Draft Environmental Impact Report

Brawley Solar Energy Facility Project

SCH No. 2021070424

Imperial County, California

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Prepared for County of Imperial 801 Main Street El Centro, CA 92243

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Acronyms	
AAM	Annual Arithmetic Mean
AB	Assembly Bill
AC	alternating current
ADT	average daily traffic
AF	acre feet
AFY	acre feet per vear
ALUCP	Airport Land Use Compatibility Plan
APEHA	Alguist-Priolo Special Studies Earthquake Hazards Act
APLIC	Avian Powerline Interaction Committee
APM	Applicant Proposed Measure
APN	Assessor's Parcel Numbers
AQAP	air quality attainment plan
AQMP	air quality management plan
ATCM	airborne toxics control measure
BESS	battery storage system
BMP	Best Management Practices
BMS	Battery Management System
B.P.	before present
BUOW	burrowing owl
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CH4	methane
CO	carbon monoxide
	carbon dioxide
CUP	conditional use permit
CRHR	California Register of Historical Resources
	Colorado River Indian Tribes
	Clean Water Act
	direct ourrent
	dieblerediebervitrieblere ethene
DOC	Department of Transportation
	dissel perticulate matter
	onvironmentel impact report
EN	Environmental impact report Executive Order
EOP	Emergency Operations Plan
FPA	Environmental Protection Agency
FSA	Endangered Species Act
	facultative wetland

FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FGC	California Fish and Game Code
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse gas
HAP	Hazardous Air Pollutant
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HMMP	hazardous material management program
HRA	health risk assessment
HU	hydrologic unit
HUC	hydrologic unit code
HSC	California Health and Safety Code
HVAC	heating, ventilation, and air conditioning
ICAPCD	Imperial County Air Pollution Control District
ICFD	Imperial County Fire Department
ICPDS	Imperial County Planning and Development Services Department
IEEE	Institute of Electrical and Electronics Engineers
IID	Imperial Irrigation District
IPCC	International Panel on Climate Change
IRWMP	Imperial Integrated Regional Water Management Plan
IS	Initial Study
IVAG	Imperial Valley Association of Governments
IVT	Imperial Vallev Transit
IWSP	Interim Water Supply Policy
KOP	key observation points
kV	kilovolt
KVA	kilo volt amperes
LCFS	low carbon fuel standard
	level of service
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MEER	Mechanical and Electrical Equipment Room
MLD	most likely descendant
MMTCO ₂ e	million metric tons of CO ₂ equivalent
MPO	metropolitan planning organization
MW	medawatt
N2O	nitrous oxides
NAAOS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEHRP	National Earthquake Hazards Reduction Program
NEIP	National Flood Insurance Program
NEPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMES	National Marine Fisheries Service
NOI	Notice of Intent
NOx	nitrogen dioxide
NOP	notice of preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
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OES	Office of Emergency Services
OHP	California Office of Historic Preservation
OHWM	ordinary high water mark
O&M	operations and maintenance
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated biphenyls
PCF	passenger-car-equivalent
PCS	Power Conversion Station
PEC	Perfluorocarbons
PM10	narticulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
ΡΡΔ	nower nurchase agreement
	parts per million
	Public Posourcos Codo
	nhotovoltaio
	Popowal Energy
RE	Renewal Energy
REG	Renewable Energy/Geothermal
RUG	reactive organic gases
ROW	right-of-way
RPS	Renewables Portfolio Standard
RIP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SR	State Route
SSAB	Salton Sea Air Basin
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TMDL	total maximum daily load
U.S.	United States
USACE	United States Army Corps of Engineers
UL	Underwriters Laboratory
USC	United States Code
USFWS	United States Fish and Wildlife Service
VOC	volatile organic compounds
VMT	vehicle miles traveled
WEAP	Worker Environmental Awareness Program
WPLT	Western Pluvial Lakes Tradition
WSA	water supply assessment
	water supply assessment

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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 Brawley Solar Energy Facility Project (i.e., "project" or "proposed project") and to propose mitigation measures, where required, to reduce significant impacts.

