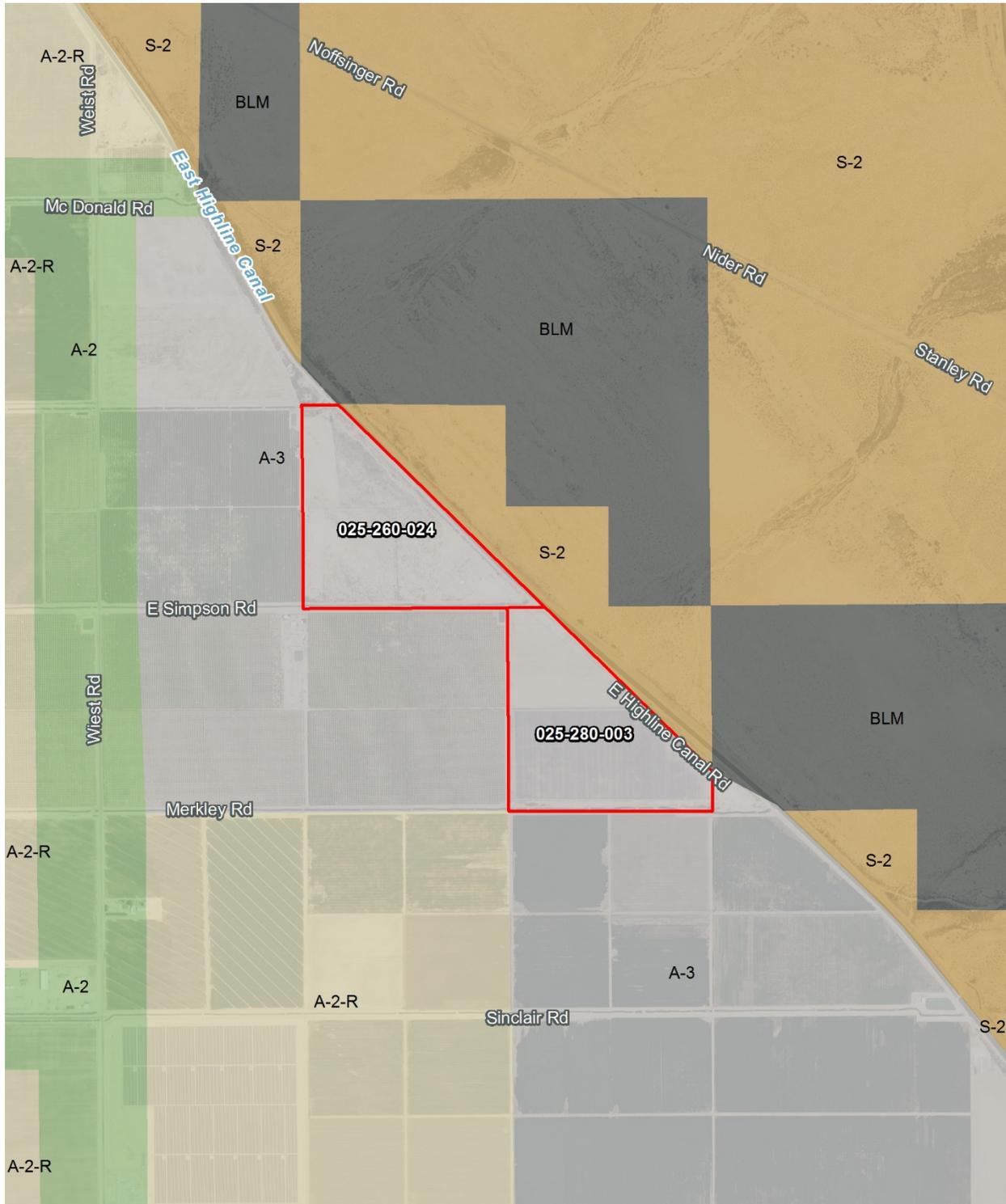
LEGEND

-  Project Site
- General Plan
 -  Agriculture
 -  Recreation





Figure 4.10-2. Zoning Designations



LEGEND

- Project Site
- Zoning A-2 (General Agriculture)
- Zoning A-2-R (General Agriculture Rural)
- Zoning A-3 (Heavy Agriculture)
- Zoning S-2 (Open Space and Preservation)
- Zoning BLM (Bureau of Land Management)



4.10.2 Regulatory Setting

This section identifies and summarizes state and local laws, policies, and regulations that are applicable to the project.

State

State Planning and Zoning Laws

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning.

The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period or more.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific zone district, are required to be consistent with the general plan and any applicable specific plans.

Local

Regional Comprehensive Plan and Regional Transportation Plan

SCAG's Intergovernmental Review (IGR) section, part of the Environmental Planning Division of Planning and Policy, is responsible for performing consistency review of regionally significant local plans, projects, and programs. Regionally significant projects are required to be consistent with SCAG's adopted regional plans and policies, such as the Regional Comprehensive Plan (RCP) and the RTP. The criteria for projects of regional significance are outlined in CEQA Guidelines Sections 15125 and 15206. According to the SCAG Intergovernmental Review Procedures Handbook, "new or expanded electrical generating facilities and transmission lines" qualify as regionally significant projects. For this reason, Table 4.10-1 provides a consistency evaluation for the project with applicable SCAG IGR policies.

County of Imperial General Plan

The purpose of the County's General Plan (as amended through 2008) is to direct growth, particularly urban development, to areas where public infrastructure exists or can be provided, where public health and safety hazards are limited, and where impacts to the County's abundant natural, cultural, and economic resources can be avoided. The following 10 elements comprise the County's General Plan: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; RE and Transmission Element; Water; and Parks and Recreation. Together, these elements satisfy the seven mandatory general plan elements as established in the California Government Code. Goals, objectives, and implementing policies and actions programs have been established for each of the elements.

Imperial County received funding from the California Energy Commission RE and Conservation Planning Grant to amend and update the County's General Plan in order to facilitate future



development of RE projects. The Geothermal/Alternative Energy and Transmission Element was last updated in 2006. Since then there have been numerous renewable projects proposed, approved, and constructed within Imperial County as a result of California’s move to reduce greenhouse gas emissions, develop alternative fuel sources and implement its Renewable Portfolio Standard. The County has recently prepared an update to the Geothermal/Alternative Energy and Transmission Element of its General Plan, called the RE and Transmission Element. This Element is designed to provide guidance and approaches with respect to the future siting of RE projects and electrical transmission lines in the County. The County adopted this element in 2016.

Table 4.10-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
<i>Imperial County General Plan, Land Use Element</i>		
Public Facilities, Objective 8.7. Ensure the development, improvement, timing, and location of community sewer, water, and drainage facilities will meet the needs of existing communities and new developing areas.	Consistent	The project includes the necessary supporting infrastructure and would not require new community-based infrastructure. The project would be required to construct supporting drainage infrastructure consistent with County requirements and mitigation measures prescribed in Section 4.9, Hydrology/Water Quality, of the EIR. Once the project is operational, water would be required for solar panel washing and fire protection. The project site is within the IID’s service area boundary and therefore would receive water service from the IID. The proposed project would not require an operations and maintenance building. Therefore, no septic system would be required for the project.
Public Facilities, Objective 8.8. Ensure that the siting of future facilities for the transmission of electricity, gas, and telecommunications is compatible with the environment and County regulation.	Consistent	The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of RE projects with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As shown on Figure 3-1, the project site is located within the RE Overlay Zone.
Public Facilities, Objective 8.9. Require necessary public utility rights-of-way when appropriate.	Consistent	The project would include the dedication of necessary ROW to facilitate the placement of electrical distribution and transmission infrastructure.
Protection of Environmental Resources, Objective 9.6. Incorporate the strategies of the Imperial County AQAP in land use planning decisions and as amended.	Consistent	Because of the minimal grading of the site during construction and limited travel over the site during operations, local vegetation is anticipated to remain largely intact which will assist in dust suppression. Furthermore, dust suppression will be implemented including the use of water, bio-degradable chemical stabilization, and speed restrictions during construction. Chapter 4.3, Air Quality, discusses the project’s consistency with the AQAP in more detail.

Table 4.10-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
<i>Imperial County General Plan, Circulation and Scenic Highways Element</i>		
Safe, Convenient, and Efficient Transportation System, Objective 1.1. Maintain and improve the existing road and highway network, while providing for future expansion and improvement based on travel demand and the development of alternative travel modes.	Consistent	The County Department of Public Works has reviewed the trip generation associated with project construction and proposed construction traffic routes and has determined that a formal traffic study is not warranted for the project. The project would include limited operational vehicle trips and would not be expected to reduce the current LOS at affected intersections, roadway segments, and highways. The project does not propose any forms for residential or commercial development and therefore would not require new forms of alternative transportation to minimize impacts to existing roadways.
Safe, Convenient, and Efficient Transportation System, Objective 1.2. Require a traffic analysis for any new development which may have a significant impact on County roads.	Consistent	The Imperial County Department of Public Works has determined that a traffic impact study is not required for the project, primarily because the project is not located near other planned or ongoing solar projects. Once construction is completed, the project would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. The project would include limited operational vehicle trips and would not be expected to reduce the current level of service (LOS) at affected intersections, roadway segments, and highways.
<i>Imperial County General Plan, Noise Element</i>		
Noise Environment. Objective 1.3. Control noise levels at the source where feasible.	Consistent	Where construction-related and operational noise would occur in close proximity to noise sensitive land uses (e.g., less than 500 feet), the County would condition the project to maintain conformance with County noise standards.
Project/Land Use Planning. Goal 2: Review Proposed Actions for noise impacts and require design which will provide acceptable indoor and outdoor noise environments.	Consistent	As discussed in Section 4.11, Noise and Vibration, the project would be required to comply with the County's noise standards during both construction and operation.
Long Range Planning. Goal 3: Provide for environmental noise analysis inclusion in long range planning activities which affect the County.	Consistent	The EIR contains a noise analysis that considers and evaluates long-term noise impacts related to project operations. As discussed in Section 4.11, Noise and Vibration, the project would result in less than significant noise impacts.



Table 4.10-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
<i>Imperial County General Plan, Conservation and Open Space Element</i>		
<p>Conservation of Environmental Resources for Future Generations Objective 1.5: Provide for the most beneficial use of land based upon recognition of natural constraints.</p>	<p>Consistent</p>	<p>The project site would be converted from undeveloped agricultural land to a solar energy facility. The proposed project would provide a beneficial use of the land by creating local jobs during construction and to a lesser degree during operation. Section I(C) of the Imperial County General Plan RE and Transmission Element explains that the County adopted the element after determining that the benefits of alternative energy development in the County include: 1) Fiscal benefit of expanded property tax revenues; 2) Fiscal benefit of sales tax revenues from purchase of goods and services; 3) Royalty and lease benefits to local landowners and County; 4) Social and fiscal benefits from increased economic activity and employment opportunities that do not threaten the economic viability of other industries; 5) Improvements in technology to reduce costs of electrical generation; 6) Reduction in potential greenhouse gases by displacing fossil-fuel-generated electricity with RE power which does not add to the greenhouse effect; 7) Contribution towards meeting the State of California’s RPS; and, 8) Minimization of impacts to local communities, agriculture and sensitive environmental resources.</p> <p>In addition, the generation of 30 MW of renewable electrical energy is a benefit that would otherwise be generated by nonrenewable fossil fuels. Therefore, the proposed project is consistent with this objective.</p>
<p>Preservation of Biological Resources. Goal 2: The County will preserve the integrity, function, productivity, and long-term viability of environmentally sensitive habitats, and plant and animal species.</p>	<p>Consistent</p>	<p>A biological resources survey was conducted for the project site. As discussed in Section 4.4, Biological Resources, there are potentially significant biological resources located within the project site. However, with the implementation of mitigation identified in Section 4.4, Biological Resources, these impacts would be reduced to a level less than significant.</p>
<p>Preservation of Cultural Resources. Objective 3.1 Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.</p>	<p>Consistent</p>	<p>A cultural resources report was prepared for the project site. As discussed in Section 4.5, Cultural Resources, the proposed project has the potential to encounter undocumented archaeological resources, paleontological resources, and human remains. Mitigation Measures CR-1 through CR-3 have been identified to reduce potential impacts to a level less than significant.</p>

Table 4.10-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
<p>Preservation of Agricultural Lands. Goal 4: The County will actively conserve and maintain contiguous farmlands and prime soil areas to maintain economic vitality and the unique lifestyle of the Imperial Valley.</p>	<p>Consistent</p>	<p>The proposed project would temporarily convert land designated as Farmland of Statewide Importance and Prime Farmland to non-agricultural uses. However, the project applicant is proposing agriculture as the end use and is required to prepare a site-specific Reclamation Plan to minimize impacts related to short- and long-term conversion of farmland to non-agricultural use. The reclamation plan contents will include addressing the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on the site, as well as restoration of the site to its pre-project condition. Therefore, the proposed project would not permanently convert Farmland of Statewide Importance and Prime Farmland to non-agricultural uses. Please refer to Section 4.2, Agricultural Resources, which provides a more detailed analysis of the project's consistency with applicable agricultural goals and objectives.</p>
<p>Conservation of Energy Sources. Goal 6: The County shall seek to achieve maximum conservation practices and maximum development of renewable alternative sources of energy.</p>	<p>Consistent</p>	<p>The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As shown on Figure 3-1, the project site is located within the RE Overlay Zone. The project entails the construction and operation of a solar energy facility, which is considered an alternative source of energy.</p>
<p>Conservation of Energy Sources. Objective 6.2: Encourage the utilization of alternative passive and RE resources.</p>	<p>Consistent</p>	<p>The project entails the construction and operation of a solar energy facility, which is considered an alternative source of energy. With implementation of the project, a new source of solar energy would be identified.</p>
<p>Conservation of Energy Sources. Objective 6.6: Encourage compatibility with National and state energy goals and city and community general plans.</p>	<p>Consistent</p>	<p>The project is consistent with California Public Utilities Code § 399.11 et seq., "Increasing the Diversity, Reliability, Public Health and Environmental Benefits of the Energy Mix." California's electric utility companies are required to procure 50 percent of their electricity from eligible RE resources by 2030. The project would contribute toward this goal.</p>



Table 4.10-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
<i>Imperial County General Plan, RE and Transmission Element</i>		
Objective 1.5: Require appropriate mitigation and monitoring for environmental issues associated with developing RE facilities.	Consistent	Please refer to Section 4.2, Agricultural Resources, for a description of existing agricultural resources within the project site and a discussion of potential impacts attributable to the project. A biological resources report has been prepared for the project, which is summarized in Section 4.4, Biological Resources, along with potential impacts attributable to the project. With incorporation of mitigation identified in Sections 4.2, Agricultural Resources and 4.4, Biological Resources, less than significant impacts would result.
Objective 1.7: Assure that development of RE facilities and transmission lines comply with Imperial County Air Pollution Control District's regulations and mitigation measures.	Consistent	Because of the minimal grading of the site during construction and limited travel over the site during operations, local vegetation is anticipated to remain largely intact which will assist in dust suppression. Furthermore, dust suppression will be implemented including the use of water, bio-degradable chemical stabilization, and speed restrictions during construction. Section 4.3, Air Quality, discusses the project's consistency with the ICAPCD in more detail.
Objective 2.1: To the extent practicable, maximize utilization of IID's transmission capacity in existing easements or rights-of-way. Encourage the location of all major transmission lines within designated corridors easements, and rights-of-way.	Consistent	The project involves the construction and operation of new RE infrastructure that would interconnect with existing and approved IID transmission infrastructure thereby maximizing the use of existing facilities. As discussed in Chapter 3, Project Description, the project would interconnect to IID's existing Midway Substation located on the northern parcel of the project site.
<i>Imperial County Land Use Compatibility Plan</i>		
Safety Objective 2.1: The intent of land use safety compatibility criteria is to minimize the risks associated with an off-airport accident or emergency landing.	Consistent	The project site is not located within a designated ALUCP area.
<i>Southern California Area of Governments Regional Comprehensive Plan and Regional Transportation Plan</i>		
Objective 3.05: Encourage patterns of urban development and land use which reduce costs on infrastructure construction and make better use of existing facilities.	Consistent	The project involves the construction and operation of new RE infrastructure that would interconnect with existing and approved IID transmission infrastructure thereby maximizing the use of existing facilities. The project would not involve new forms of urban development that could increase demands for existing infrastructure.

Table 4.10-1. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Objective 3.14: Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.	Consistent	The project does not propose an increase in urban densities along regional commuter rail, transit systems, and activity centers and is not in proximity to these areas.
Objective 3.16: Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.	Consistent	The project site is located in an agriculturally designated portion of unincorporated Imperial County and would not discourage new development in and around existing activity centers, transportation corridors, underutilized infrastructure systems, or areas in need of recycling and redevelopment.
Objective 3.17: Support and encourage settlement patterns which contain a range of urban densities.	Consistent	The project would not increase urban densities because the project consists of new RE infrastructure and not residential or commercial development.
Objective 3.18: Encourage planned development in locations least likely to cause adverse environmental impact.	Consistent	The project is not characterized as “Planned Development” and is appropriately located to minimize adverse impacts to sensitive land uses and takes advantage of anticipated utility infrastructure needs.
RTP G6: Encourage land use and growth patterns that complement our transportation investments and improve the cost-effectiveness of expenditures.	Consistent	See discussion under Policy 3.16 above.
GV P1.1: Encourage transportation investments and land use decisions that are mutually supportive.	Consistent	See discussion under Policy 3.16 above.
GV P4.2: Focus development in urban centers and existing cities.	Consistent	The project consists of new renewable energy infrastructure and does not include residential or commercial forms of development that should otherwise be directed toward urban centers or existing cities.
GV P4.3: Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.	Consistent	See discussion under Policy 3.16 above.

Source: County of Imperial 1993, SCAG 2008a and 2008b

ALUCP – Airport Land Use Compatibility Plan; AQAP – air quality attainment plan; CRHR – California Register of Historic Resources; CUP – conditional use permit; EIR – environmental impact report; ICAPCD - Imperial County Air Pollution Control District; IID – Imperial Control District; LOS – level of service; MW – megawatt; RE – renewable energy; RPS – Renewables Portfolio Standard; ROW – right-of-way



The RE and Transmission Element includes a RE Zone (RE Overlay Map). The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of RE projects, with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As shown in Chapter 3, Figure 3-1, the project site is located within the RE Overlay Zone.

As previously indicated, the County's General Plan designates the project site as "Agriculture." The County identifies agricultural land as a form of open space. According to the Conservation and Open Space Element of the General Plan, open space is "any parcel or area of land or water, which is essentially unimproved and devoted to one of the following categories of uses: Preservation of Natural Resources; Managed Production of Resources; Outdoor Recreation; and, Protection of the Public Health and Safety." As such, outdoor recreational activities including hunting, bike riding, walking, and bird watching can take place in agricultural areas.

An analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in Table 4.10-1, Project Consistency with Applicable Plan Policies. A detailed analysis of the project's consistency with the General Plan goals, objectives, and policies regarding Agriculture is provided in Section 4.2, Agriculture Resources, of this EIR. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Planning Commission and Board of Supervisors retain authority for the determination of the project's consistency with the General Plan.

County of Imperial Land Use Ordinance

The County's Land Use Ordinance provides the physical land use planning criteria for development within the jurisdiction of the County. As depicted on Figure 4.10-2, the project site is zoned A-3. The purpose of the A-3 zoning designation is to "designate areas that are suitable for agricultural land uses; to prevent the encroachment of incompatible uses onto and within agricultural lands; and to prohibit the premature conversion of such lands to non-agricultural uses" (County of Imperial 2017). Uses in the A-3 zoning designation are limited primarily to agricultural-related uses and agricultural activities that are compatible with agricultural uses.

Sections 90509.01 and 90509.02 of the Land Use Ordinance identifies the permitted and conditional uses within the A-3 zoning designation. Uses identified as conditionally permitted require a CUP, which is subject to the discretionary approval of the County Board of Supervisors (Board) per a recommendation by the County Planning Commission. Pursuant to Title 9, Division 5, Chapter 9, "Solar Energy Plants" and "Transmission lines, including supporting towers, poles microwave towers, utility substations" are uses that are permitted in the A-3 Zone, subject to approval of a CUP. Section 90509.07 of the Land Use Ordinance limits the height of all non-residential structures within the A-3 zone to 120 feet. Specifically, Section 90509.07 (C) states, "Non-Residential structures and commercial communication towers shall not exceed 120 feet in height, and as may be required by the Airport Land Use Compatibility Plan (ALUCP)."

County of Imperial Right to Farm Ordinance Number 1031

The County of Imperial Right to Farm Ordinance (No. 1031) was approved by the County Board of Supervisors on August 7, 1990. The purpose and intent of the Ordinance is to reduce the loss to the County of its agricultural resources by clarifying the circumstances under which agricultural operations may be considered a nuisance. The Ordinance permits operation of properly conducted agricultural operations within the County. The Ordinance promotes a good neighbor policy by

disclosing to purchasers and users of adjacent properties the potential problems and inconveniences associated with agricultural operations.

Imperial County Airport Land Use Compatibility Plan

The Imperial County ALUCP provides the criteria and policies used by the Imperial County Airport Land Use Commission to assess compatibility between the principal airports in Imperial County and proposed land use development in the areas surrounding the airports. The ALUCP emphasizes review of local general and specific plans, zoning ordinances, and other land use documents covering broad geographic areas.

The nearest airport to the project site is the Cliff Hatfield Memorial Airport, located approximately 7 miles southwest of the project site. According to Figure 3C of the ALUCP, no portion of the project site is located within the Cliff Hatfield Municipal Memorial Airport's land use compatibility zones (County of Imperial 1996).

4.10.3 Existing Conditions

The project site encompasses approximately 223 acres of land located approximately 6 miles northeast of the City of Calipatria and 5 miles southeast of Niland, a census-designated place, in the unincorporated area of Imperial County. The project site encompasses approximately 223 acres, comprised of two parcels of land identified as APNs 025-260-024 (northern parcel) and 025-280-003 (southern parcel) (Figure 3-2).

The northern parcel is located at the northwest corner of Simpson Road and the IID's East Highline Canal. The existing Midway Substation is located on the southeast corner of the northern parcel of the project site. The northern parcel is bound by IID's 'M' Lateral on the south, 'N' Lateral on the north, and the East Highline Canal diagonally along the east.

The southern parcel is irregular in shape with the southwest corner located 1 mile east of the Wiest and Merkley Road intersection and consists of two fallowed agricultural fields. The southern parcel is bounded by IID's 'L' Lateral (irrigation supply canal) on the south, 'M' Lateral on the north, and the East Highline Canal diagonally along the east.

Adjacent properties consist of agricultural fields and citrus orchards, the IID's East Highline Canal, and a farm shop (P&T Enterprises) located south across the 'M' Lateral from the southwest corner of the northern parcel of the project site. The project site is located in a sparsely populated, agriculturally zoned portion of Imperial County. The nearest residence to the project site is located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road.

As shown on Figure 4.10-1, the project site is designated as Agriculture under the County's General Plan. As depicted on Figure 4.10-2, the project site is located on two privately-owned legal parcels zoned A-3 (Heavy Agriculture).

4.10.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to land use and planning, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to land use/planning are considered significant if any of the following occur:

- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating a significant environmental effect
- Conflict with any applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP)

Methodology

This analysis evaluates the project's consistency with applicable federal, state, and local land uses plans and policies. In order to analyze land-use consistency and land-use impacts, the following approach was employed:

- The project was reviewed relative to the land-use assumptions, policies, and designations of the Imperial County General Plan and applicable land-use plans, policies, and regulations
- The project was reviewed to identify any potential conflicts between the proposed land uses and existing or proposed land uses in the vicinity

In some instances, the land use for the project poses potential physical environmental consequences, such as traffic. In these cases, the consequences are discussed in the specific section of this EIR that focuses on that issue. The conceptual site plan for the project (Figure 3-3) was also used to evaluate potential impacts.

Impact Analysis

Impact 4.10-1 Physically Divide an Established Community.

The project would not physically divide an established community.

The project site is located in a sparsely populated, agriculturally zoned portion of Imperial County. The nearest residence to the project site is located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road. There are no established residential communities located within or in the vicinity of the project site. Therefore, implementation of the proposed project would not divide an established community and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.10-2 Conflict with Applicable Land Use Plan, Policies, or Regulations.

The project could conflict with an applicable land-use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, airport land use plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

The project's consistency with applicable land use plans, policies, and regulations is evaluated below.

Regional Comprehensive Plan and Regional Transportation Plan

According to the SCAG Intergovernmental Review Procedures Handbook, "new or expanded electrical generating facilities and transmission lines" qualify as regionally significant projects. Therefore, Table 4.10-1 provides a consistency evaluation for the project with applicable SCAG IGR policies. As shown in Table 4.10-1, the proposed project is consistent with the SCAG IGR policies.

County of Imperial General Plan

The County's General Plan applies to the solar energy facility and supporting infrastructure portions associated with the project. An analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in Table 4.10-1. As shown in Table 4.10-1, the proposed project would be consistent with the goals and objectives of the General Plan.

County of Imperial Land Use Ordinance

Development of the solar energy facility and supporting infrastructure is subject to the County's zoning ordinance. The project site is located on 2 privately-owned legal parcels zoned A-3. Pursuant to Title 9, Division 5, Chapter 9, "Solar Energy Plants" and "Transmission lines, including supporting towers, poles microwave towers, utility substations" are uses that are permitted in the A-3 Zone, subject to approval of a CUP. Therefore, with approval of a CUP for the project, the proposed project would not conflict with the County's zoning ordinance.

Imperial County Airport Land Use Compatibility Plan

The nearest airport to the project site is the Cliff Hatfield Memorial Airport, located approximately 7 miles southwest of the project site. According to Figure 3C of the ALUCP, no portion of the project site is located within the Cliff Hatfield Municipal Memorial Airport's land use compatibility zones (County of Imperial 1996). Therefore, the proposed project would not conflict with the Imperial County ALUCP, and no significant impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.10-3 Conflict with an Adopted Habitat Conservation Plan or Natural Communities Conservation Plan.

The project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

The project site is not located within the boundaries of any adopted HCP (16 USC §1539) or NCCP (California FGC §2800 et seq.). The County is not within the boundary of any adopted HCP or NCCP. Based on these considerations, the project would not conflict with any HCP or NCCP and would result in no significant impact.

Mitigation Measure(s)

No mitigation measures are required.

4.10.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

No impacts to land use and planning are anticipated to occur during decommissioning and restoration of the project site. Decommissioning and restoration would not physically divide an established community or conflict with any applicable land use or HCP. Through the project's decommissioning and subsequent restoration to pre-project conditions, the uses of the project site would remain consistent with the General Plan and zoning designations of the site, which allow agricultural uses. Therefore, no impact is identified and no mitigation is required.

Residual

With mitigation as prescribed in other sections of this EIR, issues related to the conversion of Important Farmland to non-agricultural use would be mitigated and reduced to a less than significant level. Similarly, with the approval of a CUP and reclamation plan to address post-project decommissioning, the project would generally be consistent with applicable federal, state, regional, and local plans and policies. Likewise, the project would not conflict with the provisions of an adopted HCP or NCCP. Based on these circumstances, the project would not result in any residual significant and unmitigable land use impacts.

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4.11 Noise and Vibration

This section provides a description of the existing ambient noise environment for the project area and describes applicable federal, state, and local regulations. Potential noise or vibration impacts associated with the project-related facilities, as described in Chapter 3, Project Description, are considered in Section 4.11.4 and, if necessary, mitigation is proposed based on the anticipated level of significance. Section 4.11.5 concludes by describing significant impacts following the application of mitigation, if any. The noise and vibration impact assessment in Section 4.11.4 provides an evaluation of potential adverse effects based on criteria derived from the CEQA Guidelines.

4.11.1 Environmental Setting

Noise is defined as unwanted sound. Pressure waves traveling through air exert a force registered by the human ear as sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level), which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. Consequently, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 hertz (Hz) and above 5,000 Hz to imitate the human ear's decreased sensitivity to low and extremely high frequencies. This emulation of the human ear's frequency sensitivity is referred to as A-weighting and is expressed in units of dBA. Frequency A weighting follows an international standard method of frequency de-emphasis and is typically applied to community noise measurements. In practice, the specific sound level from a source is measured using a meter incorporating an electrical filter corresponding to the A-weighting curve. All noise levels reported are A-weighted unless otherwise stated.

Noise Exposure and Community Noise

Community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources that constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. Community noise is constantly changing throughout the day because of short duration single event noise sources, such as aircraft flyovers, vehicle passbys, and sirens. These successive additions of sound to the community noise environment vary the community noise level from instant to instant. This requires the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below (Caltrans 1998):

- L_{eq} : the equivalent sound level (L_{eq}) is used to describe noise over a specified period of time, typically 1 hour, in terms of a single numerical value. The L_{eq} is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- L_{max} : the instantaneous maximum noise level (L_{max}) for a specified period of time.

- L_{dn} : 24-hour day and night (L_{dn}) A-weighted noise exposure level, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10 p.m. and 7 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises. Similar to L_{dn} , community noise equivalent Level (CNEL) adds a 5 dBA “penalty” for the evening hours between 7 p.m. and 10 p.m. in addition to a 10 dBA penalty between the hours of 10 p.m. and 7 a.m.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

1. Subjective effects of annoyance, nuisance, dissatisfaction
2. Interference with activities, such as speech, sleep, learning
3. Physiological effects, such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial settings can experience noise in the last category. A satisfactory method for measuring the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction does not exist. However, a wide variation in individual thresholds of annoyance does exist, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted; i.e., the “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans 1998):

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived
- Outside of the laboratory, a 3 dBA change is considered a perceivable difference
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected
- A 10 dBA change is subjectively heard as approximately a doubling in loudness and can cause adverse response

These relationships occur in part because of the logarithmic nature of sound and the dB system. The human ear perceives sound in a nonlinear fashion hence the dB scale was developed. Because the dB scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dB, the combined sound level would be 53 dB, not 100 dB. Because of this sound characteristic, if there are two noise emission sources, one producing a noise level greater than 9 dB than the other, the contribution of the quieter noise source is negligible and the sum of the noise sources is that of the louder noise source.



Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans 1998).

The project area is characterized by an agricultural landscape and, therefore, soft surfaces are generally present throughout.

4.11.2 Regulatory Setting

This section presents federal, state, and local laws, plans, and regulations governing noise levels and allowable limits applicable to the project.

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR, Part 205, Subpart B. The federal truck passby noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers. In addition to noise standards for individual vehicles, under regulations established by the U.S. Department of Transportation's FHWA, noise abatement must be considered for certain federal or federally-funded projects. Abatement is an issue for new highways or significant modification of an existing freeway. The agency must determine if the project would create a substantial increase in noise or if the predicted noise levels approach or exceed the Noise Abatement Criteria.

State

The state has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (CCR, Title 24). The noise insulation standards set forth an interior standard of L_{dn} 45 dB for any habitable room. They also require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than L_{dn} 60 dB. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

The State of California General Plan Guidelines, published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/ L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. The County of Imperial has utilized the adjustment factors provided and has modified the state's Land Use Compatibility standards for the purpose of implementing the Noise Element of its

General Plan. Table 4.11-1 summarizes the acceptable and unacceptable community noise exposure limits for various land use categories as currently defined by the State of California. These community noise exposure limits are also incorporated into the County of Imperial General Plan Noise Element.

Local

County of Imperial General Plan

The County of Imperial General Plan Noise Element identifies and defines existing and future environmental noise levels from sources of noise within or adjacent to the County of Imperial; establishes goals and objectives to address noise impacts, and provides Implementation Programs to implement adopted goals and objectives. Table 4.11-2 summarizes the project’s consistency with the applicable General Plan noise policies. While this EIR analyzes the project’s consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Noise Impact Zones. A Noise Impact Zone is an area that is likely to be exposed to significant noise. The County of Imperial defines a Noise Impact Zone as an area which may be exposed to noise greater than 60 dB CNEL or 75 dB $L_{eq}(1)$.

Table 4.11-1. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure – L_{dn} or CNEL (dBA)							
	50	55	60	65	70	75	80	
Residential	Blue	Blue	Blue	Blue				
			Green	Green	Green			
						Yellow	Yellow	
							Red	Red
Transient Lodging – Motel, Hotel	Blue	Blue	Blue	Blue	Blue			
			Green	Green	Green	Green		
							Yellow	Yellow
Schools, Libraries, Churches, Hospitals, Nursing Homes	Blue	Blue	Blue	Blue				
			Green	Green	Green			
						Yellow	Yellow	Yellow
								Red
Auditorium, Concert Hall, Amphitheaters	Green	Green	Green	Green	Green			
						Yellow	Yellow	Yellow



Table 4.11-1. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure – L _{dn} or CNEL (dBA)							
	50	55	60	65	70	75	80	
Sports Arena, Outdoor Spectator Sports								
	█	█	█	█	█	█	█	
								█
								█
Playgrounds, Neighborhood Parks	█	█	█	█	█	█		
						█	█	
							█	█
Golf Courses, Riding Stables, Water Recreation, Cemeteries	█	█	█	█	█			
						█	█	█
								█
Office Buildings, Business, Commercial and Professional	█	█	█	█	█			
					█	█	█	█
							█	█
Industrial, Manufacturing, Utilities, Agriculture	█	█	█	█	█			
						█	█	█
							█	█
█	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.						
█	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: OPR 2017; ICPDS 1993

CNEL - community noise equivalent level; dBA – A-weighted decibel; L_{dn} – day-night average sound level

Table 4.11-2. Project Consistency with Applicable General Plan Noise Policies

General Plan Policies	Consistency with General Plan	Analysis
<p>1. Acoustical Analysis of proposed projects. The County shall require the analysis of proposed discretionary projects, which may generate excessive noise, or which may be impacted by existing excessive noise levels.</p>	<p>Consistent</p>	<p>Under existing conditions, the ambient noise environment is characterized as relatively quiet with peak noise levels influenced by vehicular traffic and off-site agricultural operations. Given that the project is not characterized as a sensitive land use, project facilities would be unaffected by existing noise levels. The project facilities would be constructed within areas zoned for agricultural use with noise levels up to 70 dBA identified as normally acceptable. Project operations are expected to produce noise levels that would not exceed County standards and, hence impacts are expected to be less than significant.</p> <p>This EIR provides an analysis of the potential short- and long-term noise impacts of the project. As discussed, short-term and long-term noise levels were found to be less than significant.</p>
<p>2. Noise/Land Use Compatibility. Where acoustical analysis of a proposed project is required, the County shall identify and evaluate potential noise/land use conflicts that could result from the implementation of the project. Projects which may result in noise levels that exceed the “Normally Acceptable” criteria of the Noise/Land Use Compatibility Guidelines shall include mitigation measures to eliminate or reduce the adverse noise impacts to an acceptable level.</p>	<p>Consistent</p>	<p>Noise levels associated with project operations are unlikely to exceed noise limits for the A-3 zone. See Section 4.11.4 for additional discussion.</p>
<p>4. Interior Noise Environment. Where acoustical analysis of a proposed project is required, the County shall identify and evaluate projects to ensure compliance to the California (Title 24) interior noise standards and the additional requirements of this Element.</p>	<p>Consistent</p>	<p>This EIR provides an analysis of the potential short- and long-term noise impacts of the project. As discussed, short-term and long-term noise levels were found to be less than significant.</p> <p>Noise levels associated with project operations would be unlikely to exceed noise limits for the A-3 zone.</p>
<p>5. New Noise Generating projects. The County shall identify and evaluate projects which have the potential to generate noise in excess of the Property Line Noise Limits. An acoustical analysis must be submitted which demonstrates the project’s compliance.</p>	<p>Consistent</p>	<p>This EIR provides an analysis of the potential short- and long-term noise impacts of the project. As discussed, short-term and long-term noise levels were found to be less than significant.</p> <p>Noise levels associated with project operations would be unlikely to exceed noise limits for the A-3 zone.</p>



Table 4.11-2. Project Consistency with Applicable General Plan Noise Policies

General Plan Policies	Consistency with General Plan	Analysis
<p>6. Projects Which Generate Off-site Traffic Noise. The acoustical analysis shall identify and evaluate projects, which would generate traffic and increase noise levels on off-site roadways. If the project site has the potential to cause a significant noise impact on sensitive receptors along those roadways, the acoustical analysis report shall consider noise reduction measures to reduce the impact to a level less than significant.</p>	<p>Consistent</p>	<p>As described in Chapter 3, the project would involve a minimal number of operational related vehicle trips and therefore, is unlikely to produce any increase in traffic noise levels on local roadways.</p>

Source: ICPDS 1993

*dB*A – A-weighted decibel; EIR – environmental impact report

The County of Imperial has established the following interior noise standards to be considered in acoustical analyses:

- The interior noise standard for detached single family dwellings shall be 45 dB CNEL.
- The interior noise standard for schools, libraries, offices and other noise-sensitive areas where the occupancy is normally only in the day time, shall be 50 dB averaged over a 1-hour period ($L_{eq}(1)$).

Construction Noise Standards

Construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq} when averaged over an 8-hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual receptor of days or weeks.

Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No construction operations are permitted on Sundays or holidays.

County of Imperial Noise Ordinance

Noise generating sources in Imperial County are regulated under the County of Imperial Codified Ordinances, Title 9, Division 7 (Noise Abatement and Control). Noise limits are established in Chapter 2 of this ordinance. Under Section 90702.00 of this rule, 70 dB is the normally acceptable limit for the Industrial, Manufacturing, Utilities, and Agricultural category of land use (Table 4.11-3).

Table 4.11-3. Imperial County Exterior Noise Standards

Land Use Zone	Time Period	Noise Level, L_{eq} 1-hour
R-1 Residential	Night (10 p.m. to 7 a.m.)	45 dBA
	Day (7 a.m. to 10 p.m.)	50 dBA
R-2 Residential	Night (10 p.m. to 7 a.m.)	50 dBA
	Day (7 a.m. to 10 p.m.)	55 dBA
R-3, R-4, and all other residential	Night (10 p.m. to 7 a.m.)	50 dBA
	Day (7 a.m. to 10 p.m.)	55 dBA
Commercial	Night (10 p.m. to 7 a.m.)	55 dBA
	Day (7 a.m. to 10 p.m.)	60 dBA
Manufacturing, other industrial, agricultural, and extraction industry	Anytime	70 dBA
Industrial	Anytime	75 dBA

dBA – A-weighted decibel; L_{eq} – equivalent sound level

Imperial County Right-to-Farm Ordinance

In recognition of the role of agriculture in the county, the County of Imperial has adopted a “right-to-farm” ordinance (County of Imperial Codified Ordinances, Division 2, Title 6: Right to Farm). A “right-to-farm” ordinance creates a legal presumption that ongoing standard farming practices are not a nuisance to adjoining residences and requires a disclosure to land owners near agricultural land operations or areas zoned for agricultural purposes. The disclosure advises persons regarding potential discomfort and inconvenience that may occur from operating machinery as a result of conforming and accepted agricultural operations.

4.11.3 Existing Conditions

The project site is designated as Agriculture under the County’s General Plan. As depicted on Figure 4.10-2, the project site is located on two privately-owned legal parcels zoned A-3 (Heavy Agriculture).

The East Highline Canal is located on the project site’s eastern boundary, with desert lands immediately beyond. The existing Midway Substation is located on the northern parcel of the project site. The project site is surrounded to the north, west, and south by privately-owned agricultural lands. Adjacent roadways, which are currently developed for agricultural uses, include Merkley Road, Simpson Road, and Wiest Road.

The predominant sources of noise in the project area includes vehicular traffic on local roads and highways and agricultural operations. Activities involving the use of heavy-duty equipment such as frontend loaders, forklifts, and diesel-powered trucks are common noise sources typically associated with agricultural uses. Noise typically associated with agricultural operations, including the use of heavy-duty equipment, can reach maximum levels of approximately 85 dBA at 50 feet (Caltrans 1998). With the soft surfaces characterizing the agricultural landscape, these noise levels attenuate

to ~60 dBA at distances over 800 feet. Primary sources of noise in the project area include vehicle traffic along roadways including Merkley Road, Simpson Road and Wiest Road, and agricultural operations in the vicinity of the project area including the operation of heavy equipment and vehicles.

Sensitive Receptors

Although noise pollution can affect all segments of the population, certain groups and land uses are considered more sensitive to ambient noise levels than others, sensitivity being a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. Children, the elderly, and the chronically or acutely ill are the most sensitive population groups.

Residential land uses are also generally more sensitive to noise than commercial and industrial land uses. The project site is located in a sparsely populated, agriculturally zoned portion of Imperial County. The nearest sensitive receptor to the project site is a residence located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road.

Groundborne Vibration

Groundborne vibration consists of rapidly fluctuating motions or waves, which are also measured in dB. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside structures. Differences in subsurface geologic conditions and distance from the source of vibration would result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes would decrease with increasing distance. High frequency vibrations reduce much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances.

Human response to vibration is difficult to quantify. Vibration can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does frequency. Generally, as the duration and vibration frequency increase, the potential for adverse human response increases. While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings may be perceived as motion of building surfaces or rattling of windows, items on shelves, and pictures hanging on walls. Vibration of building components can also take the form of an audible low-frequency rumbling noise, which is referred to as groundborne noise.

Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when the structure and the source of vibration are connected by foundations or utilities, such as sewer and water pipes. To assess a project's vibration impacts, the Caltrans 2013 vibration impact assessment, entitled the "*Transportation and Construction-Induced Vibration Guidance Manual*," was utilized. The guidance manual uses peak particle velocity (PPV) to quantify vibration amplitude. PPV is defined as the maximum instantaneous peak of the vibratory motion (Caltrans 2013). As a point of reference, a strongly perceived transient source is 0.90 PPV at 25 feet, and 0.10 PPV at 25 feet for an intermittent source. Table 4.11-4 identifies acceptable vibration limits for transportation and construction projects based on guidelines prepared by Caltrans.

Table 4.11-4. California Department of Transportation Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (inch/second)	
	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
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2013

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV – peak particle velocity

Proximity to Airports

The project site is not located within 2 miles of a public airport or a private airstrip. The nearest airport to the project site is the Cliff Hatfield Memorial Airport, located approximately 7 miles southwest of the project site.

4.11.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to noise and vibration, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to noise and vibration are considered significant if any of the following occur:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project



- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels

Methodology

Noise generated by the proposed project would consist of: (1) short duration noise resulting from construction activities and (2) noise during normal facility operations. Vibration from the proposed project would only result during construction. Construction activities would take place only during daytime hours. An evaluation was performed of expected noise and vibration and compared to regulatory requirements.

Impact Analysis

Impact 4.11-1 Temporary, Short-Term Exposure of Sensitive Receptors to Increased Equipment Noise from Project Construction.

The project would not expose persons to or generate noise levels in excess of applicable County standards.

Construction noise, although temporary, can potentially affect nearby sensitive receptors, such as residences. Construction of the proposed project would require the use of heavy equipment that may be periodically audible at offsite locations. Received noise levels would fluctuate, depending on the construction activity, equipment type, and distance between noise source and receiver. Additionally, noise from construction equipment would vary dependent on the construction phase and the number and type of equipment at a location at any given time. Construction for the project is expected to conservatively last 6 months. The project would be constructed in three potentially overlapping phase activities:

- Phase 1 - Site Preparation
- Phase 2 – Facility Installation
- Phase 3 – Commissioning/Finishing

The nearest sensitive receptor to the project site is a residence located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road. However, because of the large size of the project site, over an 8-hour period the average distance from the construction activities on the project site to this sensitive land use is approximately 500 feet. Construction noise would attenuate with increased distance from the noise sources.

Construction is performed in discrete steps, each of which has its own mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 4.11-5 lists maximum noise levels recommended for noise impact assessments for typical construction equipment based on a distance of 50 feet between the equipment and a noise

receptor. Typical maximum noise levels range up to 91 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels, because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings.

Table 4.11-5. Typical Maximum Construction Equipment Noise Levels (L_{max})

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Pile Drivers, 12,000 to 18,000 feet-pound/blow	81 – 96	93
Rock Drills	83 – 99	96
Jack hammers	75 – 85	82
Pneumatic Tools	78 – 88	85
Pumps	74 – 84	80
Dozers	77 – 90	85
Scrapers	83 – 91	87
Haul Trucks	83 – 94	88
Cranes	79 – 86	82
Portable Generators	71 – 87	80
Rollers	75 – 82	80
Tractors	77 – 82	80
Front-End Loaders	77 – 90	86
Hydraulic Backhoe	81 – 90	86
Hydraulic Excavators	81 – 90	86
Graders	79 – 89	86
Air Compressors	76 – 89	86
Trucks	81 – 87	86

Source: *Noise Control for Buildings and Manufacturing Plants*, Bolt, Beranek & Newman 1987

dBA – A-weighted decibel; L_{eq} – equivalent sound level



Construction of the proposed project is expected to require the use of earthmovers, bulldozers, loaders, cranes, forklifts, pile drivers, water trucks, and pickup trucks. This equipment would be used on the project site. Based on Table 4.11-5, the maximum noise level generated by each earthmover on the project site is assumed to be 88 dBA L_{max} at 50 feet from the earthmover. Each bulldozer would also generate 88 dBA L_{max} at 50 feet. The maximum noise level generated by water and pickup trucks is approximately 86 dBA L_{max} at 50 feet from these vehicles. While full sized pile drivers can generate noise levels in excess of 96 dBA L_{max} , the post driver required for the solar panel mounts would generate noise levels of 85 to 88 dBA L_{max} . Each doubling of a sound source with equal strength increases the noise level by 3 dBA. As each piece of construction equipment operates as an independent noise source, the combined noise level during construction would be 91 dBA L_{max} at a distance of 50 feet. The proposed project would include construction activities within 250 feet of the existing residence located approximately 250 feet southwest of the northern parcel of the project site on Simpson Road. Distance attenuation would reduce the construction noise by 14 dBA to 77 dBA L_{max} .

The variation in power and usage of the various equipment types creates complexity in characterizing construction noise levels. The estimated composite site noise level is based on the assumption that all equipment would operate at a given usage load factor, for a given hour (i.e., front end loaders are assumed to be used for up to 40 percent of 1 hour, or 24 minutes), to calculate the composite average daytime hourly L_{eq} . Using a conservative load factor of 40 percent for all on-site equipment, the average noise level at the existing residence would be 73 dBA L_{eq} . This noise level would not exceed the County's 75 dBA L_{eq} construction noise threshold.

Pursuant to the County's construction noise standards, construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No construction operations are permitted on Sundays or holidays. Heavy construction work is expected to occur from 6 a.m. to 5 p.m., Monday through Friday; however, to meet schedule demands, it may be necessary to work early morning, evening, or nights and on weekends during certain construction phases. Some activities may continue 24 hours, 7 days per week. These activities include, but are not limited, to refueling equipment, staging material for the following day's construction activities, quality assurance/control, and commissioning. The work schedule may be modified throughout the construction period to account for changing weather conditions. If construction work takes place outside these typical hours, activities will comply with Imperial County standards for construction noise levels. Therefore, impacts from construction noise are considered less than significant.

Traffic noise associated with construction of the proposed project is not anticipated to be a significant source of noise. Traffic noise is not greatly influenced by lower levels of traffic, such as those associated with the proposed project's construction effort. For example, traffic levels would have to double in order for traffic noise on area roadways to increase by 3 dBA. The proposed project's construction traffic on area roadways would increase hourly traffic volumes by much less than double; therefore, the increase in construction related traffic noise would be less than 3 dBA and is not significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.11-2 Exposure to and/or Generation of Groundborne Vibration.

The project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.

Vibration associated with construction of the proposed project has the potential to be an annoyance to nearby land uses.

The County does not have adopted limits for determining significance of vibration impacts on structures or persons. Caltrans and the Federal Transit Authority (FTA) have developed two of the decisive works in the assessment of vibrations from transportation and construction sources (Caltrans 2013; FTA 2006). The Caltrans vibration limits are reflective of standard practice for analyzing vibration impacts on structures from continuous and intermittent sources.

The Caltrans *Transportation and Construction Vibration Guidance Manual* identifies two impact criteria for buildings and humans. Table 4.11-4 describes impact criteria for buildings, and Table 4.11-6 describes impact criteria for humans.

Table 4.11-6. California Department of Transportation Guideline Vibration Annoyance Potential

Human Response	Maximum PPV (inch/second)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2013

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV – peak particle velocity



Construction of the proposed project may require post driving and vibratory rollers and has the potential to result in temporary vibration impacts on structures and humans. Based on the potential site locations, post driving activities would not occur closer than 250 feet from the nearest off-site structures. As impact pile drivers have higher vibration levels than vibratory pile drivers, the potential vibration impact calculations assume that impact pile drivers would be used. Other construction activities are less intensive than pile driving and would have lower PPV than pile driving. Therefore, vibration levels from pile driving are considered worst case for the project construction. Caltrans vibration guidance provides the following equation to calculate PPV at sensitive receptors:

$$\text{PPV Impact Pile Driver} = \text{PPV}_{\text{Ref}} (25/D)^n \times (E_{\text{equip}}/E_{\text{Ref}})^{0.5} \text{ (inch/second)}$$

Where:

$\text{PPV}_{\text{Ref}} = 0.65 \text{ in/sec}$ for a reference pile driver at 25 feet

D = distance from pile driver to the receiver in feet

$n = 1.1$ is a value related to the vibration attenuation rate through ground

E_{equip} is rated energy of impact pile driver in feet-pounds

E_{Ref} is 36,000 feet-pounds (rated energy of reference pile driver)

Using the referenced formula and an assumed 2,400 feet-pounds rated energy for the post driver, the calculated PPV at the nearest structure (250 feet) would be 0.013 PPV, which according to the Caltrans guidance would not damage buildings and would be barely perceptible. Therefore, vibration impacts associated with construction of the proposed project would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.11-3 Permanent Increase in Ambient Noise Levels.

The project would not create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

The principle long-term, operational noise impacts resulting from the project would include light duty vehicle traffic for security patrols, and maintenance operations, including solar panel washing. The on-site water storage tank would require associated pumping and would operate intermittently. The level of noise generated by these combined sources would depend on: characteristics of the noise source, number of noise sources clustered together, and operational characteristics.

It is anticipated that maintenance of the facilities would require minimal site presence to perform periodic visual inspections and minor repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, because of the nature of the facilities, such actions would likely occur infrequently. Overall, minimal maintenance requirements are anticipated. Maintenance and other operational staff would use standard size pickup trucks and vehicles. Because of the relatively low and infrequent volume of project-generated traffic, operation of the proposed facilities would not result in noticeable changes in the traffic noise along area roadways in relation to existing and projected roadway traffic volumes. As a result, long-term increases in traffic noise levels would be less than significant.

The project would be required to comply with the County of Imperial Codified Ordinances Division 7 Noise Abatement and Control. This ordinance governs fixed operational noise within the project site. The 1-hour average sound level limit for the A-3 zone is 75 dBA and noise levels up to 70 dBA L_{dn} are identified as normally acceptable (Table 4.11-1). The noise generated during these collective operations would be required to comply with the noise standards contained in the County's Noise Ordinance. Noise generated during operations would not represent a significant noise source, and would involve less intensive activities and operation of equipment as compared to existing agricultural operations in the area. The impact would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.11-4 Airport Noise.

The project would not result in the exposure of people residing or working in the project area to excessive noise levels from public and private airport operations.

The project would not involve the construction of sensitive land uses. The project site is not located within 2 miles of a public airport or a private airstrip. The nearest airport to the project site is the Cliff Hatfield Memorial Airport, located approximately 7 miles southwest of the project site. Therefore, the project would not expose people to excessive airport noise levels and no impact is identified for these issue areas.

Mitigation Measure(s)

No mitigation measures are required.

4.11.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning or restoration of the solar facility would use similar equipment to what was evaluated in the construction noise and vibration analysis. Adhering to Imperial County standards for construction noise levels would reduce the noise and vibration impacts to below a level of significance.

Residual

Adhering to the Imperial County standards for construction noise levels would reduce the noise and vibration impacts to below a level of significance.



4.12 Public Services

This section includes an evaluation of potential impacts for identified public services that could result from implementation of the proposed project. Public services typically include fire protection, law enforcement, schools, and other public facilities, such as parks, libraries, and post offices. Each subsection includes descriptions of existing facilities, service standards, and potential environmental impacts resulting from implementation of the proposed project, and mitigation measures where appropriate. Section 4.14, Utilities/Service Systems, of this EIR evaluates impacts related to water supply, wastewater, and other utilities. The impact assessment provides an evaluation of potential adverse effects to public services based on criteria derived from the CEQA Guidelines in conjunction with actions proposed in Chapter 3, Project Description.

The IS/NOP prepared for this EIR determined that the project would not result in impacts on schools, parks and other public facilities (libraries and post offices). Therefore, these issue areas will not be discussed further. The IS/NOP is included in Appendix A of this EIR.

4.12.1 Environmental Setting

The proposed project is located approximately 6 miles northeast of the City of Calipatria and 5 miles southeast of Niland, a census-designated place, in the unincorporated area of Imperial County. The project site is located within the ICFD/OES and the Imperial County Sheriff Department's areas of service.

4.12.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

State

Fire Codes and Guidelines

The California Fire Code (Title 24, Part 9 of the CCR) establishes regulations to safeguard against 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 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. The Fire Code includes regulations regarding fire resistance-rated construction, fire protection systems, such as alarm and sprinkler systems, fire services features, including fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

Local

Imperial County General Plan

The Imperial County General Plan Seismic and Public Safety Element contains goals and objectives that relate to fire protection and law enforcement pertinent to the proposed project. An analysis of the project’s consistency with the applicable goals and objectives of the Seismic and Public Safety Element is provided in Table 4.12-1.

Table 4.12-1. Project Consistency with Applicable General Plan Seismic and Public Safety Element Policies

Applicable General Plan Goals/Policies	Consistency Determination	Analysis
Goal 1: Include public health and safety considerations in land use planning.	Consistent	The project CUP application and site plan would be reviewed by the ICFD to ensure that all site facilities comply with state and local fire codes and fire safety features are met. Additionally, the project applicant has included site design measures to reduce the potential for fire hazards including a 10,000-gallon aboveground water storage tank to supply sufficient fire suppression water during operations. Project facilities would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements. The following steps would be taken to identify and control fires and similar emergencies: <ul style="list-style-type: none"> • Electrical equipment that is part of the project would only be energized after the necessary inspection and approval, so there is minimal risk of any electrical fire during construction. • Project staff would monitor fire risks during construction and operation to ensure that prompt measures are taken to mitigate identified risks. • Transformers located on site would be equipped with coolant that is non-flammable, biodegradable, and contains no polychlorinated biphenyls or other toxic compounds.
Objective 1.8: Reduce fire hazards by the design of new developments		
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.	Consistent	See response above for a discussion on how the project would implement all state and local fire codes and provide site design measures to reduce the potential for fire hazards. <p>With regards to public safety and security, the boundary of the project site would be secured by a 6-foot-tall chain-link perimeter fence, topped by 1-foot-tall three-strands of barbed wire. Points of ingress/egress would be accessed via locked gates.</p>
Objective 2.5: Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		

Source: ICPDS 1993

CUP – conditional use permit; ICFD – Imperial County Fire Department



Imperial County Office of Emergency Services – Multi-Hazard Mitigation Plan

The ICFD is the local Office of Emergency services in Imperial County. Imperial County has developed the Multi-Hazard Mitigation Plan (MHMP) to create a safer community. The purpose of the MHMP is to significantly reduce deaths, injuries, and other disaster losses caused by natural and human-caused hazards in Imperial County. The MHMP describes past and current hazard mitigation activities and outlines goals, strategies, and actions for reducing future disaster losses. The Imperial County MHMP is the representation of the County's commitment to reduce risks from natural and other hazards and serves as a guide for decision-makers as they commit resources to reducing the effects of natural and other hazards. The jurisdictions included in the MHMP include the cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmoreland, the IID and the Imperial County Office of Education. The MHMP complies with all federal, state, and local laws guiding disaster management.

County Evacuation Plans

The Imperial County EOP provides guidance and procedures for the County to prepare for and respond to emergencies. The EOP designates the Sheriff's Department as having jurisdiction in an emergency involving evacuation within the unincorporated areas of the county and within contract cities.

4.12.3 Existing Conditions

Fire Protection Services

The project site is located within the ICFD/OES area of service. ICFD/OES currently has eight fire stations serving the entire 4,500 square miles of unincorporated Imperial County. The eight ICFD stations are located in the communities of Heber, Seeley, Ocotillo, Palo Verde, Niland, Winterhaven, and the City of Imperial. Each of the county fire stations is staffed with a Captain, Firefighter, and Reserve Firefighter with the only exception being the Palo Verde station that is staffed with a Firefighter and Reserve Firefighter.

Every fire station has a Type I engine as its primary apparatus. The City of Imperial and Heber stations also house a Ladder Truck along with the Type I engine. The Seeley and Heber stations also house Type III engines. The ICFD Emergency Units strive to respond immediately after receiving the initial tone for service. The actual response time would be determined by the area of response throughout the vast response area covered.

The closest fire station to the project is site is the Niland station located at 8071 Luxor Avenue in Niland, California. This station is located approximately 10 miles northwest of the project site.

Police Protection Services

Imperial County's Sheriff's Department is responsible for police protection services in the unincorporated areas of Imperial County and the City of Holtville. The patrol function is divided between North County Patrol, South County Patrol, East County Operations, and City of Holtville. Deputies assigned to the Patrol Divisions are the "first responders" to a call for law enforcement service. The main patrol station is located in El Centro on Applestill Road. Sheriff substations are located in the communities of Brawley, Niland, Salton City, and Winterhaven with resident deputies located in the unincorporated community of Palo Verde. Under an existing mutual aid agreement, additional law enforcement services would be provided if and when required by all of the cities within

the county, as well as with Border Patrol and the California Highway Patrol. The California Highway Patrol provides traffic regulation enforcement, emergency accident management, and service and assistance on state roadways and other major roadways in the unincorporated portions of Imperial County.

4.12.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to public services, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to public services are considered significant if the project would result in 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, to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire protection
- Police protection
- Schools
- Parks
- Other public facilities

As mentioned previously, it was determined through the preparation of an IS that the project would not result in impacts on schools, parks or other public facilities. Therefore, those issue areas will not be discussed further.

Methodology

Evaluation of potential fire and police service impacts of the proposed project were based on consultation with the ICFD, Sheriff's Department and review of other development projects in the area.

Impact Analysis

Impact 4.12-1 Increased Demand on the ICFD.

Implementation of the project would not result in the need for additional fire protection services during construction and operational activities.

The project would result in a minor increase in demand for fire protection services over existing levels. No operations and maintenance buildings are required. Auxiliary facilities would include lighting, grounding, emergency generator, and fire and hazardous materials safety systems. The project applicant would include site design measures to reduce the potential for fire hazards including a 10,000 gallon aboveground water storage tank to supply sufficient fire suppression water during operations. Project facilities would be designed, constructed, and operated in accordance

with applicable fire protection and other environmental, health, and safety requirements. The following steps would be taken to identify and control fires and similar emergencies:

- Electrical equipment that is part of the project would only be energized after the necessary inspection and approval, so there is minimal risk of any electrical fire during construction.
- Project staff would monitor fire risks during construction and operation to ensure that prompt measures are taken to mitigate identified risks.
- Transformers located on site would be equipped with coolant that is non-flammable, biodegradable, and contains no polychlorinated biphenyls or other toxic compounds.

Additionally, fire protection for the project would be provided by vegetation management programs as part of project design measures. As such, the project would not result in a need for fire facility expansion.

Decommissioning of the project at the end of its 25-year life would occur through implementation of a required Reclamation Plan. These activities would not be anticipated to result in an increased need for fire protection services. Imperial County requires payment of impact fees for new development projects. Fire Impact Fees are imposed pursuant to Ordinance 1418 §2 (2006), which was drafted in accordance with the County's TischlerBise Impact Fee Study. The ordinance has provisions for non-residential industrial projects based on square footage. The project applicant would be required to pay the fire protection services' impact fees. These fees would be included in the Conditions of Approval for the CUP. No new fire stations or facilities would be required to serve the project. Impacts would therefore be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.12-2 Increased Demand on the Imperial County Sheriff Department.

Implementation of the project would not result in the need for additional police protection services during construction and operational activities.

The project would result in a minor increase in demand for law enforcement protection services over existing levels. Emergency response times can vary because of the large patrol area of the County. Depending on the location of the deputy, response times can range from approximately 5 minutes to 1 hour; however, emergency calls involving public safety would take priority.

The project does not include a residential component; therefore, it would not result in a substantial addition of residents to the Sheriff Department's service area. The project facility would be monitored remotely by the project applicant or an affiliated company. Once constructed, the project would operate during daylight, 7 days per week, 365 days per year. Security would be maintained through installation of a 6-foot-tall wire fence topped by 1-foot-tall three-strands of barbed wire. A security company would be contracted for security purposes during construction and operation. Should the security system detect the presence of unauthorized personnel, a security representative would be dispatched to the facility, and appropriate local authorities would be notified.

No slats are proposed within the perimeter fencing. This would allow for visibility onto the site by law enforcement patrols and security patrols. A box containing keys for the project facility would be installed to permit emergency access to the project site. With these features installed on site, the

security on the solar facility would be adequate and would not require the addition of staff to the Sheriff's Department. As such, the project would not result in a need for police facility expansion. Decommissioning of the project at the end of its 25-year life would occur through implementation of a required Reclamation Plan. These activities would not be anticipated to result in an increased need for police services.

Imperial County requires payment of impact fees for new development projects. Police services Impact Fees are imposed pursuant to Ordinance 1418 §2 (2006), which was drafted in accordance with the County's TischlerBise Impact Fee Study. The ordinance has provisions for non-residential industrial projects based on square footage. The project applicant would be required to pay the police protection services' impact fees. These fees would be included in the Conditions of Approval for the CUP. Impacts would, therefore, be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

4.12.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration of the project site at the end of its 25-year life would occur and would not result in an increased need for fire and police protection services. These activities would be in the form of disassembling project components, and then restoring the site to preexisting (pre-project) conditions, both of which would not create an increase in demand for police or fire service beyond the level required for the proposed solar operations. Therefore, no impact is identified and no mitigation is required for this phase.

Residual

With payment of the development impact fees for fire and police protection services, project impacts would be less than significant. No mitigation is required, and no residual significant and unmitigated impacts would result.



4.13 Transportation/Traffic

This section addresses the project's impacts on traffic and the surrounding roadway network associated with construction and operation of the project. The following discussion describes the existing environmental setting in the surrounding area, the existing federal, state, and local regulations regarding traffic, and an analysis of the potential impacts of the proposed project.

4.13.1 Environmental Setting

The proposed project is located approximately 6 miles northeast of the City of Calipatria and 5 miles southeast of Niland, a census-designated place, in the unincorporated area of Imperial County. The East Highline Canal is located on the project site's eastern boundary, with desert lands immediately beyond. Adjacent roadways, which are currently developed for agricultural uses, include Merkley Road and Simpson Road.

4.13.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

State

California Department of Transportation

Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Specifically, Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System. As it relates to the proposed project and potential construction access routes, Caltrans is responsible for maintaining and managing SR-11 and SR-115. Specific thresholds for assessing project-related impacts on state highways are further discussed in the California Department of Transportation section of this chapter.

Regional Plans

2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, SCAG adopted the 2016-2040 *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) (SCAG 2016). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. Input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The RTP/SCS demonstrates how the region will reduce emissions from transportation sources to comply with SB 375 and meet the NAAQS set forth by the CAA. Consistency with the RTP/SCS is addressed in Section 4.10, Land Use Planning.

The updated RTP/SCS contains thousands of individual transportation projects that aim to improve the region's mobility and air quality and revitalize our economy. Since the RTP/SCS's adoption, the county transportation commissions have identified new project priorities and have experienced technical changes that are time-sensitive. Additionally, the new amendments for the plan have

outlined minor modifications to project scopes, costs and/or funding and updates to completion years. The amendments to the RTP/SCS do not change any other policies, programs, or projects in the plan.

Local

County of Imperial Circulation and Scenic Highways Element

The Circulation and Scenic Highways Element identifies the location and extent of transportation routes and facilities. It is intended to meet the transportation needs of local residents and businesses and as a source for regional coordination. The inclusion of Scenic Highways provides a means of protecting and enhancing scenic resources within highway corridors in Imperial County. The purpose of the Circulation and Scenic Highways Element is to provide a comprehensive document which contains the latest knowledge about the transportation needs of the County and the various modes available to meet these needs. Additionally, the purpose of this Element is to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

Coordination across jurisdictional standards for road classification and design standards was identified as a crucial component to the 2008 update of the Circulation and Scenic Highways Element. The intent of this element is to provide a system of roads and streets that operate at an LOS "C" or better (Imperial County Planning and Development 2008).

Level of Service

LOS is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. LOS ranges from A through F, where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating needs. Additionally, with the growth of Imperial County, transportation management and systems management will be necessary to preserve and increase roadway "capacity." LOS standards are used to assess the performance of a street or highway system and the capacity of a roadway.

County of Imperial Bicycle Master Plan Update: Final Plan

In 2012, the County of Imperial adopted an updated Bicycle Master Plan to serve as the guiding document for the development of an integrated network of bicycle facilities and supporting programs designed to link the unincorporated areas and attractive land uses throughout the County. This document is an update to the previously adopted Countywide Bicycle Master Plan; and was prepared to accomplish the following goals:

1. To promote bicycling as a viable travel choice for users of all abilities in the County,
2. To provide a safe and comprehensive regional connected bikeway network,
3. To enhance environmental quality, public health, recreation and mobility benefits for the County through increased bicycling

The County of Imperial's General Plan, Circulation Element and Open Space Element, provide a solid planning basis for the Bicycle Master Plan. In spite of the fact that there are a limited number of bicycle facilities in Imperial County and no comprehensive bicycle system, there is a growing interest

in cycling and numerous cyclists bike on a regular basis for both recreation and commuting to work and school.

4.13.3 Existing Conditions

This section presents the significance criteria used for considering project-related impacts, the methodology employed for the evaluation, and mitigation requirements, if necessary.

Existing Circulation Network

The following roadway classifications are derived from the County of Imperial General Plan Circulation and Scenic Highways Element:

Expressway

The main function of this classification is to provide regional and intra-county travel services. Features include high design standards with six travel lanes; wide landscaped medians; highly restricted access; provisions for public transit lands, including but not limited to, bus lanes, train lanes, or other mass transit type means; and no parking. Minimum ROW is 210 feet consisting of three travel lanes per direction, a 56-foot median, and shoulders along both sides of the travel way. The ROW width is exclusive of necessary adjacent easements such as for the IID facilities as these vary. The minimum intersection spacing is 1 mile (ROWS may be greater if the road segment also serves as a corridor for public utilities).

Prime Arterial

The main function of this classification is to provide regional, sub regional, and intracounty travel services. Features include high design standards with four to six travel lanes, raised and landscaped medians, highly restricted access, which in most cases will be a 1 mile minimum, provisions for public transit lanes, including but not limited to bus lanes, train lanes, or other mass transit type means and no parking. The absolute minimum ROW without public transit lanes is 136 feet. ROW dimensions are specified in the standards for specific road segments. Please refer to the appropriate standards section (ROWS may be greater if the road segment also serves as a corridor for public utilities).

Minor Arterial

These roadways provide intra-county and sub-regional service. Access and parking may be allowed, but closely restricted in such a manner as to ensure proper function of this roadway. Typical standards include the provision for four and six travel lanes with raised landscaped medians for added safety and efficiency by providing protected left turn lanes at selected locations. Some may also contain provisions for public transit lanes or other mass transit type means. Minimum ROW is 102 feet for four lanes and 126 feet for six lanes.

Major Collector (Collector)

These roadways are designed to provide intra-county travel as a link between the long haul facilities and the collector/local facilities. Although it frequently provides direct access to abutting properties, that is not its primary purpose. Typical design features include provision for four travel lanes without a raised median and some may also contain provisions for public transit lanes or other mass transit type means. Minimum ROW is 84 feet. Parking is generally not permitted.

Minor Local Collector (Local Collector)

This is designed to connect local streets with adjacent Collectors or the arterial street system. Design standards include provision for two travel lanes and parking, except in specific locations where parking is removed to provide a turn lane at intersections. Local Collector streets frequently provide direct access to abutting properties, although that should be avoided where feasible. Minimum ROW is 70 feet.

Residential Street

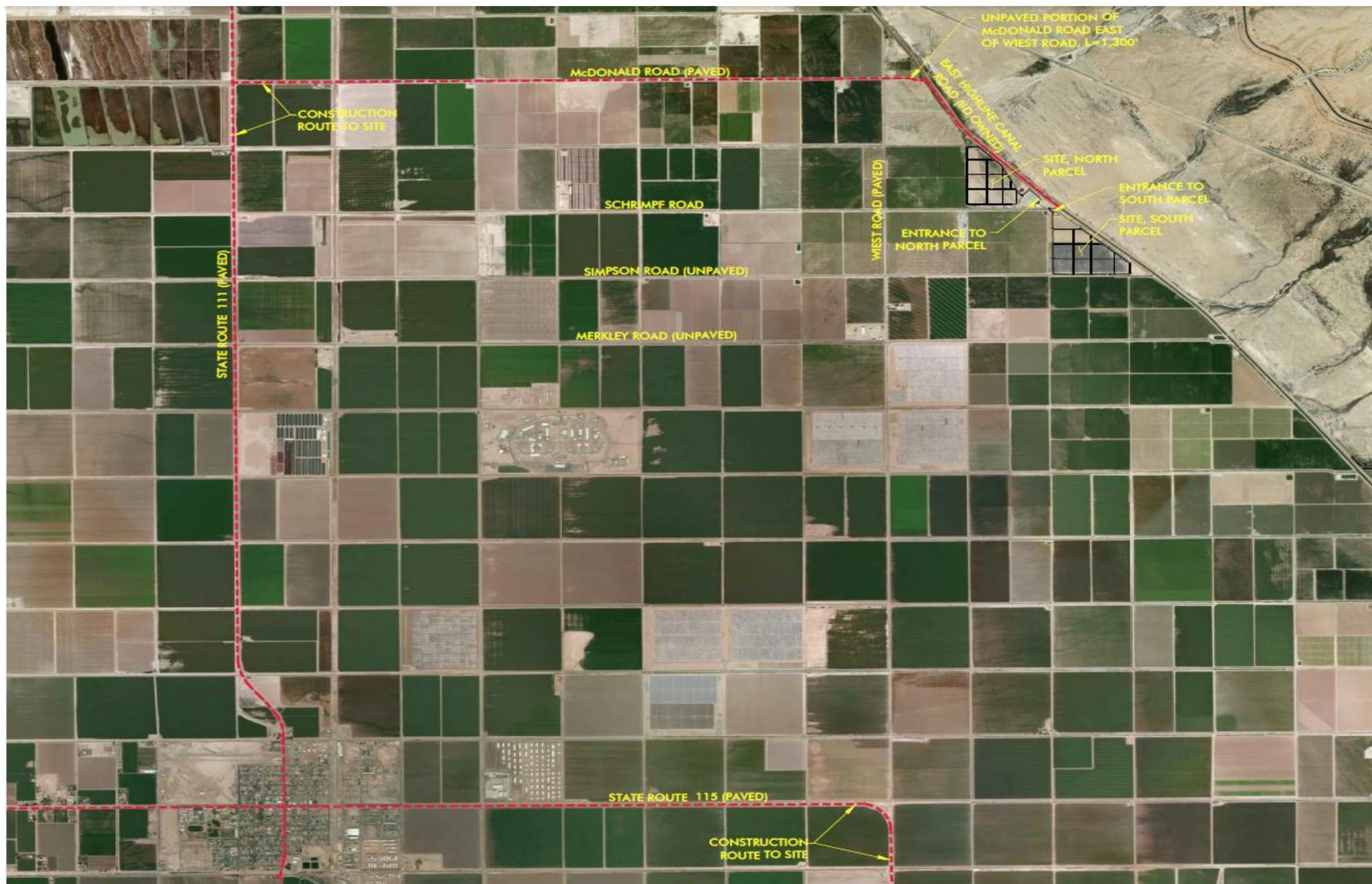
This street type includes residential cul-de-sac and loop streets and is designed to provide direct access to abutting properties and to give access from neighborhoods to the Local Street and Collector Street system. This classification should be discontinuous in alignment, such that through trips are discouraged. Typical design standards include provision for two travel lanes, parking on both sides, and direct driveway access. Minimum ROW is 60 feet.

Project Access Roadways

Following is a brief description of the roadways that would be utilized for access to the project site during construction, and subsequent operation (e.g., maintenance) activities. Figure 4.13-1 depicts the proposed haul routes/construction access to the project site.

- **SR-11 and SR-115** (Caltrans-operated highways). These roads are maintained by Caltrans and are considered to be in good condition. Because these are State operated facilities, they are not maintained by the County.
- **McDonald Road east of SR-111**. McDonald Road is paved between SR-111 and Wiest Road. East of Wiest Road, McDonald Road is unpaved.
- **Simpson Road** along a portion of the project frontage. Simpson road is unpaved along the project frontage.
- **East Highline Canal Road (IID-owned access road)**. East Highline Canal Road is unpaved and the project Applicant is coordinating with the IID with respect to what improvements, if any, may be required by the IID to enable use of the project as a construction haul route.

Figure 4.13-1. Construction Haul Route



Source: Appendix J of this EIR

Alternative/Public Transportation

Fixed Route Transportation

Imperial Valley Transit (IVT) is an inter-city fixed route bus system, subsidized by the Imperial Valley Association of Governments (IVAG), administered by the County Department of Public Works and operated by a public transit bus service. The service is wheelchair accessible and Americans with Disabilities Act compliant. Existing ridership averages approximately 23,000 passengers a month.

Service is provided from 6 a.m. until 11 p.m. weekdays, and 6 a.m. to 6 p.m. on Saturdays, within the areas classified as the Primary Zone; a north-south axis throughout Brawley, Imperial Valley College (IVC), Imperial, El Centro, Heber and Calexico, and from 6 a.m. until 6:45 p.m. in the Secondary Zones; outlying cities and communities of Niland, Calipatria, Westmorland, Seeley, and Holtville. The outlying Remote Zone community of Ocotillo is served once a week on Thursdays, by request 1 day ahead. Remote Zone communities east and west of the Salton Sea, including Desert Shores, Salton City, Salton Sea Beach, and the far eastern portion of the County, including Winterhaven, are served once a week, via Lifeline. The project site is not within the Fixed Route Transportation system and, therefore, would not receive regular bus service to the project site or within the vicinity of the project site.

Bicycle Facilities

The Highway Design Manual classifies bikeways into three types:

- Class I Bike Path – Provides for bicycle travel on a ROW completely separated from the street
- Class II Bike Lane – Provides a striped lane for one-way travel within the street
- Class III Bike Routes – Provides routes that are signed but not striped

Although none of the roadway segments within proximity of the project sites are designated a bikeway classification, the County of Imperial Bicycle Master Plan Update lays out a framework for creating and expanding programs and improvements designed to increase bicycling activity in the County of Imperial. There are no roadways in immediate proximity to the site planned as a bike route.

Daily Street Segment Levels of Service

As previously described, the project site is located in a rural setting with many of these being compacted dirt roads with no congestion. As prescribed in the Circulation and Scenic Highway Element, the intent of the County is to provide a system of roads and streets that operate at a LOS C or better (Imperial County Planning and Development Services Department 2008).

4.13.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to transportation and traffic, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.



Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to transportation and traffic are considered significant if any of the following occur:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

County of Imperial

The County of Imperial does not have published significance criteria. However, the County General Plan does state that the LOS goal for intersections and roadway segments is to operate at LOS C or better. Therefore, if an intersection or segment degrades from LOS C or better to LOS D or worse with the addition of project traffic, the impact is considered significant. If the location operates at LOS D or worse with and without project traffic, the impact is considered significant if the project causes the intersection delta to increase by more than 2 seconds, or the volume to capacity (V/C) ratio to increase by more than 0.02. V/C ratios provide a quantitative description of traffic conditions for signalized intersections. These amounts are consistent with those used in the County of Imperial in numerous traffic studies.

California Department of Transportation

A project is considered to have a significant impact on Caltrans facilities if the new project traffic has decreased the operations of surrounding roadways by a defined threshold. If the project exceeds the thresholds addressed in Table 4.13-1, then the project may be considered to have a significant project impact. A feasible mitigation measure will need to be identified to return the impact within the thresholds (pre-project + allowable increase) or the impact will be considered significant and unmitigated when affecting any state highway facilities. As stated previously, Caltrans is responsible for maintaining and managing SR-11 and SR-115.

Table 4.13-1. Level of Service Thresholds for Unsignalized Intersections

LOS	Average Control Delay Per Vehicle (Seconds/Vehicle)	Expected Delay to Minor Street Traffic
A	0.0 ≤ 10.0	Little or no delay
B	10.1 to 15.0	Short traffic delays
C	15.1 to 25.0	Average traffic delays
D	25.1 to 35.0	Long traffic delays
E	35.1 to 50.0	Very long traffic delays
F	≥ 50.0	Severe congestion

LOS – level of service

Methodology

The assessment evaluates the potential for the project, as described in Chapter 3, Project Description, to assess the project trip generation created during and after construction, and roadway conditions for roads that would be utilized to access the project site for construction.

Project Trip Generation

Project trip generation for both the construction and operational scenarios will be very minimal. The project will generate the most traffic during construction, with the construction vehicle mix for both on-road and off-road equipment, by each phase of construction, presented in Chapter 3.

Table 4.13-2 provides the estimated average daily on-road project trip generation (i.e., trips to and from the site) for the construction phases and operational phase of the project. As shown, the maximum number of on-road trips during any phase of the project would be approximately 63 trips. This estimated project trip generation is below the County’s threshold requirement for preparation of a formal traffic impact analysis as the trips would be so minimal that they would not affect roadway or intersection levels of service for any of the roadways that would be utilized for access to and from the project site. Based on the 30MW size of the project and relatively small acreage, the construction workforce will be limited. Because of the minimal trips estimated, the Department of Public Works has not required a detailed traffic study for this project pursuant to the Imperial County Congestion Management Program (CMP).

The project would be operated remotely and would involve very minimal maintenance related trips on a periodic basis.

Table 4.13-2. Project Trip Generation

Construction	Vehicle Type	Number of Daily Trips
Phase 1		
	Employee Commute	20
	Pickup Trucks	2
	Haul Trucks	2
TOTAL Phase 1		24
Phase 2		
	Employee Commute	50
	Pickup Trucks	3
	Haul Trucks	10
TOTAL Phase 2		63
Phase 3		
	Employee Commute	10
	Pickup Trucks	3
	Haul Trucks	3
TOTAL Phase 3		16
Operation	Employee Commute	N/A

Impact Analysis

Impact 4.13-1 Possible Conflict with Applicable Plan, Ordinance, or Policy.

The development of the project site would not cause a substantial increase in traffic affecting the efficiency of the circulation system; this includes all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, such as highways and freeways, pedestrian and bicycle paths, and mass transit.

During the construction phase of the projects, the maximum number of trips generated on a daily basis would be approximately 63 trips. This trip count is so low that it does not require a formal traffic analysis as it does not have the potential to impact LOS of roadway segments and intersections. There is no regular bus service to the general area and project related construction and operations and maintenance phases would not impact mass transit.

Future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. The proposed project would not interfere with potential future designated bike routes. Implementation of the proposed project would not require any public road widening to accommodate vehicular trips associated with the project (construction phase and operational phase), while maintaining adequate level of service. Impacts on this issue area are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.13-2 Possible Conflict with Applicable Congestion Management Program.

The construction and/or operation of the proposed project would not exceed a level of service standard established by the County Congestion Management Agency for designated roads or highways.

The County of Imperial General Plan set goals for roadways to retain a LOS of C or better. As stated previously, the project trip count is so low that it does not require a formal traffic analysis pursuant to the Imperial County CMP as it does not have the potential to impact LOS of roadway segments and intersections. Based on this evidence, and adherence to goals set by the County of Imperial General Plan, impacts on this issue area are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.13-3 Possible Modification in Air Traffic Patterns.

Development of the proposed project would not result in changes to air traffic patterns resulting in safety issues.

The projects would utilize PV panels or modules on mounting frameworks to convert sunlight directly into electricity. The project would utilize single-axis tracking systems in rows running north-south, typical for projects in the region. The panels would be tracking and would be no more than 15 feet high at the high end (at maximum rotation angle). Fixed-tilt racking could also be utilized in areas not suited for tracking equipment. The maximum height would still not exceed 15 feet if fixed-tilt racking is utilized. Therefore they would not be at a height that would interfere with air traffic patterns. This is considered a less than significant impact.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.13-4 Possible Safety Hazard from Design Features.

Design features related to the project site would not result in hazards or incompatible land uses.

To accommodate emergency access, PV panels would be spaced to maintain proper clearance. A 20-foot wide access road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. The internal access road would be graded and compacted native soils) as required for construction, operations, maintenance, and emergency vehicle access.

During construction, access to the project site for construction vehicles would utilize the following roads:

- SR-11 and SR-115 (Caltrans-operated highways)

- McDonald Road east of SR-111
- Simpson Road along a portion of the project frontage
- East Highline Canal Road (IID-owned access road)

At the time of final design for the project, and as a Condition of Approval of the project, the applicant will submit a final Haul Route Study that identifies what road improvements, in any, are requested by Department of Public Works and a cost estimate. The applicant would work with Department of Public Works to address the appropriate improvements and Applicant's responsibility for the cost of improvements, if required. The haul route study would include the following components:

1. Pictures and/or other documents to verify the existing conditions of the roads proposed to be utilized for haul routes
2. The haul route study shall evaluate the impact to McDonald Road from SR 111 to Wiest Road and provide recommendations on improvements, as well as quantity and cost estimates for such improvements

The County Department of Public Works, in its preliminary conditions of approval, will require that McDonald Road from Wiest Road to Highland Canal Road shall be improved to have two 12-foot travel lanes per County of Imperial Department of Public Works – Engineering Design Guidelines Manual, Structural Section DWG No. 440 – Road Classification Local/Residential. Such road improvements shall be completed prior to site construction activities to begin. Quantity and cost estimates for these improvements shall also be included in the haul route study. Improvements on this road shall be required to help mitigate dust generation and for public health and safety.

Preliminary conditions of approval require that because Highline Canal Road is a private road, it is required to be included in the final haul route study for informational purposes only. The conditions of approval will require that prior to the usage of the private road, the Applicant shall obtain written approval from the private road owner.

The County Department of Public Works will require a Roadway Maintenance Agreement, and that the Application provide financial security to maintain the road on the approved haul route study during construction. The Applicant would be responsible to repair any damages caused by construction traffic during construction and maintain them in safe conditions.

The use of the proposed access roads are not otherwise anticipated to increase hazards because of design features or incompatible uses and no significant impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.13-5 Possible Safety Hazard from Inadequate Emergency Access.

Development of the project site would not result in inadequate emergency access.

To accommodate emergency access, PV panels would be spaced to maintain proper clearance. A 20-foot wide access road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. The internal access road would be graded and compacted (native soils) as required for construction, operations, maintenance, and emergency vehicle access. The access and service roads would also have

turnaround areas at any dead-end to allow clearance for fire trucks per fire department standards (70 feet by 70 feet and 20-foot-wide access road). Based on this context, impacts on this issue area are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.13-6 Possible Conflict with Adopted Policies, Plans, or Programs.

Development of the project site would not result in a decrease in performance or safety of adopted policies, plans programs for public transit, bicycle, or pedestrian facilities.

There is no regular bus service or bicycle infrastructure in the general area and project related construction and operations and maintenance phases would not impact alternative modes of transportation. The project does not propose modifications to be made to existing roadways serving future designated bikeway routes. Based on this context, impacts on this issue area are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

4.13.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

This section included an analysis of construction traffic for the proposed project. As presented above, construction traffic would not result in a significant impact on any of the project area roadway segments or intersections because of the low volume of traffic. A similar scenario would occur during the decommissioning and site restoration stage for the project. Average daily traffic would be similar to or less than the average daily traffic required for construction. Similarly, the decommissioning activities would not result in a significant impact related to modification of air traffic patterns, possible safety hazards, or possible conflicts with adopted policies, plans, or programs as the decommissioning and subsequent restoration would revert the project site to the existing condition. Therefore, decommissioning and restoration of the project site would not generate traffic resulting in a significant impact on the circulation network. No impact is identified and no mitigation is required.

Residual

The construction and operation of the proposed project would not result in direct impacts on intersections, roadway segments, and freeway segments. Therefore, less than significant impacts have been identified. No mitigation is required and no residual unmitigated impacts would occur with implementation of the project.



4.14 Utilities/Service Systems

This section includes an evaluation of potential impacts for identified Utilities/Service Systems that could result from implementation of the project. Utilities/Service Systems include wastewater treatment facilities, storm drainage facilities, water supply and treatment, solid waste disposal, and energy consumption. The impact analysis provides an evaluation of potential impacts to Utilities/Service Systems based on criteria derived from CEQA Guidelines in conjunction with actions proposed in Chapter 3, Project Description. Development Design & Engineering prepared the *Water Supply Assessment* (WSA) for the Citizens Imperial Solar, LLC Project. This report is included in Appendix K of this EIR.

The IS/NOP prepared for this EIR determined that impacts with regards to solid waste disposal, storm drainage, and wastewater treatment would be less than significant.

Solid waste generation would be minor for the construction and operation of the project. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. There are over 20 active solid waste facilities listed in Imperial County in the CalRecycle database. Trash would likely be hauled to the Niland Solid Waste Site (13-AA-0009) located in Niland. The Niland Solid Waste Site has approximately 318,669 cubic yards of remaining capacity and is estimated to remain in operation through 2056 (CalRecycle n.d.). Therefore, there is ample landfill capacity in the County to receive the minor amount of solid waste generated by construction and operation of the project.

The project does not require expanded or new storm drainage facilities (other than on-site retention areas) because the proposed solar facility would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events. Water from solar panel washing would continue to percolate through the ground, as a majority of the surfaces within the project site would remain pervious.

4.14.1 Environmental Setting

Water

The Imperial Valley area is located within the south-central part of Imperial County and is bound by Mexico on the south, the Algodones Sand Hills on the east, the Salton Sea on the north and San Diego County on the northwest, and the alluvial fans bordering the Coyote Mountains and the Yuha Desert to the southwest. The valley is an irrigated agricultural area. Agriculture is the most highly water consumptive use in Imperial County.

The Imperial Valley depends solely on the Colorado River for surface water supply. IID delivers its annual entitlement of 3.1 million AF to nearly 500,000 acres for agricultural, municipal, and industrial use. Imperial Dam, located north of Yuma, Arizona, serves as a diversion structure for water deliveries throughout southeastern California, Arizona, and Mexico. Water diverted at Imperial Dam for use in the Imperial Valley first passes through one of three desilting basins, used to remove silt and clarify the water. From the desilting basins, water is then delivered to the Imperial Valley through the All-American Canal. Three main canals, East Highline, Central Main, and Westside Main, receive water from the 80-mile-long All-American Canal and distribute water to smaller lateral canals throughout the Imperial Valley (IID n.d.)

Approximately 98 percent of the water diverted to Imperial County from the IID is used for agricultural purposes. The area served by IID is located in Imperial Valley, which is generally contiguous with IID's Imperial Unit, lying south of the Salton Sea, north of the U.S./Mexico international border and generally within the 658,942 acre area between IID's Westside Main and East Highline canals. In 2015, IID delivered untreated water to 426,530 net irrigated acres, predominantly in the Imperial Valley along with small areas of East and West Mesa land. The developed area consists of seven incorporated cities (Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial and Westmorland), three unincorporated communities (Heber, Niland, Seeley), and three institutions Naval Air Facility El Centro, Calipatria California Department of Corrections and Rehabilitation, and Centinela. California Department of Corrections and Rehabilitation and supporting facilities.

Energy

The IID supplies electricity to Imperial County. IID's 2014 Integrated Resource Plan (IRP) addresses the current challenges to meet retail load requirements, adapt to new renewable energy portfolio standards and reduce greenhouse gas emissions. The IRP includes implementation of energy programs necessary to reduce current energy load by at least 5 percent by 2015, with a 10 percent reduction goal set for 2020 (IID 2014). In addition, the Plan calls for generating 25 percent of annual energy requirements for its service area from renewable sources by 2016, and at least 33 percent by 2020; and continuing to reduce greenhouse gas emissions to 1990 levels by 2020 (IID 2014). The IID is also implementing an energy efficiency program with the goal of reducing load demand by at least 5 percent by 2015 with a 10 percent load reduction goal by 2020 (IID 2014).

4.14.2 Regulatory Setting

This section identifies and summarizes federal, state, and local laws, policies, and regulations that are applicable to the project.

State

Senate Bill 610

With the introduction of SB 610, any project under CEQA shall provide a WSA if:

- The project meets the definition of the Water Code Section 10912:

For the purposes of this part, the following terms have the following meanings:

(a) "Project" means any of the following:

- (1) A proposed residential development of more than 500 dwelling units.
- (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- (4) A proposed hotel or motel, or both, having more than 500 rooms.
- (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.



(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

(b) If a public water system has fewer than 5,000 service connections, then “project” means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system’s existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections.

After review of Water Code Section 10912, it was determined that a water supply assessment is required because the solar facility is a proposed industrial use occupying more than 40 acres of land.

California Water Code

Water Code Sections 10656 and 10657 restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resources. In addition, Water Code Section 10910 describes the WSA that must be undertaken for projects referred under PRC Section 21151.9, including an analysis of groundwater supplies. Water agencies are given 90 days from the start of consultation in which to provide a WSA to the CEQA lead agency. Water Code Section 10910 also specifies the circumstances under which a project for which a WSA was once prepared would be required to obtain another assessment. Water Code Section 10631, directs that contents of the urban water management plans include further information on future water supply projects and programs and groundwater supplies.

Urban Water Management Planning Act – Assembly Bill 797

The Urban Water Management Planning Act was established by AB 797 (AB 707) on September 21, 1983. Passage of this law was recognition by state legislators that water is a limited resources and a declaration that efficient water use and conservation would be actively pursued throughout the state. The law requires water suppliers in California, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 AFY of water, to prepare and adopt a specific plan every 5 years, which defines their current and future water use, sources of supply and its reliability, and existing conservation measures.

Local

Imperial Integrated Regional Water Management Plan

The Imperial Integrated Regional Water Management Plan (IRWMP) serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management and determination and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Through the IRWMP process, IID presented to the region stakeholders options in the event long-term water supply augmentation is

needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.

Imperial Irrigation District Interim Water Supply Policy for Non-Agricultural Projects

The Interim Water Supply Policy (IWSP) was adopted by the IID Board on September 29, 2009. The IWSP provides a mechanism to address water supply requests for projects being developed within the IID service area. The IWSP designates up to 25,000 AFY of IID’s annual Colorado River water supply for new non-agricultural projects, provides a mechanism and process to develop a water supply agreement for any appropriately permitted project, and establishes a framework and set of fees to ensure the supplies used to meet new demands do not adversely affect existing users by funding water conservation or augmentation projects as needed.

Depending on the nature, complexity and water demands of the proposed projects, new projects may be charged a one-time Reservation Fee and an annual Water Supply Development Fee for the contracted water volume used solely to assist in funding new water supply projects. All new industrial use projects are subject to the fee, while new municipal and mixed-use projects shall be subject to the fee if the project water demands exceed certain district-wide average per capita use standards. The applicability of the fee to mixed-use projects will be determined by IID on a case-by-case basis, depending on the proportion of types of land uses and water demand proposed for a project.

County of Imperial General Plan

The Imperial County General Plan provides goals, objectives, policies, and programs regarding the preservation and use of water. Table 4.14-1 provides a consistency analysis of the applicable Imperial County General Plan goals and objectives from the Conservation and Open Space Element, and Renewable Energy and Transmission Element, as they relate to the proposed project. While the EIR analyzes the project’s consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 4.14-1. County of Imperial General Plan Consistency Analysis – Water Service

Applicable General Plan Goals and Policies	Consistency Determination	Analysis
<i>Conservation and Open Space Element</i>		
Preservation of Water Resources, Goal 6: The County will conserve, protect, and enhance water resources in the County.	Consistent	Based on the WSA prepared for the project (Appendix K of this EIR), the project represents a 90.8 percent decrease of operational water demand for agricultural uses at the project site and will provide a reduction in use (151.35 AFY for the project life).
Preservation of Water Resources, Objective 6.4: Eliminate potential surface and groundwater pollution through regulations, as well as educational programs.	Consistent	Currently groundwater quality in the region is poor. However, the project would reduce the amount of water used on-site; thereby, reducing potential surface and groundwater pollution from agricultural uses.



Table 4.14-1. County of Imperial General Plan Consistency Analysis – Water Service

Applicable General Plan Goals and Policies	Consistency Determination	Analysis
Renewable Energy and Transmission Element		
Objective 1.6: Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.	Consistent	Water for the project site will be used on-site during construction, operation, and decommissioning/restoration for potable, non-drinking non-potable water needs. During operations, potable water would be trucked onto the site. No groundwater will be utilized because of the poor groundwater quality in the region.

Source: County of Imperial 1993

IID – Imperial Irrigation District

4.14.3 Existing Conditions

Water

IID delivers untreated Colorado River water to the project site through delivery gates EHL 27A and EHL 29, serving the southern parcel (APN 025-280-003) and northern parcel (APN 025-260-024), respectively. Land served by EHL 27A was enrolled in IID fallowing programs from January 1, 2014 to December 31, 2014, and from July 1, 2015 to June 30, 2016. For the duration of 2015 (January 1 through June 30) and 2016 (July 1 through December 31) and all of 2017, no water was delivered through EHL 27A, as the land was left idle (area farmable but not farmed during year). No water was delivered through EHL 29 during 2008 through 2017. The northern parcel has been unfarmed since at least 1987, when the IID Midway Substation was built and commissioned.

The 10-year record for 2008 through 2017 of water delivery accounting for gates EHL 27A and EHL 29 is shown in Table 4.14-2. The 10-year average annual delivery to the project site from 2008-2017 is 166.65 AFY.

Table 4.14-2. Historic Delivery and Fallowing Program Yield Record for Project Delivery Gates, 2008 through 2017

Acre-feet

Canal/Gate	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
EHL 27A	145.5	91.5	44.3	230.4	631.6	523.2	0.0	0.0	0.0	0.0	1666.5
EHL 29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	145.5	91.5	44.3	230.4	631.6	523.3	0.0	0.0	0.0	0.0	1666.5

Source: Appendix K of this EIR

Energy

The project site is primarily undeveloped and utilized for agricultural production. Therefore, the site’s current energy demand is minimal. The IID would provide electricity service to the project site (i.e., during non-generating hours for the facility). IID meets its annual resource requirements through a mix of the IID-owned generation and a number of purchase power contracts that can take the form of

must-take contracts and call options. The IID's generation resources range from hydroelectric resources on the All-American Canal System to San Juan Unit 3, a coal plant in New Mexico to the Palo Verdes Nuclear Generation Station near Phoenix. The IID also owns thermal generation facilities within its service territory, fueled by natural gas or diesel.

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal includes: decreasing overall per capita energy consumption; decreasing reliance on fossil fuels, such as coal, natural gas, and oil; and increasing reliance on renewable energy sources.

4.14.4 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to utilities/service systems, the methodology employed for the evaluation, an impact evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to utilities/service systems are considered significant if any of the following occur:

Water Supply

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed

Energy

- Result in the need for new systems or supplies, or a substantial expansion or alteration to electricity, natural gas, or telephone that results in a physical impact on the environment
- Result in inefficient energy uses of fuel type for each stage of the project including construction, operation, maintenance, and/or removal
- Result in negative effects on local and regional energy supplies and require additional capacity
- Result in increased effects to peak and base period demands for electricity and other forms of energy
- Result in noncompliance with existing energy standards
- Result in negative effects on energy resources

As stated previously, it was determined through the preparation of the IS/NOP that impacts with regards to solid waste disposal and policies and wastewater treatment would be less than significant. Therefore, these issue areas will not be discussed further. Impacts associated with water quality are discussed in Section 4.9, Hydrology/Water Quality, of this EIR.

Methodology

Project-specific data was used to calculate the project's water consumption during construction and at build-out collectively ("operational").

Impact Analysis

Impact 4.14-1 Construction of New or Expansion of Existing Water Facilities.

The project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Untreated Colorado River water will be supplied to the project via existing IID delivery gates located on the East Highline Canal. Potable drinking water will be obtained for the duration of the project from a state-approved provider. Therefore, the proposed project would not require or result in the construction of new water treatment facilities or expansion of existing facilities. This is considered a less than significant impact.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.14-2 Increase in Water Demand.

The project would have sufficient water supplies available to serve the project from existing entitlements and resources.

Construction

The proposed project is anticipated to take approximately 23 weeks from the commencement of the construction process to complete. Water will be needed during construction for dust control and soil compaction, with small amounts used for sanitary and other purposes. All non-potable water for construction will be obtained from IID. As shown in Table 4.14-3, total water demand during construction is estimated to be 80 AF.

Operations and Maintenance

Panel washing and operational water required for O&M of the project will be provided by IID. As discussed in Chapter 3, Project Description, a 10,000-gallon aboveground water storage tank would be installed on the project site as required by the ICFD. The water tank would be sized to meet the requirements of the County of Imperial to supply sufficient fire suppression water during operations. Water will also be used for periodic cleaning of the solar PV panels. It is anticipated that the solar PV panels will be washed up to four times per year to ensure optimum solar absorption by removing dust particles and other buildup. As shown in Table 4.14-3, total water demand during operation, including panel washing and other domestic water needs, is estimated to be approximately 10 AFY.

Decommissioning

The project's expected lifetime is 30 years. If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding

of the project, the project will be decommissioned and dismantled. As shown in Table 4.14-3, total water demand during decommissioning is estimated to be 80 AF.

Total and Annual Water Demand

According to the WSA prepared by Development Design & Engineering (Appendix K of this EIR), the anticipated water demand for construction, operation, and decommissioning of the project is estimated to be 460 AF, for an annualized demand of 15.3 AFY for the 30-year project life (Table 4.14-3).

Table 4.14-3. Total and Annual Estimated Life-of-Project Water Demand

Water Use	Project Life Demand (AF)	Annual Demand (AFY)
Construction	80	2.66
Operations & Maintenance (10 AF x 30 years)	300	10.00
Decommissioning/Site Reclamation	80	2.66
Total Demand, Project Life (AF), and Annual (AFY)	460	15.33

Source: Appendix K of this EIR

AF – acre-feet; AFY – acre-feet per year

It is anticipated that IID will provide Schedule 7 General Industrial Use for the proposed project. In the event that IID determines that the project is to utilize IWSP for Non-Agricultural Projects water, the project applicant will enter into an IWSP Water Supply Agreement with IID to meet the project's water demands. IID has adopted an IWSP for non-agricultural projects from which water supplies can be contracted to serve new non-agricultural developments within IID's water service area. The IWSP sets aside 25,000 AFY of IID's Colorado River water supply to serve new non-agricultural projects. Untreated Colorado River water will be supplied to the project via existing IID delivery gates located on the East Highline Canal. Potable drinking water will be obtained for the duration of the project from a state-approved provider.

Based on the WSA prepared for the project (Appendix K of this EIR), there is adequate water supply from IID to support the project. IID's IWSP for non-agricultural projects dedicates 25,000 AFY of IID's annual water supply to serve new projects. To date 23,800 AFY remain available for new projects ensuring reasonably sufficient supplies for new non-agricultural water users. Total water usage for the life of the project represents 0.065 percent of the supply set aside in the IWSP for non-agricultural projects, and approximately 0.56 percent of forecasted future non-agricultural water demands planned in the Imperial IRWMP through 2055. Furthermore, the project represents a 90.8 percent decrease of operational water demand for agricultural uses at the project site and will provide a reduction in use (151.35 AFY for the project life). For all the reasons described herein, the amount of water available and the stability of the IID water supply along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers ensure that the project's water needs will be met for the next 20 years as requested by SB 610. Therefore, this is considered a less than significant impact.



Mitigation Measure(s)

No mitigation measures are required.

Impact 4.14-3 Result in the Need for New Systems or Supplies, or a Substantial Expansion or Alteration to Electricity, Natural Gas, or Telephone.

The project includes the construction of a renewable energy facility and would not require a substantial expansion of new utility service.

The project will help California meet its Renewable Portfolio Standard of 50 percent of retail electricity sales from renewable sources by the end of 2030. The electricity generation process associated with the projects would utilize solar technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an “eligible renewable energy resource” in Section 399.12 of the California Public Utilities Code and the definition of “in-state renewable electricity generation facility” in Section 25741 of the California PRC. The project would generate and transmit renewable energy resources and is considered a beneficial effect rather than an impact. The use of energy associated with the project include both construction and operational activities. Construction activities typically include site grading, clearing, and transmission line construction. Operational activities would include energy consumption associated with vehicular use.

The project would not use natural gas during the construction or operation of the project. The project would not result in the need for additional natural gas or telephone facilities. Therefore, a less than significant impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.14-4 Result in Inefficient Energy Uses of Fuel Type.

The project will require the consumption of fossil fuels during construction activities.

Construction-Related Energy Consumption

Construction activities consume energy through the use of heavy construction equipment and truck and worker traffic.

The project will use energy-conserving construction equipment (Mitigation Measure AQ-1), including standard mitigation measures for construction combustion equipment recommended in the ICAPCD CEQA Air Quality Handbook as discussed in Section 4.3, Air Quality, of this EIR. The use of better engine technology, in conjunction with the ICAPCD’s standard mitigation measures will reduce the amount of energy used for the project. The standard mitigation measures for construction combustion equipment include:

- Using alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment
- Minimizing idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum
- Limiting the hours of operation of heavy-duty equipment and/or the amount of equipment in use

- Replacing fossil fueled equipment with electricity driven equivalents (provided they are not run on a portable generator set)

Implementation of ICAPCD's standard mitigation measures listed above and the use of energy-conserving construction equipment will ensure that the projects' energy consumption during construction is less than significant.

Operational-Related Energy Consumption

The U.S. Energy Information Administration reports the net energy generation for the state from all sources is approximately 199,518,567 megawatt-hours (MW-h). The electricity generation process associated with the project would use solar PV technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California PRC. The project would generate renewable energy resources and is considered a beneficial effect rather than an impact. Therefore, a less than significant impact is identified for the operational-related energy consumption.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.14-5 Result in Negative Effects on Local and Regional Energy Supplies Requiring Additional Capacity.

The project is the construction of a small scale renewable energy facility and would therefore provide additional capacity to the regional supply.

The project has a PPA with IID for the sale of power from the project. If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project would be decommissioned and dismantled. The project will help California meet its RPS of 50 percent of retail electricity sales from renewable sources by the end of 2030. Please see discussion under Impact 4.14-1. The project would not result in negative effects on local and regional energy supplies requiring additional capacity. Therefore, a less than significant impact is identified.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.14-6 Result in Increased Effects to Peak and Base Period Demands for Electricity and Other Forms of Energy.

The project would not result in increased effects to peak and base period demands for electricity and other forms of energy.

The expected energy usage during operation, and generating and non-generating hours for the proposed project will be minimal. Furthermore, the electricity generation process associated with the project would use solar PV technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity



generation facility” in Section 25741 of the California PRC. The project would generate renewable energy resources and therefore, this is considered a beneficial effect rather than an impact.

Additionally, implementation of ICAPCD’s standard mitigation measures listed above will ensure that project energy consumption during construction is less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 4.14-7 Result in Noncompliance with Existing Energy Standards.

The project would assist IID in meeting California’s mandate to procure 50 percent of its power from renewable resources.

The electricity generation process associated with the project would utilize solar technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an “eligible renewable energy resource” in Section 399.12 of the California Public utilities Code and the definition of “in-state renewable electricity generation facility in Section 25741 of the California PRC.

The use of energy associated with the project includes both construction and operational activities. Implementation of ICAPCD’s Standard mitigation measures listed above will ensure that project’s energy consumption during construction is reduced to a level below significance. The project would not result in noncompliance with existing energy standards. The project would generate renewable energy resources, resulting in beneficial effects. Therefore, impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

4.14.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

It is anticipated that a small quantity of water would be required during decommissioning of the project and site restoration at the end of the project’s 30-year life. This water need would be less than what is required for construction and operation of the project site. Therefore, a less than significant impact is identified and no mitigation is required. Decommissioning and restoration activities would not require energy so no impact is identified and no mitigation is required.

Residual

The project would not result in significant impacts to the water supply or energy resources of Imperial County; therefore, no mitigation is required. The projects would not result in residual impacts.

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5 Analysis of Long-Term Effects

5.1 Growth-Inducing Impacts

In accordance with Section 15126.2(d) of CEQA Guidelines, an EIR must:

“discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth ... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

Projects promoting direct growth will impose burdens on a community by directly inducing an increase in population, or resulting in the construction of additional developments in the same area. For example, projects involving the expansion, modifications, or additions to infrastructure, such as sewer, water, and roads, could have the potential to directly promote growth by removing existing physical barriers or allowing for additional development through capacity increases. New roadways leading into a previously undeveloped area directly promote growth by removing previously existing physical barriers to development and a new wastewater treatment plant would allow for further development within a community by increasing infrastructure capacity. Because these types of infrastructure projects directly serve related projects and result in an overall impact to the local community, associated impacts cannot be considered isolated. Indirect growth typically includes substantial new permanent employment opportunities and can result from these aforementioned modifications.

The proposed project is located within the unincorporated area of Imperial County and it does not involve the development of permanent residences that would directly result in population growth in the area. The unemployment rate in Imperial County, as of December 2017 (not seasonally adjusted), was 17.9 percent (State of California Employment Development Department 2018). The applicant expects to utilize construction workers from the local and regional area, a workforce similar to that involved in the development of other utility-scale solar facilities. Based on the unemployment rate, and the availability of the local workforce, construction of the proposed project would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services.

Once construction is completed, the facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Security personnel may conduct unscheduled security rounds, and would be dispatched to the project site in response to a fence breach or other alarm. It is anticipated that maintenance of the facilities would require minimal site presence to perform periodic visual inspections and minor repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, because of the nature of the facilities, such actions would likely occur infrequently. Overall, minimal maintenance requirements are anticipated. The proposed project would not result in

substantial population growth, as the number of employees required to operate and maintain the facility is minimal.

While the proposed project would contribute to energy supply, which indirectly supports population growth, the proposed project is a response to the state's need for renewable energy to meet its Renewable Portfolio Standard, and while it would increase the availability of renewable energy, it would also replace existing sources of non-renewable energy. Unlike a gas-fired power plant, the proposed project is not being developed as a source of base-load power in response to growth in demand for electricity. The power generated would be added to the state's electricity grid with the intent that it would displace fossil fueled power plants and their associated environmental impacts, consistent with the findings and declarations in SB 2 that a benefit of the Renewable Portfolio Standard is displacing fossil fuel consumption within the state. The project is being proposed in response to state policy and legislation promoting development of renewable energy.

The proposed project would supply energy to accommodate and support existing demand and projected growth, but the energy provided by the project would not foster any new growth because (1) the additional energy would be used to ease the burdens of meeting existing statewide energy demands within and beyond the area of the project site; (2) the energy would be used to support already-projected growth; or, (3) the factors affecting growth are so diverse that any potential connection between additional energy production and growth would necessarily be too speculative and uncertain to merit further analysis.

Under CEQA, an EIR should consider potentially significant energy implications of a project (CEQA Guidelines Appendix F(II); PRC Section 21100(b)(3)). However, the relationship between the proposed project's increased electrical capacity and the growth-inducing impacts outside the surrounding area is too speculative and uncertain to warrant further analysis. When a project's growth-inducing impacts are speculative, the lead agency should consider 14 CCR §15145, which provides that, if an impact is too speculative for evaluation, the agency should note this conclusion and terminate discussion of the impact. As the court explained in *Napa Citizens for Honest Gov't v. Napa County Board of Supervisors*, 91 Cal. App.4th 342, 368: "Nothing in the Guidelines, or in the cases, requires more than a general analysis of projected growth" *Napa Citizens*, 91 CA4th at 369. The problem of uncertainty of the proposed project's growth-inducing effects cannot be resolved by collection of further data because of the diversity of factors affecting growth.

While this document has considered that the proposed project, as an energy project, might foster regional growth, the particular growth that could be attributed to the proposed project is unpredictable, given the multitude of variables at play, including uncertainty about the nature, extent, and location of growth and the effect of other contributors to growth besides the proposed project. No accurate and reliable data is available that could be used to predict the amount of growth outside the area that would result from the proposed project's contribution of additional electrical capacity. The County of Imperial has not adopted a threshold of significance for determining when an energy project is growth-inducing. Further evaluation of this impact is not required under CEQA.

Additionally, the project would not involve the development of any new roadways, new water systems, or sewer and thus, the project would not further facilitate additional development into outlying areas. For these reasons, the proposed project would not be growth-inducing.



5.2 Significant Irreversible Environmental Changes

In accordance with CEQA Guidelines Section 15126.2(c), an EIR must identify any significant irreversible environmental changes that would be caused by implementation of the proposed project being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources or secondary growth-inducing impacts that commit future generations to similar uses.

Energy resources needed for the construction of the proposed project would contribute to the incremental depletion of renewable and non-renewable resources. Resources, such as timber, used in building construction are generally considered renewable and would ultimately be replenished. Non-renewable resources, such as petrochemical construction materials, steel, copper, lead and other metals, gravel, concrete, and other materials, are typically considered finite and would not be replenished over the lifetime of the project. Thus, the project would irretrievably commit resources over the anticipated 25-year life of the project. However, after 25 years, the project is planned to be decommissioned and the project applicant is required to restore land to its pre-project state. Consequently, some of the resources on the site could potentially be retrieved after the site has been decommissioned. The applicant anticipates using the best available recycling measures at the time of decommissioning. Additionally, the project applicant would implement a reclamation plan which would include a performance standard to assess the success of post-project vegetation.

Implementation and operation of the proposed project would promote the use of renewable energy and contribute incrementally to the reduction in demand for fossil fuel use for electricity-generating purposes. Therefore, the incremental reduction in fossil fuels would be a positive effect of the commitment of nonrenewable resources. Additionally, the project is consistent with future buildout plans for the project site under the General Plan, as well as with the state's definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California PRC.

5.3 Unavoidable Adverse Impacts

In accordance with CEQA Guidelines Section 15126(b), EIRs must include a discussion of significant environmental effects that cannot be avoided if the proposed project is implemented. The impact analysis, as detailed in Section 4 of this EIR, concludes that no unavoidable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant.

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6 Cumulative Impacts

The CEQA Guidelines (Section 15355) define a cumulative impact as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” The CEQA Guidelines [Section 15130(a)(1)] further states that “an EIR should not discuss impacts which do not result in part from the project.”

Section 15130(a) of the CEQA Guidelines provides that “[A]n EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable...” Cumulatively considerable, as defined in Section 15065(a)(3), “means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

An adequate discussion of significant cumulative impacts requires either: (1) “a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) “a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.”

The CEQA Guidelines recognize that cumulative impacts may require mitigation, such as new rules and regulations that go beyond project-by-project measures. An EIR may also determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project’s contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency must identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable (CEQA Guidelines Section 15130(a)(3)).

This EIR evaluates the cumulative impacts of the project for each resource area, using the following steps:

- (1) Define the geographic and temporal scope of cumulative impact analysis for each cumulative effects issue, based on the project’s reasonably foreseeable direct and indirect effects.
- (2) Evaluate the cumulative effects of the project in combination with past and present (existing) and reasonably foreseeable future projects and, in the larger context of the Imperial Valley.
- (3) Evaluate the project’s incremental contribution to the cumulative effects on each resource considered in Chapter 4, Environmental Analysis. When the project’s incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the project’s “fair share” contribution to the cumulative effect are discussed, where required.

6.1 Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effects varies by each resource area considered in Chapter 4. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. Similarly, impacts on the habitats of special-status wildlife species need to be considered within its range of movement and associated habitat needs. The analysis of cumulative effects in this EIR considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project sites and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects of a project, but not beyond the scope of the direct and indirect effects of that project.

The cumulative development scenario includes projects that extend through year (2030), which is the planning horizon of the County of Imperial General Plan. Because of uncertain development patterns that are far in the future, it is too speculative to accurately determine the type and quantity of cumulative projects beyond the planning horizon of the County's adopted County General Plan.

6.2 Projects Contributing to Potential Cumulative Impacts

The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the projects are to be considered: the use of a list of past, present, and probable future projects (the "list approach") or the use of adopted projections from a general plan, other regional planning document, or certified EIR for such a planning document (the "plan approach").

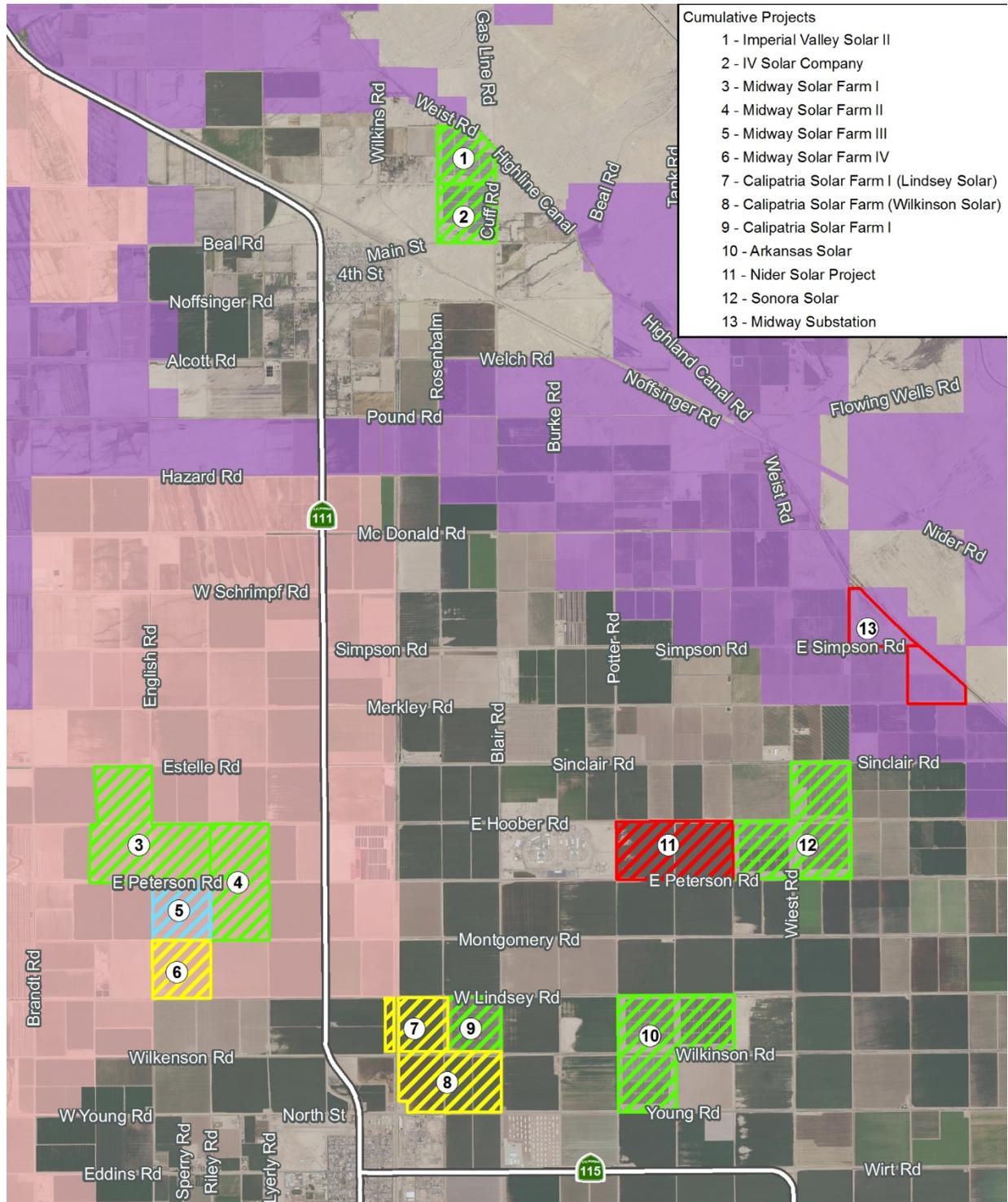
For this EIR, the list approach has been utilized to generate the most reliable future projections of possible cumulative impacts. When the impacts of the project are considered in combination with other past, present, and future projects to identify cumulative impacts, the other projects considered may also vary depending on the type of environmental impacts being assessed. As described above, the general geographic area associated with different environmental impacts of the project defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Figure 6-1 provides the general location for each of these projects in relation to the project site.

6.3 Cumulative Impact Analysis

This cumulative impact analysis utilizes an expanded list method (as defined under CEQA) and considers environmental effects associated with those projects identified in Table 6-1 in conjunction with the impacts identified for the project in Chapter 4 of this EIR. Table 6-1 includes projects known at the time of release of the NOP of the Draft EIR, as well as additional projects that have been proposed since the NOP date. Figure 6-1 provides the general geographic location for each of these projects.



Figure 6-1. Cumulative Projects



LEGEND

- | | | |
|---------------------|-------------------------------|---------------------------------|
| Project Site | Solar Projects | Renewable Energy Overlay |
| Cumulative Projects | Operational | Geothermal Only |
| | Approved - Under Construction | Renewable Energy/Geothermal |
| | Approved - Not Built | |
| | Pending Entitlement | |



Table 6-1. Projects Considered in the Cumulative Impact Analysis

Map Label ¹	Project Name	Description of Project	Location	Status ²
1	Imperial Valley Solar II	A PV solar facility capable of producing approximately 20 MW of electricity. The project also includes a 92-kV overhead gen-tie line that interconnects to the IID Niland Substation.	Approximately 0.75 miles northeast of Niland.	Operational
2	IV Solar Company	A PV solar facility capable of producing 23 MW of electricity on approximately 123 acres of land.	Approximately 0.5 miles northeast of Niland.	Operational
3	Midway Solar Farm I	A PV solar facility capable of producing 50 MW of electricity on approximately 480 acres of land.	Approximately 2.5 miles northwest of the City of Calipatria.	Operational
4	Midway Solar Farm II	A PV solar facility capable of producing 30 MW of electricity on approximately 320 acres of land.	Approximately 1 mile northwest of the City of Calipatria.	Operational
5	Midway Solar Farm III	A PV solar facility capable of producing 20 MW of electricity on approximately 160 acres of land.	Approximately 1 mile northwest of the City of Calipatria.	Approved – Under Construction
6	Midway Solar Farm IV	A PV solar facility capable of producing 15 MW of electricity on approximately 152 acres of land.	Approximately 1 mile northwest of the City of Calipatria.	Approved – Not Built
7	Calipatria Solar Farm I (Lindsey Solar)	A PV solar facility capable of producing 20 MW of electricity on approximately 148 acres of land.	Directly north of the City of Calipatria.	Approved – Not Built
8	Calipatria Solar Farm (Wilkinson Solar)	A PV solar facility capable of producing 30 MW of electricity on approximately 302 acres of land.	Directly north of the City of Calipatria.	Approved – Not Built
9	Calipatria Solar Farm I	A PV solar facility capable of producing 20 MW of electricity on approximately 159 acres of land.	Directly north of the City of Calipatria.	Operational
10	Arkansas Solar	A PV solar facility capable of producing 50 MW of electricity on approximately 481 acres of land.	Approximately 1.5 miles northeast of the City of Calipatria.	Operational

Table 6-1. Projects Considered in the Cumulative Impact Analysis

Map Label ¹	Project Name	Description of Project	Location	Status ²
11	Nider Solar Project	A PV solar facility capable of producing 100 MW of electricity on approximately 320 acres of land.	Located immediately east of the Calipatria State Prison, south of Hooper Road and north of Peterson Road.	Pending Entitlement
12	Sonora Solar	A PV solar facility capable of producing 50 MW of electricity on approximately 488 acres of land.	Approximately 3.5 miles northeast of the City of Calipatria.	Operational
13	Midway Substation	230 kV substation owned and operated by IID	Approximately 6 miles northeast of the City of Calipatria. Located within the northern parcel of the project site.	Operational

1 – See Figure 6-1 for cumulative project location.

2 – Project status based on information provided by County staff and on Imperial County Planning & Development Service’s RE Geographic Information System Mapping Application (<http://icpds.maps.arcgis.com/apps/Viewer/index.html?appid=c6fd31272e3d42e1b736ce8542b994ae>). Accessed on May 25, 2018.

IID – Imperial Irrigation District; MW – megawatts; PV – photovoltaic

6.3.1 Aesthetics

The cumulative study area for projects considered in the visual resources cumulative impact analysis considers a 5-mile radius from the project site. Views beyond 5 miles are obstructed by a combination of the flat topography coupled with the Earth’s curvature. The short-term visual impacts of the project would be in the form of general construction activities including grading, use of construction machinery, and installation of the transmission poles and stringing of transmission lines. Longer-term visual impacts of the project would be in the form of the presence of solar array grids, an electrical distribution and transmission system, and substation.

As provided in Section 4.1, Aesthetics, the proposed project’s components would result in a partial change in the existing land use at the project site. A portion of the northern parcel is already developed with the Midway substation and supporting infrastructure, transmission lines, and fencing. The entire site is disturbed, and is considered fallow, agricultural land. While the proposed project would alter the visual character of the project site, the change would not be dramatic both in terms of the on-site features proposed under the project and in the context of the study areas’ relationship within the context of the currently developed portions of the site, the surrounding agricultural landscape, as well as existing and developing solar facilities that are located in proximity.

Because the visual changes associated with the project would be located in a remote area viewed by a minimal number of people, the project site is not located within scenic vistas, and are not readily viewable from any frequently travelled interstates or scenic highways. Additionally, with the

exception of the transmission line, the project's structural features would generally be less than 15 feet in height and, therefore, would not substantially disrupt background view of mountains to the east. Further, the project site would be restored to its existing condition following the decommissioning of the solar uses. As a result, although the visual character of the project site would change from that of a rural agricultural nature to one with developed characteristics, a less than significant impact associated with the proposed project has been identified.

Development of the proposed project in conjunction with the cumulative projects identified in Table 6-1 will gradually change the visual character of this portion of the Imperial Valley. However, projects located within private lands and/or under the jurisdiction of the County of Imperial are being designed in accordance with the County of Imperial's General Plan and Land Use Ordinance, which includes policies to protect visual resources in the County.

Finally, all projects listed in Table 6-1 would not produce a substantial amount of light and glare, as no significant source of light or glare is proposed, or the project will otherwise comply with the County lighting ordinance. Based on these considerations, no significant cumulatively considerable aesthetic impact is anticipated.

6.3.2 Agriculture and Forestry Resources

Cumulative impacts on agricultural resources take into account the proposed project's temporary impacts as well as those likely to occur as a result of other existing, proposed and reasonably foreseeable projects.

As discussed in Section 4.2, Agricultural Resources, implementation of the project would result in the temporary conversion of approximately 211 acres of land currently fallow, but considered available for agricultural production to non-agricultural uses. Thus, the proposed project would incrementally add to the temporary conversion of agricultural land in Imperial County. According to the *California Farmland Conversion Report*, approximately half of the County (538,326 acres out of a total of 1,028,508 acres) is Important Farmland (California DOC 2015).

The majority of the cumulative projects are located on private lands, which are predominately agricultural, and would have agricultural impacts similar to the proposed project. The impacts of these individual projects include conversion of Important Farmland.

As discussed in Section 4.2, Agricultural Resources, the proposed project would result in the temporary conversion of approximately 194.56 acres of Farmland of Local Importance and 9.61 acres of Other Land (excludes 12.02 acres associated with existing Midway Substation). It should be noted that the analysis of Farmland of Local Importance and Other Land is not required under CEQA significance criteria, as these designations are not considered an "agricultural land" per CEQA Statute Section 21060.1(a). Approximately 7.04 acres of the project site are classified as Farmland of Statewide Importance and 0.02 acre are classified as Prime Farmland. With the implementation of Mitigation Measure AG-1a and AG-1b, this impact would be reduced to a level less than significant. As with the project, cumulative projects have been, and are expected to continue to provide mitigation for any impacts on agricultural resources.

6.3.3 Air Quality

Imperial County is used as the geographic scope for analysis of cumulative air quality impacts. Table 6-1 lists the projects considered for the air quality cumulative impact analysis. As shown in Table 6-1, many of these projects are large-scale renewable energy generation projects, where the

main source of air emissions would be generated during the construction phases of these projects; however, there would also be limited operational emissions associated with operations and maintenance activities for these facilities. Additionally, a majority of the projects listed in Table 6-1 are already constructed. Therefore the potential for a cumulative, short-term air quality impact as a result of construction activities is anticipated to be less than significant.

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-Hour O₃, PM₁₀, and PM_{2.5}. Imperial County is classified as a "serious" nonattainment area for PM₁₀ for the NAAQS. On November 13, 2009, EPA published Air Quality Designations for the 2006 24-Hour Fine Particle (PM_{2.5}) NAAQS wherein Imperial County was listed as designated nonattainment for the 2006 24-hour PM_{2.5} NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed project is not located within the nonattainment boundaries for PM_{2.5}.

The AQAP for the SSAB, through the implementation of the AQMP and SIP for PM₁₀, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. With respect to PM₁₀, the ICAPCD implements Regulation VIII – Fugitive Dust Rules, to control these emissions and ultimately lead the basin into compliance with air standards, consistent with the AQAP. Within Regulation VIII are Rules 800 through 806, which address construction and earthmoving activities, bulk materials, carry-out and track-out, open areas, paved and unpaved roads, and conservation management practices. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

- Phasing of work in order to minimize disturbed surface area;
- Application of water or chemical stabilizers to disturbed soils;
- Construction and maintenance of wind barriers; and
- Use of a track-out control device or wash down system at access points to paved roads.

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size. However, compliance with Regulation VIII does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the air district is required 10 days prior to the commencement of any construction activity.

Construction

The proposed project would generate air emissions due to vehicle and dust emissions associated with construction activities. Similar effects would also be realized upon site decommissioning, which would be carried out in conjunction with the project's restoration plan, and subject to applicable ICAPCD standards. Likewise, the other cumulative projects that are currently under construction (Midway Solar Farm III) or pending entitlement (Nider Solar Project) identified in Table 6-1 would result in the generation of air emissions during construction activities.

With respect to the proposed project, during the construction and decommissioning phases, the project would generate PM₁₀, PM_{2.5}, ROG, CO, and NO_x emissions during each active day of construction.

As discussed in Section 4.3, Air Quality, the project would not result in a significant increase in CO, ROG, and NO_x that would exceed ICAPCD thresholds.

However, the project's impact could be cumulatively considerable because: (1) portions of the SSAB are nonattainment already (PM₁₀ and PM_{2.5}), although mitigated by ICAPCD Regulations; and, (2) project construction would occur on most days, including days when O₃ already in excess of state standards. Additionally, the effects would again be experienced in the future during decommissioning in conjunction with site restoration. The proposed project, in conjunction with the construction of other cumulative projects as identified in Table 6-1 (Midway Solar Farm III and Nider Solar Project) could result in a cumulatively considerable increase in the generation of PM₁₀ and NO_x; however, like the proposed project, cumulative projects would be subject to mitigation as pursuant to County ICAPCD's Regulations and Rules, and the cumulative impact would be reduced to a level less than significant through compliance with these measures. Because the project will be required to implement measures consistent with ICAPCD regulations designed to alleviate the cumulative impact associated with PM₁₀, the proposed project's contribution is rendered less than cumulatively considerable.

Operation

As the proposed project would have no major stationary emission sources and would require minimal vehicular trips, operation of the proposed solar facility would result in substantially lower emissions than project construction. The project's operational emissions would not exceed the Tier I thresholds; therefore, the impact would be less than significant. Operational impacts of other renewable energy facilities identified in Table 6-1 would also be similar. Although these cumulative projects involve large areas, their operational requirements are very minimal, requiring minimal staff or use of machinery or equipment that generate emissions. Further, alternative energy projects, such as the project, would assist attainment of regional air quality standards and improvement of regional air quality by providing clean, renewable energy sources. Consequently, the projects would provide a positive contribution to the implementation of applicable air quality plan policies and compliance with EO S-3-05.

However, from a cumulative air quality standpoint, the potential cumulative impact associated with the generation of PM₁₀ and PM_{2.5} emissions during operation of the cumulative projects is a concern because of the fact that Imperial County is classified as a "serious" non-attainment area for PM₁₀ and a "moderate" non-attainment area for 8-hour O₃ for the NAAQS and non-attainment for PM_{2.5} for the urban areas of Imperial County. As previously indicated, the project is not located within the nonattainment boundaries for PM_{2.5}. The project's operational contribution to PM₁₀ is below a level of significance. However, when combined with other cumulative projects, the operational PM₁₀ emissions would likely exceed daily thresholds which is considered a potentially significant cumulative impact. As with the construction phases, the cumulative projects would be required to comply with ICAPCD's Regulation VIII for dust control (Regulation VIII applies to both the construction and operational phases of projects). As a result, the ICAPCD would require compliance with the various dust control measures and may, in addition be required to prepare and implement operational dust control plans (Mitigation Measure AQ-5) as approved by the ICAPCD, which is a component of ICAPCD's overall framework of the AQAP for the SSAB, which sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. Therefore, the project would not contribute to long-term cumulatively considerable air quality impacts and the project would not result in cumulatively significant air quality impacts.

6.3.4 Biological Resources

The geographic scope for considering cumulative impacts on biological resources includes the Imperial Valley and related biological habitats. Table 6-1 lists the projects considered for the biological resources cumulative impact analysis.

In general terms, in instances where a potential impact could occur, CDFW and USFWS have promulgated a regulatory scheme that limits impacts on these species. The effects of the project would be rendered less than significant through mitigation requiring compliance with all applicable regulations that protect plant, fish, and animal species, as well as waters of the U.S. and state. Other cumulative projects would also be required to avoid impacts on special-status species and/or mitigate to the satisfaction of the CDFW and USFWS for the potential loss of habitat. As described in Section 4.4, Biological Resources, the project has the potential to result in impacts on biological resources. These impacts are generally focused on potential construction-related effects to burrowing owl, migratory birds, loggerhead shrike, and black-tailed gnatcatcher.

Burrowing Owls are protected by the CDFW mitigation guidelines for burrowing owl (CDFW 2012) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. Mitigation Measures BIO-1 and BIO-2 contain these requirements thereby minimizing potential impacts on these species to a less than significant level. Additionally, as provided in Section 4.4, Biological Resources, loggerhead shrike, black-tailed gnatcatcher, and several other special-status birds were observed on the project site or have a potential to be present. In addition, several common bird species could nest on the project site. As a result of project-related construction activities, one or more of these species could be harmed. However, with the implementation of Mitigation Measures BIO-1, BIO-3, and BIO-4 as identified in Section 4.4, Biological Resources, these impacts would be reduced to a level of less than significant. Similarly, the cumulative projects within the geographic scope of the project would be required to comply with the legal framework as described above. Based on these considerations, impacts on biological resources would not be cumulatively considerable.

As with the proposed project, each of the cumulative projects would be required to provide mitigation for impacts on biological resources. The analysis below is conducted qualitatively and in the context that the cumulative projects would be subject to a variety of statutes and administrative frameworks that require mitigation for impacts on biological resources.

Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by USFWS. This act prohibits the killing of any migratory birds without a valid permit. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under this act. With few exceptions, most birds are considered migratory under this act. Raptors and active raptor nests are protected under California FGCs 3503.5, 3503, and 3513.

The CWA and California's Porter-Cologne Water Quality Control Act provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit. No jurisdictional wetlands are located with the project site that could otherwise be directly impacted by construction of the proposed project. Likewise, Mitigation Measures HYD-1 through HYD-3 would be required to

avoid or minimize potential water quality impacts that could otherwise indirectly impact biological resources.

The proposed project would comply with these and other laws, regulations and guidelines and therefore would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative actions within the geographic scope of the proposed project will be required to comply with the legal frameworks set forth above, as well as others. The cumulative actions will be required to mitigate their impacts to a less than significant level.

6.3.5 Cultural Resources

As discussed in Section 4.5, Cultural Resources, no sensitive historical resources were identified within the project site or within the 0.25-mile surrounding radius. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines and no impact would occur.

The potential of finding a buried archaeological site during construction is considered low. However, like all construction projects in the state, the possibility exists. This potential impact is considered significant. Implementation of Mitigation Measures CR-1 and CR-2 would reduce potential impacts associated with the unanticipated discovery of unknown buried archaeological resources. Implementation of Mitigation Measure CR-3 would ensure that the impact on paleontological resources during construction would be mitigated to a level less than significant. Implementation of Mitigation Measure CR-4 would reduce potential impacts on human remains to a level less than significant.

Future projects with potentially significant impacts on cultural resources would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and Mitigation Measures CR-1 through CR-4, the proposed project would have a less than cumulatively considerable contribution to impacts on cultural resources.

During operations and decommissioning of the project, no additional impacts on archeological resources would be anticipated because the soil disturbance would have already occurred and been mitigated during construction.

6.3.6 Geology and Soils

The Imperial Valley portion of the Salton Trough physiographic province of Southern California is used as the geographic scope for the analysis of cumulative impacts on geology/soils and mineral resources. Cumulative development would result in an increase in population and development that could be exposed to hazardous geological conditions, depending on the location of proposed developments. Geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices. Cumulative impacts on geologic resources would be considered significant if the project would be impacted by geologic hazard(s) and if the impact could combine with off-site geologic hazards to be cumulatively considerable. None of the projects identified within the geographic scope of potential cumulative impacts would intersect or be additive to the project's site-specific geology and soils impacts; therefore, no cumulative effects are identified for geology/soils.

With regards to mineral resources, no mineral resources are located within the boundaries of the project site. Therefore, the project would not result in a cumulative geology/soils impact for mineral resources.

6.3.7 Greenhouse Gas Emissions

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Although the emissions of the projects alone would not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. In turn, global climate change has the potential to result in rising sea levels, which can inundate low-lying areas; affect rainfall and snowfall, leading to changes in water supply; and affect habitat, leading to adverse effects on biological resources. SCAQMD has proposed a threshold of 3,000 tCO_{2e}, for residential and commercial projects; which was applied to the project analysis as provided in Section 4.7, Greenhouse Gases. As provided, the proposed project's CO₂ emissions would not exceed SCAQMD's threshold of 3,000 tCO_{2e}.

Given that the project is characterized as a renewable energy project and places emphasis on solar power generation, project operations would be almost carbon-neutral with the majority of the operational GHG emissions associated with vehicle trips. Based on these considerations, no significant long-term operational GHG impacts would occur and, therefore, project-related GHG impacts would not be cumulatively considerable.

6.3.8 Hazards/Hazardous Materials

The geographic scope considered for cumulative impacts from health, safety, and hazardous materials is the area within 1 mile of the boundary of the project sites. One mile is the American Society of Testing and Materials standard search distance for hazardous materials.

Under cumulative conditions, implementation of the project in conjunction with development of projects listed in Table 6-1 is not anticipated to present a public health and safety hazard to residents. Additionally, the project and related projects would all involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operation. Impacts from these activities are less than significant for the project because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various Federal, state, and local laws, regulations, and policies. It is foreseeable that the project and related projects would implement and comply with these existing hazardous materials laws, regulations, and policies. Therefore, the related projects would not cause a cumulative impact, and the project would not result in a cumulatively considerable incremental contribution to a cumulative impact related to use or routine transport of hazardous materials.

6.3.9 Hydrology/Water Quality

Table 6-1 lists the projects considered for the hydrology and water quality cumulative impact analysis. The geographic scope for considering cumulative hydrology and water quality impacts is the Imperial Valley Hydrologic Unit as defined by the Colorado Basin RWQCB Basin Plan. The construction of the project is expected to result in short-term water quality impacts. Substantial short-term cumulative water quality impacts may occur during simultaneous construction of the project and other cumulative projects (Midway Solar Farm III and Nider Solar Project) identified in Table 6-1. However, the construction phasing of these projects is currently not anticipated to overlap.

Furthermore, in compliance with the SWRCB's NPDES general permit for activities associated with construction (2009-0009-DWQ) would reduce water quality impacts. As with the project, each of the cumulative projects would be required to comply with the Construction General Permit. The SWRCB has determined that the Construction General Permit protects water quality, is consistent with the CWA and addresses the cumulative impacts of numerous construction activities throughout the state. This determination in conjunction with the implementation of Mitigation Measures HYD-1 and HYD-2 would ensure short-term water quality impacts are not cumulatively considerable.

The project is not expected to result in long-term operations-related impacts related to water quality. The project would mitigate potential water quality impacts by implementing site design, source control, and treatment control BMPs. Some cumulative projects would require compliance with the SWRCB's NPDES general permit for industrial activities, as well as rules found in the CWA, Section 402(p)(1) and 40 CFR 122.26, and implemented Order No. 90-42 of the RWQCB. With implementation of SWRCB, Colorado River RWQCB, and County policies, plans, and ordinances governing land use activities that may degrade or contribute to the violation of water quality standards, cumulatively considerable impacts on water quality would be minimized to a less than significant level.

Based on a review of the FEMA Flood Insurance Rate Map FIRM, the project site is located within Zone X, which is an area determined to be outside of the 100-year floodplain. As such, the project would not result in a significant cumulatively considerable impact on floodplains by constructing new facilities within an identified flood hazard zone.

As discussed in Section 4.9, Hydrology/Water Quality, the proposed project would not result in the alteration of existing drainage patterns thereby increasing the rate or amount of surface runoff in a manner that could result in on or off-site flooding and downstream erosion and sedimentation. The proposed on-site retention basins would provide the required runoff storage volume. Based on these considerations, the project would not contribute to or result in a significant cumulatively considerable adverse hydrology or water quality impact.

6.3.10 Land Use and Planning

The geographic scope for the analysis of cumulative land use and planning impacts is typically defined by government jurisdiction. The geographic scope for considering potential inconsistencies with the General Plan's policies, including agriculture, from a cumulative perspective includes all lands within the County's jurisdiction and governed by its currently adopted General Plan. In contrast, the geographic scope for considering potential land use impacts or incompatibilities include the project sites plus a 1-mile buffer to ensure a consideration for reasonably anticipated potential direct and indirect effects.

As provided in Section 4.10, Land Use and Planning, the project would not involve any facilities that could otherwise divide an established community. Based on this circumstance, no cumulatively considerable impacts would occur. As discussed in Section 4.10, Land Use and Planning, the project would not conflict with the goals and objectives of the County of Imperial General Plan. In addition, a majority of the cumulative projects identified in Table 6-1 would not result in a conflict with applicable land use plans, policies, or regulations. In the event that incompatibilities or land use conflicts are identified for other projects listed in Table 6-1, similar to the project, the County would require mitigation to avoid or minimize potential land use impacts. Based on these circumstances, no cumulatively considerable impact would occur.

6.3.11 Noise and Vibration

When determining whether the overall noise (and vibration) impacts from related projects would be cumulatively significant and whether the project's incremental contribution to any significant cumulative impacts would be cumulatively considerable, it is important to note that noise and vibration are localized occurrences; as such, they decrease rapidly in magnitude as the distance from the source to the receptor increases. Therefore, only those related projects and identified in Table 6-1 that are in the direct vicinity of the project site and those that are considered influential in regards to noise and vibration would have the potential to be considered in a cumulative context with the project's incremental contribution.

Construction equipment noise from the related projects identified in Table 6-1 would be similar in nature and magnitude to those discussed for the project in Section 4.11, Noise and Vibration. Specifically, noise levels from on-site construction activities would fluctuate depending on the particular type, number, and duration of usage for the varying equipment. The site preparation phase would be anticipated to generate the most substantial noise levels as the on-site equipment associated with grading, compacting, and excavation tend to be the loudest. As discussed in Section 4.11, Noise and Vibration, the project's noise levels would not exceed the County's 75 dBA L_{eq} construction noise threshold. Therefore, impacts from construction noise are considered less than significant. Similar to the proposed project, other cumulative projects would be required to comply with the County's construction noise standards. Construction activity is limited to the hours of 7 a.m. to 7 p.m. Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays. Adhering to the County's construction hours would reduce the noise and vibration impacts to below a level of significance. Thus, the incremental contribution of the project to a cumulative noise impact would not be cumulatively considerable.

Stationary-source and vehicular noise from the aforementioned related projects would be similar in nature and magnitude to those discussed for the project in Section 4.11, Noise and Vibration. For the proposed project, no noise impacts have been identified. Operation of the other cumulative projects listed in Table 6-1 could result in the long-term stationary source noise levels that exceed applicable standards at nearby sensitive receptors and/or result in substantial increases in ambient noise levels. However, given that the project facilities would be constructed within the A-3 zone, and components of the project would be located at appropriate distances from the residential uses scattered in this portion of the County, long-term operational noise levels are not expected to exceed normally acceptable noise levels for these zones (e.g., 70 dBA day-night average sound level [L_{dn}]). Thus, the incremental contribution of the project to significant cumulative noise impacts would not be cumulatively considerable.

6.3.12 Public Services

The project would result in increased demand for public services (fire protection service and law enforcement services) (Section 4.12, Public Services). Future development in the Imperial Valley, including projects identified in Table 6-1, would also increase the demand for public services. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries. In conjunction with the project's approval, the project applicant would also be conditioned to ensure sufficient funding is available for any fire protection or prevention needs and law enforcement services. Based on the type of projects proposed (e.g., solar energy generation, energy storage systems), their relatively low demand for public services other than fire and police, it is reasonable to conclude that the project

would not increase demands for education, or other public services. Service impacts associated with the project related to fire and police would be addressed through payment of impact fees as part of the project's Conditions of Approval to ensure that the service capabilities of these departments are maintained. Therefore, no cumulatively considerable impacts would occur.

6.3.13 Transportation/Traffic

During the construction phase of the project, the maximum number of trips generated on a daily basis would be approximately 63 trips. This trip count is so low that it does not require a formal traffic analysis as it does not have the potential to impact LOS of roadway segments and intersections. A majority of the projects listed in Table 6-1 are already constructed. The Midway Solar Farm III Project is currently under construction and the Nider Solar Project is pending entitlement. The construction phasing of these projects is not anticipated to overlap with the proposed project. Furthermore, with exception of SR-111 and SR-115, the cumulative projects are not anticipated to use the same construction haul route as the proposed project. Future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. Based on these findings, the project would not result in cumulatively considerable roadway or intersection impacts.

6.3.14 Utilities/Service Systems

Future development in Imperial County would increase the demand for utility service in the region. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public utilities within their jurisdictional boundaries. As indicated in Section 4.14, Utilities/Service Systems, the necessary public utilities would be provided to the projects by IID; however, the project is not expected to substantially increase demands for any particular service provider.

The related projects identified in Table 6-1 would rely on similar service providers. Compared to agricultural uses, the proposed project's water demand would be lower. Likewise, limited on-site wastewater facilities would be constructed for the project and, therefore, no extension of sanitary sewer service would be required. Similarly, the project would connect with existing drainage infrastructure owned and operated by IID or the County. Additionally, the project would be comprised of mostly recyclable materials and would not generate significant volumes of solid waste that could otherwise contribute to significant decreases in landfill capacity. Based on these considerations, the project would result in less than significant impacts on existing utility providers and, therefore, would not result in cumulatively considerable impacts.

7 Effects Found Not to be Significant

In accordance with Section 15128 of the CEQA Guidelines, an EIR must contain a statement briefly indicating the reasons that various potential significant effects of a project were determined not to be significant. Based on the Initial Study and Notice of Preparation prepared for the proposed project (Appendix A of this EIR), Imperial County has determined that the proposed project would not have the potential to cause significant adverse effects associated with the topics identified below. Therefore, these topics are not addressed in this EIR; however, the rationale for eliminating these topics is briefly discussed below.

7.1 Forestry Resources

The project site is located on privately owned, undeveloped agricultural land. No portion of the project site or the immediate vicinity is zoned or designated as forest lands, timberlands, or Timberland Production. As such, the proposed project would not result in a conflict with existing zoning or cause rezoning. Therefore, implementation of the proposed project would not impact forestry resources.

7.2 Mineral Resources

The project site is not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to the Conservation and Open Space Element of the County of Imperial General Plan, no known mineral resources occur within the project site nor does the project site contain mapped mineral resources. As such, the proposed project would not adversely affect the availability of any known mineral resources. Therefore, no impact is identified for mineral resources.

Based on a review of the California Department Division of Oil, Gas, and Geothermal Resources Well Finder, there is one plugged and abandoned geothermal well (Well No. 02590318) located immediately east of the southern parcel of the project site (California Department of Oil, Gas, and Geothermal Resources n.d.). This geothermal well is not located within the project's construction limit and, therefore, would be avoided by the proposed project. Implementation of the proposed project would not impact geothermal wells.

7.3 Recreation

The proposed project would not generate new employment on a long-term basis. As such, the project would not significantly increase the use or accelerate the deterioration of regional parks or other recreational facilities. The temporary increase of population during construction that might be caused by an influx of workers would be minimal and not cause a detectable increase in the use of parks. Additionally, the project does not include or require the expansion of recreational facilities. Therefore, no impact is identified for recreation.

7.4 Population and Housing

Development of housing is not proposed as part of the project. Once construction is completed, the facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Security personnel may conduct unscheduled security rounds and would be

dispatched to the project site in response to a fence breach or other alarm. It is anticipated that maintenance of the facilities would require minimal site presence to perform periodic visual inspections and minor repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, because of the nature of the facilities, such actions would likely occur infrequently. Overall, minimal maintenance requirements are anticipated. The proposed project would not result in substantial population growth, as the number of employees required to operate and maintain the facility is minimal. Therefore, no impact is identified for population and housing.

7.5 Public Services

7.5.1 Schools, Parks, and Other Facilities

The proposed project does not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed project would not result in an increase in student population within School Districts that would service the area since it is anticipated that construction workers would commute in during construction operations.

Additionally, operation of the proposed project would require minimal part-time staff for maintenance. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities, such as post offices, are not expected.

7.6 Utilities

7.6.1 Wastewater and Stormwater

The project would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No habitable structures are proposed on the project site, such as O&M buildings; therefore, there would be no wastewater generation from the proposed project. The proposed project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board.

The proposed project is not anticipated to generate a significant increase in the amount of runoff water from water use involving solar panel washing. Water would continue to percolate through the ground, as a majority of the surfaces on the project site would remain pervious. The proposed project would not substantially alter the existing drainage pattern of the site, substantially increase the rate of runoff, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. No Imperial Irrigation District drains or canals would be removed or relocated within the project site. A less than significant impact is identified for these issue areas.

7.6.2 Solid Waste

Solid waste generation would be minor for the construction and operation of the project. Solid waste would be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. Trash would likely be hauled to the Niland Solid Waste Site (13-AA-0009) located in Niland. The Niland Solid Waste Site has approximately 318,669 cubic yards of remaining capacity and is estimated to remain in operation through 2056 (CalRecycle n.d.). Therefore, there is ample landfill capacity in the County to receive the minor amount of solid waste generated by construction and operation of the project.



Additionally, because the proposed project would generate solid waste during construction and operation, the project would be required to comply with state and local requirements for waste reduction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the CUP would contain provisions for recycling and diversion of Imperial County construction waste policies.

Further, when the proposed project reaches the end of its operational life, the components would be decommissioned and deconstructed. When the project concludes operations, much of the wire, steel, and modules of which the system is comprised would be recycled to the extent feasible. The project components would be deconstructed and recycled or disposed of safely, and the site could be converted to other uses in accordance with applicable land use regulations in effect at the time of closure. Commercially reasonable efforts would be used to recycle or reuse materials from the decommissioning. All other materials would be disposed of at a licensed facility. A less than significant impact is identified for this issue.

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8 Alternatives

8.1 Introduction

The identification and analysis of alternatives is a fundamental concept under CEQA. This is evident in that the role of alternatives in an EIR is set forth clearly and forthrightly within the CEQA statutes. Specifically, CEQA §21002.1(a) states:

“The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.”

The CEQA Guidelines require an EIR to “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives” (CEQA Guidelines §15126.6(a)). The CEQA Guidelines direct that selection of alternatives focus on those alternatives capable of eliminating any significant environmental effects of the project or of reducing them to a less-than significant level, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly. In cases where a project is not expected to result in significant impacts after implementation of recommended mitigation, review of project alternatives is still appropriate.

The range of alternatives required within an EIR is governed by the “rule of reason” which requires an EIR to include only those alternatives necessary to permit a reasoned choice. The discussion of alternatives need not be exhaustive. Furthermore, an EIR need not consider an alternative whose implementation is remote and speculative or whose effects cannot be reasonably ascertained.

Alternatives that were considered but were rejected as infeasible during the scoping process should be identified along with a reasonably detailed discussion of the reasons and facts supporting the conclusion that such alternatives were infeasible.

Based on the alternatives analysis, an environmentally superior alternative is designated among the alternatives. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives (CEQA Guidelines §15126.6(e)(2)).

8.2 Criteria for Alternatives Analysis

As stated above, pursuant to CEQA, one of the criteria for defining project alternatives is the potential to attain the project objectives. Established objectives of the project applicant for the proposed project include:

- To provide solar energy for the IID’s eGreen low-income community solar program. This project will lower the electricity bills for the District’s 15,000 qualified low-income customers from a local source of clean energy
- To construct and operate a 30 MW solar PV energy facility using high-efficiency PV technology to provide a renewable and reliable source of electrical power to California utilities

- To locate the project on private lands with high-solar insolation and relatively flat terrain and to minimize construction of new transmission infrastructure
- To minimize environmental impacts and land disturbance by locating the project on fallowed agricultural lands
- To assist California and its investor-owned utilities in meeting the State's RPS and greenhouse gas emission reduction requirements
- To provide economic benefits to Imperial County, through new jobs, spending in local business, and additional sales tax revenue

8.3 Alternatives Considered but Rejected

8.3.1 Alternative Site

Section 15126.6(f)(2) of the CEQA Guidelines addresses alternative locations for a project. The key question and first step in the analysis is whether any of the significant effects of the proposed project would be avoided or substantially lessened by constructing the proposed project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR. Further, CEQA Guidelines Section 15126.6(f)(1) states that among the factors that may be taken into account when addressing the feasibility of alternative locations are whether the project proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent).

With respect to the proposed project, no significant, unmitigable impacts have been identified. With implementation of proposed mitigation, all significant environmental impacts will be mitigated to a level less than significant. Additionally, the proposed project would be consistent with applicable plans, such as the County's General Plan, and importantly the Renewable Energy Element and RE Overlay Zone.

The Applicant investigated the opportunity to develop the project site in the general project area and determined that the currently proposed project site is the most suitable for development of the solar facility. An alternative site was considered in the early planning process and is depicted on Figure 8-1. As shown, this site is located in the vicinity of the project site on privately-owned agricultural lands. The site comprises approximately 126 acres of land.

However, this site was rejected from detailed analysis for the following reasons:

- The site comprises a total of 126 acres of land; however, the Applicant's criteria for a suitable site (to achieve a 30 MW facility) is 200 acres. Therefore, this parcel is approximately 74 acres smaller than the site size needed to accommodate the project.
- The alternative location site, as compared to the proposed project site, has a greater agricultural value (the project site's agricultural value is limited as the project site has remained fallow since the construction of the Midway substation).
- As compared to the alternative location, the proposed project site is large enough to accommodate the project, would not impact existing farming operations, and is adjacent to existing transmission lines with existing capacity to accommodate the project.
- No significant, unmitigated impacts have been identified for the proposed project. Construction and operation of the proposed project at this alternative location would likely

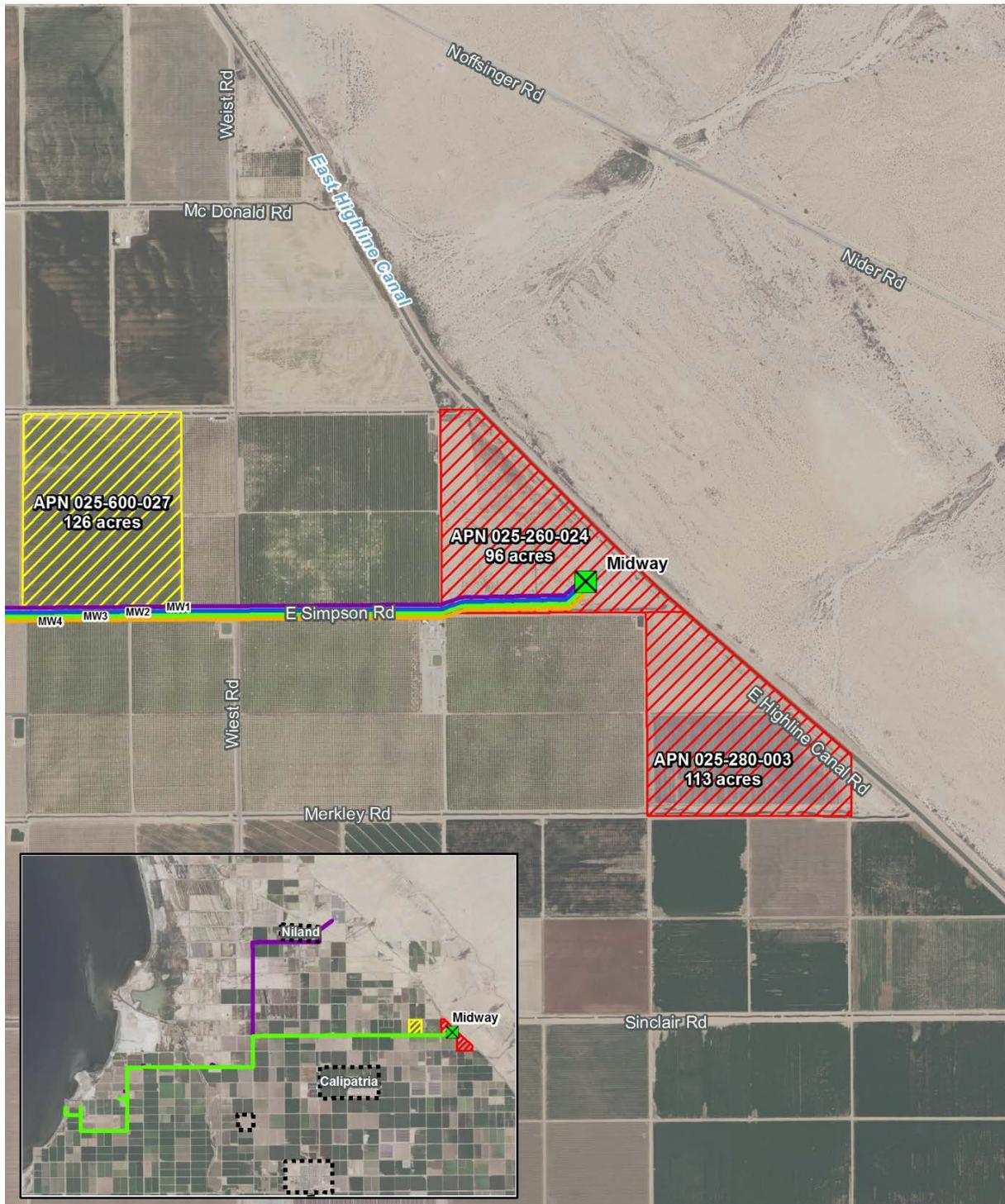


result in similar, impacts associated with the proposed project, or additional impacts that are currently not identified for the project at the currently proposed location.

- The proposed project is consistent with the overall goals and objectives of the County's General Plan and is located within the RE Overlay Zone.
- As compared to the alternative site, a portion of the proposed project site is already developed with the Midway substation, and the remaining portions of the site are characterized by fallow agricultural land, and disturbed habitat.

As such, the County considers this alternative location infeasible and rejects further analysis of this alternative because of the factors listed above.

Figure 8-1. Alternative Site



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- | | |
|-----------------------|--------------------|
| Substation | Transmission Lines |
| Proposed Project Site | MW1 |
| Alternative Site | MW2 |
| City | MW3 |
| | MW4 |





8.4 Alternative 1: No Project/No Development Alternative

The CEQA Guidelines require analysis of the No Project Alternative (PRC Section 15126). According to Section 15126.6(e), “the specific alternative of ‘no project’ shall also be evaluated along with its impacts. The ‘no project’ analysis shall discuss the existing conditions at the time the 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.”

The No Project/No Development Alternative assumes that the project, as proposed, would not be implemented and the project site would not be further developed with a solar energy project. The No Project/No Development Alternative would not meet any of the project objectives.

Environmental Impact of Alternative 1: No Project/No Development Alternative

Aesthetics

Under the No Project/No Development Alternative, the project site would not be further developed and would continue to be utilized for the Midway substation. It is anticipated that the remaining undeveloped portion of the project site would remain as fallow agricultural land. Because the No Project/No Development Alternative would not modify the existing project site or add construction to the project site, there would be no change to the existing condition of the site. Under this alternative, there would be no potential to create a new source of light or glare associated with the PV arrays. A less than significant aesthetic impact (including potential light and glare impact) has been identified associated with the project. However, because there would be no change to the existing condition of the project site under this alternative, there would be no potential impact associated with a change in visual character of the site and the potential aesthetic impact would be less as compared to the project as the existing visual conditions would not change.

Agriculture

Under the No Project/No Development Alternative, the project site would not be developed and the vacant portions of the site would continue to be undeveloped, but fallow agricultural land. Compared to the proposed project, implementation of this alternative would avoid the conversion of land designated as Prime Farmland (0.2 acre), Farmland of Statewide Importance (7.04 acres), and Farmland of Local Importance (194.56 acres) per the Farmland Mapping and Monitoring Program (FMMP). Therefore, this alternative would not contribute to the conversion of agricultural lands or otherwise adversely affect agricultural operations. Compared to the proposed project, this alternative would avoid the need for future restoration of the project sites to pre-project conditions. This alternative would avoid any agricultural impacts associated with the proposed project.

Air Quality

Under the No Project/No Development Alternative, there would be no air emissions because of project construction or operation, and no project- or cumulative-level air quality impact would occur. Therefore, no significant impacts to air quality or violation of air quality standards would occur under this alternative. Moreover, this alternative would be consistent with existing air quality attainment plans and would not result in the creation of objectionable odors.

During construction, the project would require incorporation of mitigation to minimize significant air quality impacts to a less than significant level. Therefore, this alternative would result in less air

quality emissions compared to the proposed project. The No Project/No Development Alternative would not reduce the long-term need for renewable electricity generation. As a consequence, while the No Project/No Development Alternative would not result in new impacts to air quality as a result of construction, it would likely not realize the overall benefits to regional air quality when compared to the operation of the proposed project.

Biological Resources

Under the No Project/No Development Alternative, existing biological resource conditions within the project site would largely remain unchanged and no impact would be identified. Unlike the proposed project which requires mitigation for biological resources including burrowing owl and other migratory birds, as well as vegetation, this alternative would not result in construction of solar facilities that could otherwise result in significant impacts to these biological resources. Compared to the proposed projects, this alternative would avoid impacts to biological resources.

Cultural Resources

The project include ground-disturbing activities that have the potential to disturb previously undocumented cultural resources that could qualify as historical resources or unique archaeological resources pursuant to CEQA. Under the No Project/No Development Alternative, the project site would not be developed and no construction-related ground disturbance would occur. Therefore, compared to the proposed project, this alternative would avoid impacts to cultural resources and paleontological resources.

Geology and Soils

Because there would be no development at the project site under the No Project/No Development Alternative, no grading or construction of new facilities would occur. Therefore, there would be no impact to project-related facilities as a result of local seismic or liquefaction hazards, unstable or expansive soils, or suitability of soils for proposed project components. In contrast, the proposed project would require the incorporation of mitigation measures to minimize impacts to a less than significant level. Compared to the proposed project, this alternative would avoid significant impacts related to local geological and soil conditions.

Greenhouse Gas Emissions

Under the No Project/No Development Alternative, there would be no GHG emissions resulting from project construction or operation. Therefore, no impact to global climate change would result from project-related GHG emissions, primarily associated with construction activities. For the proposed project, a less than significant impact was identified for construction-related GHG emissions, and in the long-term, the project would result in an overall beneficial impact to global climate change as the result of creation of renewable energy. While this alternative would not further implement policies (e.g., SB X1-2) for GHG reductions, this alternative would also not directly conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This alternative would not create any new GHG emissions during construction but would not lead to a long-term beneficial impact to global climate change. Compared to the proposed project, while the No Project/No Development Alternative would not result in new GHG emissions during construction, it would be less beneficial to global climate change as compared to the proposed project.



Hazards and Hazardous Materials

The No Project/No Development Alternative would not include any new construction. Therefore, no potential exposure to hazardous materials would occur. Therefore, no impact is identified for this alternative for hazards and hazardous materials. As with the proposed project, this alternative would not result in safety hazards associated with airport operations. Although a less than significant impact is identified for hazards and hazardous materials associated with the project, compared to the proposed project, this alternative would have less of an impact related to hazards and hazardous materials as there would be no potential for the transport, use, removal or disposal of hazardous materials.

Hydrology/Water Quality

The No Project/No Development Alternative would not result in modifications to the existing drainage patterns or volume of storm water runoff as attributable to the proposed project, as existing site conditions and on-site pervious surfaces would remain unchanged. In addition, no changes with regard to water quality would occur under this alternative. However, in the context of existing sediment total TMDLs for local drainages, this alternative would not realize the benefits that could be attributed to the projects in terms of reductions in exposed soil surfaces which are identified as a principle contributor to existing water quality impairments. In this context, this alternative would not contribute to any real reduction in the potential for water quality impact especially, since the project would require additional mitigation, which would not otherwise be required under this alternative to address existing water quality impairments. Compared to the proposed project, from a drainage perspective, this alternative would avoid changes to existing hydrology. Similar to the proposed projects, this alternative would not result in the placement of structures within a 100-year flood zone.

Land Use and Planning

The No Project/No Development Alternative would not result in the modification of the existing land use on the project site. Under the No Project/No Development Alternative, the project site would not be developed and continue to be undeveloped fallow agricultural land and the operation of the Midway substation. Similar to the proposed project, the No Project/No Development Alternative would not divide an established community. As with the proposed project, this alternative would not conflict with any applicable habitat conservation plan or natural community conservation plan. Compared to the proposed project, this alternative would result in a similar impact related to land use and planning.

Noise

This alternative would not require construction or operation of the project facilities; therefore, this alternative would not increase ambient noise levels within the vicinity of the project site. For this reason, no significant noise impacts would occur. As discussed in Section 4.11, Noise and Vibration, the proposed project would not result in significant noise impacts to sensitive receptors during construction and operation. Compared to the proposed project, this alternative would not generate noise and would result in a similar impact related to noise.

Public Services

The No Project/No Development Alternative would not increase the need for public services which would otherwise be required for the proposed project (additional police or fire protection services). Therefore, no impact to public services is identified for this alternative. The proposed project will

result in less than significant impacts; subject to payment of law enforcement and fire service fees. Compared to the proposed project, this alternative would have fewer impacts related to public services as no new development would occur on the project site.

Transportation/Traffic

Because there would be no new development under the No Project/No Development Alternative, no increase in vehicular trips during construction or operation would result under this alternative. For these reasons, no impact would occur and this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, change air traffic patterns, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Although the proposed project would result in less than significant transportation/traffic impacts, compared to the proposed project, this alternative would avoid an increase in vehicle trips on local roadways, and any safety related hazards that could occur in conjunction with the increase vehicle trips and truck traffic.

Utilities

The No Project/No Development Alternative would not require the expansion or extension of existing utilities, since there would be no new project facilities that would require utility service. The proposed project would not result in any significant impacts to existing utilities. Compared to the proposed project, this alternative would have less of an impact related to utilities.

Conclusion

Implementation of the No Project/No Development Alternative would generally result in reduced impacts for a majority of the environmental issues areas considered in Chapter 4, Environmental Analysis when compared to the proposed project. A majority of these reductions are realized in terms of significant impacts that are identified as a result of project construction. However, this alternative would not realize the benefits of reduced GHG emissions associated with energy use, which are desirable benefits that are directly attributable to the proposed project.

Comparison of the No Project/No Development Alternative to Project Objectives

The No Project/No Development Alternative would not meet any of the objectives of the project. Additionally, the No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of AB 32 (California Global Warming Solutions Act of 2006).

8.5 Alternative 2: Development on Northern Parcel Only

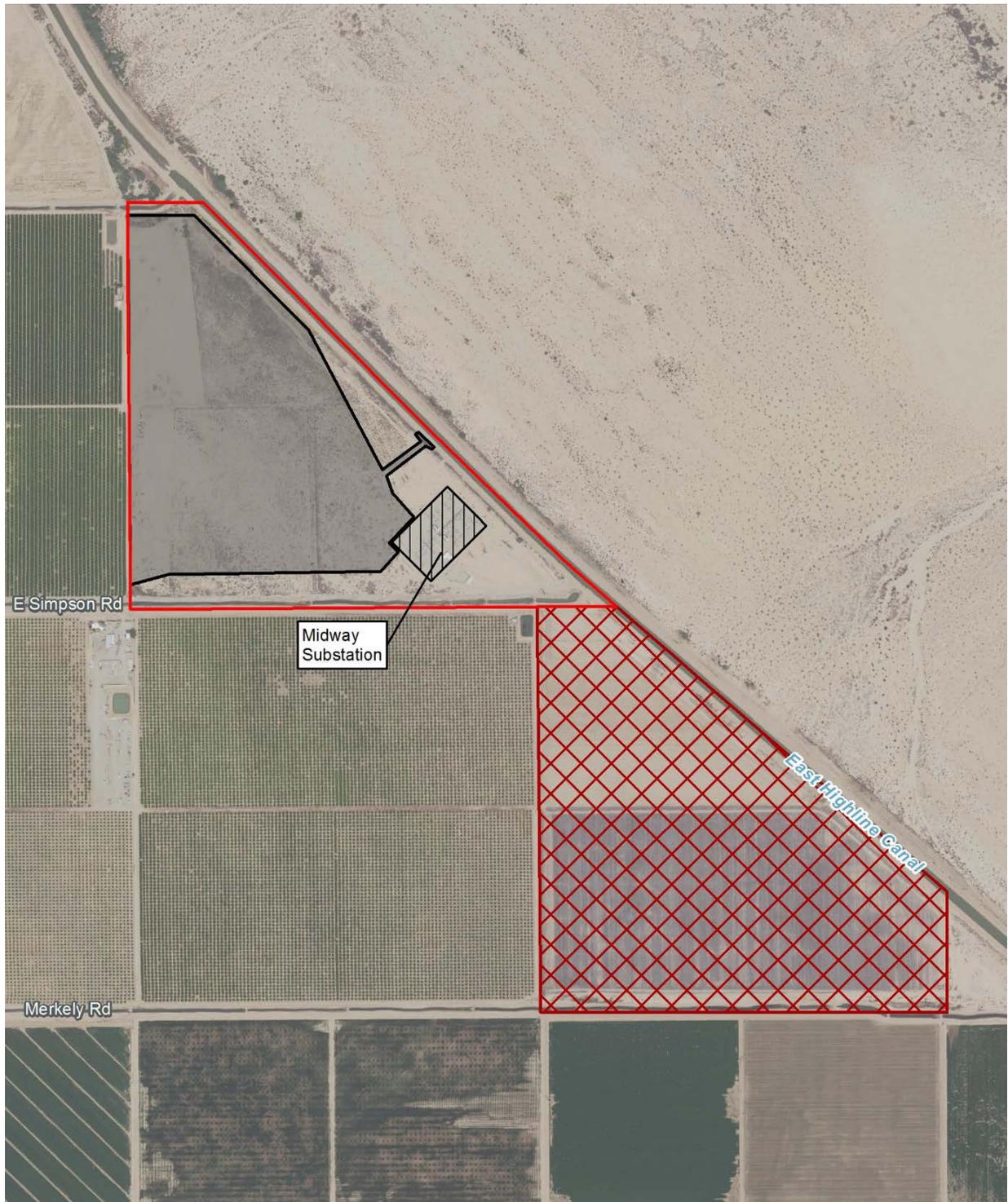
This alternative would involve development of the solar energy facility on the northern parcel of the project site only (Figure 8-2). The northern parcel comprises approximately 106 acres; however, approximately 12 acres is developed with the Midway substation. Therefore, there would be approximately 94 gross acres available to accommodate the solar field and associated infrastructure.

Environmental Impact of Alternative 2: Development on Northern Parcel Only

Aesthetics

A portion of the northern parcel is developed with the existing Midway Substation, which is located on the southeast corner. This parcel also contains overhead utility lines, ground connections to the substation, maintenance and operation substation building, fences, and irrigation. The remaining, undeveloped portion of the northern parcel was at one time utilized for agricultural operations and so is relatively disturbed; however, natural vegetation has established in the undeveloped area of this parcel. The southern parcel is generally characterized as disturbed, fallow agricultural land. There are no significant visual resources associated with either parcel. Therefore, while, this alternative would not develop the southern parcel of the project site, the Alternative 2: Development on Northern Parcel Only would not avoid or lessen any aesthetics impact associated with the project, as the aesthetic impact associated with the project is less than significant. Therefore, the aesthetic impact under this alternative would be similar to the proposed project.

Figure 8-2. Alternative 2: Development on Northern Parcel Only



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-  Alternative 2 - Development of Northern Parcel Only
-  Midway Substation (Proposed Point of Interconnection)
-  Development Area
-  No Development





Agriculture

This alternative would reduce the impact associated with the conversion of agricultural lands associated with the proposed project. Approximately 94 acres of Farmland of Local Importance would be converted with the implementation of this alternative. As with the proposed project, with the implementation of Mitigation Measure AG-1a, the project applicant would be required to minimize the permanent loss of valuable farmlands through either provision of an agricultural conservation easement, payment into the County agricultural fee program, or entering into a public benefit agreement. Mitigation Measure AG-1b will ensure that the project applicant adheres to the terms of the agricultural reclamation plan prepared for the project site, which would address the temporary conversion impact. Overall, implementation of this alternative would result in less of an impact related to agricultural resources.

Air Quality

Implementation of this alternative would result in less overall construction emissions as compared to the proposed project as a smaller project would be constructed, with less ground disturbance and a shorter overall construction duration. As with the proposed project, this alternative would be subject to implementation of mitigation and compliance with all ICAPCD applicable rules and regulations. The project's operational contribution to PM₁₀ has been determined to be below a level of significance and would not interfere with the SIP for PM₁₀. This alternative would also not interfere with the SIP.

As with the proposed project there would be a less than significant impact to air quality, as the total exhaust emissions generated within each of the construction phases would not exceed the ICAPCD thresholds for CO, ROG, NO_x, and PM₁₀ and no significant air quality impact would occur during construction. Similar to the proposed project, construction of this alternative must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, this alternative would also be subject to the ICAPCD's Air Quality Handbook, which lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Similar to the proposed project, this alternative's operational emissions would not exceed the Tier I thresholds and no significant air quality impact would occur during operation, although a Dust Suppression Management Plan for both construction and operations would be required. However, because less overall land disturbance and construction duration would occur under this alternative, this alternative would result in less of an impact to air quality as compared to the proposed project.

Biological Resources

As with the proposed project, implementation of this alternative would impact arrow weed thickets, bush seepweed scrub, common reed marshes, fourwing saltbush scrub, mesquite thickets, and quailbush scrub. As with the proposed project, suitable burrowing owl nesting and foraging habitat is present in the northern parcel and there is the potential that this species may be present at the start of project construction. Also, similar to the proposed project, indirect impacts to burrowing owls could also result if they are present in the lands surrounding the project site and project construction produces dust, noise, or other disturbances to this species. Mitigation would be required to avoid take and reduce potential impacts to this species.

As with the proposed project, implementation of this alternative could impact certain avian species and implementation of Mitigation Measures BIO-1 through BIO-4 would be required to reduce any

potentially significant direct and indirect impacts to these species. Overall, the impact associated with implementation of this alternative would be similar to the proposed project.

Cultural Resources

No sensitive historical resources, unique archaeological resources, or tribal cultural resources were identified within the project site or within the 0.25-mile surrounding radius. Additionally, NAHC responded with confirmation that no known sacred sites or tribal cultural resources as defined by CEQA are documented within the project site or surrounding 0.25-mile radius. The pedestrian survey did not identify evidence of cultural resources from any time period. Most of the area surveyed appeared disturbed from leveling and earthmoving activities associated with agriculture. The potential of finding a buried archaeological site during construction is considered low. However, Mitigation Measures CR-1 through CR-5 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant. Because no cultural resources have been identified on the project site, implementation of this alternative would result in a similar impact to archaeological resources as compared to the proposed project.

The paleontological sensitivity of geologic formations within the project site is considered to be high. However the possibility of encountering paleontological resources during construction is low, as the sensitive formations are located at depths of approximately 30 feet. As with the proposed project, implementation of Mitigation Measure CR-3 would ensure that the potential impacts on paleontological resources do not rise to the level of significance pursuant to CEQA. Implementation of this alternative would result in a similar impact to cultural resources as the proposed project.

Geology and Soils

As with the proposed project, this alternative would be exposed to seismic groundshaking as the area is located in the seismically active Imperial Valley of southern California with numerous mapped faults of the San Andreas Fault System traversing the region. Similar to the proposed project, the primary seismic hazard at the project site is the potential for strong ground shaking during earthquakes along the Brawley, Elmore Ranch, and San Andreas (Coachella Section) Faults. Therefore, like the proposed project, this alternative is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. Further, this alternative would not reduce or avoid the potential for liquefaction to occur on the project site. Also, similar to the proposed project, a site specific geotechnical investigation would be required at the project site to determine the extent and effect of lateral spreading, and a licensed geotechnical or soils engineer would be required to investigate the site-specific soil conditions and recommendations for the design of the facilities to withstand lateral spreading. Soil materials would be similar to those identified for the proposed project, and may exhibit a moderate to high potential for shrink-swell potential as well as corrosive characteristics. As with the proposed project, additional geotechnical investigation would be required and implementation of Mitigation Measure GEO-1. Implementation of this alternative would result in a similar impact to geology and soils as the proposed project.

Greenhouse Gas Emissions

As with the proposed project, construction and operation of this alternative would result in a relatively small amount of GHG emissions. GHG emissions would be generated during construction and routine operational activities at the site. Implementation of this alternative would result in less overall construction emissions; however, this alternative would not avoid or reduce a significant impact to GHG associated with the project because the project's GHG emissions are less than the SCAQMD's



screening threshold of 3,000 MT of CO₂e per year. As with the proposed project, once operational, the proposed solar facility constructed under this alternative would offset GHG emissions generated by electricity produced through the burning of fossil fuels; however, the off-sets achieved by this alternative would be less than the proposed project.

This alternative would provide less renewable energy, and so would contribute less to meeting the states renewable energy goals. As with the proposed project, implementation of this alternative would not conflict with any applicable plan, policy, or regulation adopted for reducing the emissions of GHGs. Implementation of this alternative would result in a similar impact to GHG as the proposed project. This alternative would not avoid or lessen the impact to GHG as no significant impact associated with the proposed project has been identified.

Hazards and Hazardous Materials

Similar to the proposed project, construction of this alternative would involve the limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment. Also, as with the proposed project, because the Phase I ESA prepared for the proposed project did not identify and on-site RECs, ASTs, or USTs, this alternative would not avoid or reduce impacts associated with hazardous materials. Further, no impact associated with potential safety hazards to the public residing or working within proximity to a public airport would occur. Implementation of this alternative would result in a similar hazards and hazardous materials impact as the proposed project. This alternative would not avoid or lessen the impact to hazards and hazardous materials as no significant impact associated with the proposed project has been identified.

Hydrology/Water Quality

Implementation of this alternative would involve implementation of similar mitigation measures as the proposed project to ensure that the project's SWPPP and Grading Plan include measures necessary to minimize water quality impacts as a result of construction and post-construction runoff from the project. Also, this alternative would require the implementation of mitigation measures (e.g., Mitigation Measures HYD-1 and HYD-2 as identified for the project) in order to reduce impacts on surface water quality. Further this alternative would require implementation of Mitigation Measure HYD-3 to address post-construction water quality concerns. However, because the overall area of site disturbance and operational activities would be reduced as compared to the proposed project, implementation of this alternative would result in less of an impact to hydrology/water quality as compared to the proposed project.

Land Use and Planning

Implementation of this alternative would not avoid or reduce a land use and planning impact, as no significant impact associated with the project has been identified. As with the proposed project, this alternative would be consistent with the County Land Use Ordinance, Division 17, RE Overlay Zone, which authorizes the development and operation of RE projects with an approved CUP. Implementation of this alternative would be similar to the proposed project with respect to land use and planning.

Noise

As with the proposed project, construction of this alternative would require the use of earthmovers, bulldozers, loaders, cranes, forklifts, pile drivers, water trucks, and pickup trucks. However, this

noise level would not exceed the County's 75 dBA L_{eq} construction noise threshold and, similar to the proposed project, a less than significant impact to noise would occur with implementation of this alternative.

Traffic noise associated with construction of the proposed project is not anticipated to be a significant source of noise. While this alternative could reduce the amount of construction traffic, the proposed project's construction traffic related noise would be less than 3 dBA and is not significant. Therefore, this alternative would not avoid or reduce a significant impact to noise, and the impact would be similar to the proposed project.

Public Services

As with the proposed project, implementation of this alternative would result in a minor increase in demand for fire protection services over existing levels. Additionally, the project would result in a minor increase in demand for law enforcement protection services over existing levels. While the project would result in only a minor increase in demand for public services, the reduced project site size would potentially reduce the overall demand for public services and would remain less than significant.

Transportation/Traffic

As with the proposed project, project trip generation for both the construction and operational scenarios will be very minimal under this alternative. Similar to the proposed project, the project trip generation would be below the County's threshold requirement for preparation of a formal traffic impact analysis as the trips would be so minimal that they would not affect roadway or intersection levels of service for any of the roadways that would be utilized for access to and from the project site. Further, implementation of this alternative would not require any public road widening to accommodate vehicular trips associated with the project (construction phase and operational phase), while maintaining adequate level of service. Implementation of this alternative would not avoid or reduce any significant transportation/traffic impact associated with the project, and the impact would be similar as compared to the project.

Utilities

Implementation of this alternative would result in an overall less demand for utilities, including water. However, this alternative would not avoid or reduce a significant impact associated with the project as a less than significant impact to utilities has been identified associated with the project. Implementation of this alternative would not achieve to the same degree the beneficial impacts of providing renewable energy. As compared to the proposed project, the overall demand for utilities would be less under this alternative.

Conclusion

Alternative 2: Development on Northern Parcel Only would reduce impacts to agricultural resources, air quality, hydrology/water quality, and public services and utilities.

Comparison of Alternative 2: Development on Northern Parcel Only to Project Objectives

The Alternative 2: Development on Northern Parcel Only would not meet the following objectives of the proposed project:

- To provide solar energy for the IID's eGreen low-income community solar program. This project will lower the electricity bills for the District's 15,000 qualified low-income customers from a local source of clean energy.
- To construct and operate a 30 MW solar PV energy facility using high-efficiency PV technology to provide a renewable and reliable source of electrical power to California utilities.

8.6 Alternative 3: Development on Southern Parcel Only

This alternative would involve development of the solar energy facility on the southern parcel of the project site only (Figure 8-3). The southern parcel comprises approximately 117 acres, which would be available to accommodate the solar field and associated infrastructure.

Environmental Impact of Alternative 3: Development on Southern Parcel Only

Aesthetics

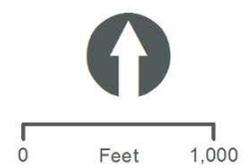
The southern parcel is generally characterized as disturbed, fallow agricultural land. There are no significant visual resources associated with this parcel. A portion of the northern parcel is developed with energy infrastructure and also contains some natural vegetation. Neither the northern or southern parcel, nor the project site as a whole, is associated with any scenic resources. Therefore, while, this alternative would not develop the northern parcel of the project site, the Alternative 3: Development on Southern Parcel Only would not avoid or lessen any aesthetics impact associated with the project, as the aesthetic impact associated with the project is less than significant. Therefore, the aesthetic impact under this alternative would be similar to the proposed project.

Figure 8-3. Alternative 3: Development on Southern Parcel Only



LEGEND

-  Alternative 3 - Development of Southern Parcel Only
-  Midway Substation (Proposed Point of Interconnection)
-  Development Area
-  No Development





Agriculture

This alternative would reduce the impact associated with the conversion of agricultural lands associated with the proposed project. Approximately 117 acres of Farmland of Local Importance would be converted with the implementation of this alternative. As with the proposed project, with the implementation of Mitigation Measure AG-1a, the project applicant would be required to minimize the permanent loss of valuable farmlands through either provision of an agricultural conservation easement, payment into the County agricultural fee program, or entering into a public benefit agreement. Mitigation Measure AG-1b will ensure that the project applicant adheres to the terms of the agricultural reclamation plan prepared for the project site, which would address the temporary conversion impact. Overall, implementation of this alternative would result in less of an impact related to agricultural resources.

Air Quality

Implementation of this alternative would result in less overall construction emissions as compared to the proposed project as a smaller project would be constructed, with less ground disturbance and a shorter overall construction duration. As with the proposed project, this alternative would be subject to implementation of mitigation and compliance with all ICAPCD applicable rules and regulations. The project's operational contribution to PM₁₀ has been determined to be below a level of significance and would not interfere with the SIP for PM₁₀. This alternative would also not interfere with the SIP.

As with the proposed project there would be a less than significant impact to air quality, as the total exhaust emissions generated within each of the construction phases would not exceed the ICAPCD thresholds for CO, ROG, NO_x, and PM₁₀ and no significant air quality impact would occur during construction. Similar to the proposed project, construction of this alternative must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, this alternative would also be subject to the ICAPCD's Air Quality Handbook, which lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Similar to the proposed project, this alternative's operational emissions would not exceed the Tier I thresholds and no significant air quality impact would occur during operation, although a Dust Suppression Management Plan for both construction and operations would be required. However, because less overall land disturbance and construction duration would occur under this alternative, this alternative would result in less of an impact to air quality as compared to the proposed project.

Biological Resources

Implementation of this alternative would avoid the impact to arrow weed thickets, bush seepweed scrub, common reed marshes, fourwing saltbush scrub, mesquite thickets, and quailbush scrub associated with the proposed project, as these vegetation communities are concentrated in the northern parcel. However, as with the proposed project, suitable burrowing owl nesting and foraging habitat is present in the project area and there is the potential that this species may be present at the start of project construction. Also, similar to the proposed project, indirect impacts to burrowing owls could also result if they are present in the lands surrounding the project site and project construction produces dust, noise, or other disturbances to this species. Mitigation would be required to avoid take and reduce potential impacts to this species.

As with the proposed project, implementation of this alternative could impact certain avian species and implementation of Mitigation Measures BIO-1 through BIO-4 would be required to reduce any

potentially significant direct and indirect impacts to these species. Overall, because the natural vegetation located on the northern parcel would not be impacted with implementation of this alternative, the impact associated with implementation of this alternative would be less than the proposed project.

Cultural Resources

No sensitive historical resources, unique archaeological resources, or tribal cultural resources were identified within the project site or within the .025-mile surrounding radius. Additionally, NAHC responded with confirmation that no known sacred sites or tribal cultural resources as defined by CEQA are documented within the project site or surrounding 0.25-mile radius. The pedestrian survey did not identify evidence of cultural resources from any time period. Most of the area surveyed appeared disturbed from leveling and earthmoving activities associated with agriculture. The potential of finding a buried archaeological site during construction is considered low. However, Mitigation Measures CR-1 through CR-5 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant. Because no cultural resources have been identified on the project site, implementation of this alternative would result in a similar impact to archaeological resources as compared to the proposed project.

The paleontological sensitivity of geologic formations within the project site is considered to be high. However the possibility of encountering paleontological resources during construction is low, as the sensitive formations are located at depths of approximately 30 feet. As with the proposed project, implementation of Mitigation Measure CR-3 would ensure that the potential impacts on paleontological resources do not rise to the level of significance pursuant to CEQA. Implementation of this alternative would result in a similar impact to cultural resources as the proposed project.

Geology and Soils

As with the proposed project, this alternative would be exposed to seismic groundshaking as the area is located in the seismically active Imperial Valley of southern California with numerous mapped faults of the San Andreas Fault System traversing the region. Similar to the proposed project, the primary seismic hazard at the project site is the potential for strong ground shaking during earthquakes along the Brawley, Elmore Ranch, and San Andreas (Coachella Section) Faults. Therefore, like the proposed project, this alternative is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. Further, this alternative would not reduce or avoid the potential for liquefaction to occur on the project site. Also, similar to the proposed project, a site specific geotechnical investigation would be required at the project site to determine the extent and effect of lateral spreading, and a licensed geotechnical or soils engineer would be required to investigate the site-specific soil conditions and recommendations for the design of the facilities to withstand lateral spreading. Soil materials would be similar to those identified for the proposed project, and may exhibit a moderate to high potential for shrink-swell potential as well as corrosive characteristics. As with the proposed project, additional geotechnical investigation would be required and implementation of Mitigation Measure GEO-1. Implementation of this alternative would result in a similar impact to geology and soils as the proposed project.

Greenhouse Gas Emissions

As with the proposed project, construction and operation of this alternative would result in a relatively small amount of GHG emissions. GHG emissions would be generated during construction and routine operational activities at the site. Implementation of this alternative would result in less overall



construction emissions; however, this alternative would not avoid or reduce a significant impact to GHG associated with the project because the project's GHG emissions are less than the SCAQMD's screening threshold of 3,000 MT of CO₂e per year. As with the proposed project, once operational, the proposed solar facility constructed under this alternative would offset GHG emissions generated by electricity produced through the burning of fossil fuels; however, the off-sets achieved by this alternative would be less than the proposed project.

This alternative would provide less renewable energy, and so would contribute less to meeting the states renewable energy goals. As with the proposed project, implementation of this alternative would not conflict with any applicable plan, policy, or regulation adopted for reducing the emissions of GHGs. Implementation of this alternative would result in a similar impact to GHG as the proposed project. This alternative would not avoid or lessen the impact to GHG as no significant impact associated with the proposed project has been identified.

Hazards and Hazardous Materials

Similar to the proposed project, construction of this alternative would involve the limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment. Also, as with the proposed project, because the Phase I ESA prepared for the proposed project did not identify and on-site RECs, ASTs, or USTs, this alternative would not avoid or reduce impacts associated with hazardous materials. Further, no impact associated with potential safety hazards to the public residing or working within proximity to a public airport would occur. Implementation of this alternative would result in a similar hazards and hazardous materials impact as the proposed project. This alternative would not avoid or lessen the impact to hazards and hazardous materials as no significant impact associated with the proposed project has been identified.

Hydrology/Water Quality

Implementation of this alternative would involve implementation of similar mitigation measures as the proposed project to ensure that the project's SWPPP and Grading Plan include measures necessary to minimize water quality impacts as a result of construction and post-construction runoff from the project. Also, this alternative would require the implementation of mitigation measures (e.g., Mitigation Measures HYD-1 and HYD-2 as identified for the project) in order to reduce impacts on surface water quality. Further this alternative would require implementation of Mitigation Measure HYD-3 to address post-construction water quality concerns. However, because the overall area of site disturbance and operational activities would be reduced as compared to the proposed project, implementation of this alternative would result in less of an impact to hydrology/water quality as compared to the proposed project.

Land Use and Planning

Implementation of this alternative would not avoid or reduce a land use and planning impact, as no significant impact associated with the project has been identified. As with the proposed project, this alternative would be consistent with the County Land Use Ordinance, Division 17, RE Overlay Zone, which authorizes the development and operation of RE projects with an approved CUP. Implementation of this alternative would be similar to the proposed project with respect to land use and planning.

Noise

As with the proposed project, construction of this alternative would require the use of earthmovers, bulldozers, loaders, cranes, forklifts, pile drivers, water trucks, and pickup trucks. However, this noise level would not exceed the County's 75 dBA L_{eq} construction noise threshold and, similar to the proposed project, a less than significant impact to noise would occur with implementation of this alternative.

Traffic noise associated with construction of the proposed project is not anticipated to be a significant source of noise. While this alternative could reduce the amount of construction traffic, the proposed project's construction traffic related noise would be less than 3 dBA and is not significant. Therefore, this alternative would not avoid or reduce a significant impact to noise, and the impact would be similar to the proposed project.

Public Services

As with the proposed project, implementation of this alternative would result in a minor increase in demand for fire protection services over existing levels. Additionally, the project would result in a minor increase in demand for law enforcement protection services over existing levels. While the project would result in only a minor increase in demand for public services, the reduced project site size would potentially reduce the overall demand for public services and would remain less than significant.

Transportation/Traffic

As with the proposed project, project trip generation for both the construction and operational scenarios will be very minimal under this alternative. Similar to the proposed project, the project trip generation would be below the County's threshold requirement for preparation of a formal traffic impact analysis as the trips would be so minimal that they would not affect roadway or intersection levels of service for any of the roadways that would be utilized for access to and from the project site. Further, implementation of this alternative would not require any public road widening to accommodate vehicular trips associated with the project (construction phase and operational phase), while maintaining adequate level of service. Implementation of this alternative would not avoid or reduce any significant transportation/traffic impact associated with the project, and the impact would be similar as compared to the project.

Utilities

Implementation of this alternative would result in an overall less demand for utilities, including water. However, this alternative would not avoid or reduce a significant impact associated with the project as a less than significant impact to utilities has been identified associated with the project. Implementation of this alternative would not achieve to the same degree the beneficial impacts of providing renewable energy. As compared to the proposed project, the overall demand for utilities would be less under this alternative.

Conclusion

The Alternative 3: Development on Southern Parcel Only would reduce impacts to agriculture, air quality, biological resources, hydrology/water quality, public services and utilities.

Comparison of Alternative 3: Development on Southern Parcel Only

The Alternative 3: Development on Southern Parcel Only would not meet the following objectives:

- To provide solar energy for the IID's eGreen low-income community solar program. This project will lower the electricity bills for the District's 15,000 qualified low-income customers from a local source of clean energy.
- To construct and operate a 30 MW solar PV energy facility using high-efficiency PV technology to provide a renewable and reliable source of electrical power to California utilities.

8.7 Environmentally Superior Alternative

Table 8-1 provides a qualitative comparison of the impacts for each alternative compared to the proposed projects. As noted in Table 8-1, the No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the projects. However, CEQA Guidelines Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." As shown in Table 8-1, Alternative 3 would reduce impacts to biological resources in addition to other resource areas that would be reduced by Alternative 2; therefore, Alternative 3 is considered the Environmentally Superior Alternative.

Table 8-1. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development on Northern Parcel Only	Alternative 3: Development on Southern Parcel Only
Aesthetics	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact
Agriculture	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact
Air Quality	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact
Biological Resources	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact
Cultural Resources	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact
Geology and Soils	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Similar Impact
GHG Emissions	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact



Table 8-1. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development on Northern Parcel Only	Alternative 3: Development on Southern Parcel Only
Hazards and Hazardous Materials	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact
Hydrology/ Water Quality	Less than Significant with Mitigation	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact (Avoid)	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant with Mitigation <i>Comparison to Proposed Project:</i> Less Impact
Land Use/Planning	No Impact	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Similar Impact
Noise	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact
Public Services	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Less Impact
Transportation/ Traffic	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Similar Impact
Utilities	Less than Significant	<i>CEQA Significance:</i> No Impact <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Less Impact	<i>CEQA Significance:</i> Less than Significant <i>Comparison to Proposed Project:</i> Less Impact

CEQA – California Environmental Quality Act; GHG – greenhouse gas

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10 EIR Preparers and Persons and Organizations Contacted

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