Project Overview

The project is located on five parcels, with Assessor Parcel Numbers 037-140-006, -020, -021, -022, and -023. The proposed solar energy facility consists of three primary components: 1) solar energy generation equipment and associated facilities including a substation and access roads (herein referred to as "solar energy facility"); 2) battery energy storage system; and, 3) gen-tie line that would connect the proposed on-site substation to the point of interconnection at the Imperial Irrigation District's (IID) existing North Brawley Geothermal Power Plant substation.

The proposed project involves the construction and operation of a 40 megawatt (MW) photovoltaic (PV) solar energy facility on approximately 227 acres of privately-owned land in unincorporated Imperial County. The proposed project would be comprised of bifacial solar PV arrays panels, an on-site, 92/12 kilovolt (kV) substation, 40 MW battery storage system (BESS), generation tie-line (gentie), fiberoptic line and microwave tower, inverters, transformers, underground electrical cables, and access roads.

The onsite substation control room would house the Supervisory Control and Data Acquisition (SCADA) system, switchgear, breakers, and direct current (DC) batteries. Additionally, a 20kV emergency backup generator would be located adjacent to this control room for the HVAC system. The proposed substation site would be located at the southern edge of the project site, adjacent to the BESS. The proposed project would connect to a switchyard located at the southern edge of the project site and then routed through the BESS for energy storage. The power produced by the proposed project would then be transferred via a 1.8-mile-long double circuit 13.8 and 92 kV gen-tie line with 66-foot-high poles to interconnect to the IID' existing North Brawley Geothermal Power Plant substation, located at Hovley Road and Andre Road, southwest of the project site. The transmission line would span the New River. A 12-inch diameter conduit railroad undercrossing would connect the PV arrays from the western side of the railroad tracks to the inverters on the eastern side.

The project applicant intends to secure a Power Purchase Agreement with utility service provider(s) for the sale of power from the project.

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

The Initial Study (IS)/NOP completed by the County (Appendix A of this EIR) determined that environmental effects to Forestry Resources, Energy, Mineral Resources, Noise, Population/Housing, Public Services, Recreation, Utilities (Wastewater, Stormwater, and Solid Waste), and Wildfire would not be potentially significant. Therefore, these impacts are not addressed in this EIR; however, the rationale for eliminating these issues is discussed in Chapter 6.0, Effects Found Not Significant.

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
- Agriculture Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- GHG Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Public Services (Fire Protection and Police Protection)
- Transportation
- Tribal Cultural Resources
- Utilities/Service Systems (Water Supply)

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 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 this solar farm project, and other solar facility projects that are proposed in the County, is the corresponding land use compatibility and fiscal/economic impacts to the County. Through the environmental review process for this project, other areas of concern and issues to be resolved include potential impacts related to the conversion of farmland to non-agricultural uses, damage to crops, wildlife, water supply, fire hazards associated with the battery energy storage system, health effects from air pollution, noise and hazardous materials, and change of visual character.

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

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation			
Agricultural Resources						
Impact 3.3-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance	Potentially Significant	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 for the project:	Less than Significant			
		Mitigation for Non-Prime Farmland				
		Option 1: Provide Agricultural Conservation Easement(s). The Permittee shall procure Agricultural Conservation Easements on a "1 on 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; or				
		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 program 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: <i>Public Benefit Agreement.</i> 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 steward ship, preservation and enhancement of agricultural lands within Imperial County				

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		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.	
		Mitigation for Prime Farmland	
		Option 1: Provide Agricultural Conservation Easement(s). The Permittee shall procure Agricultural Conservation Easements on a "2 on 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; or	
		Option 2: Pay Agricultural In-Lieu Mitigation Fee. The Permittee shall pay an "Agricultural In-Lieu Mitigation Fee" in the amount of 30 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 program 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: <i>Public Benefit Agreement.</i> 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,	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		including addressing the mitigation of ag local economy; the Project and other rec Agricultural Benefit Fee funds; or empha in the agricultural sector of the local ecor off-setting jobs displaced by this Project.	icultural job loss on the ipients of the Project's isis on creation of jobs iomy for the purpose of
		Option 4: Avoid Prime Farmland. The their CUP Application/Site Plan to avoid	Permittee must revise Prime Farmland.
		AG-1b Site Reclamation Plan. The DOC has reclamation and decommissioning pla restored to land which can be farmed. In Measure AG-1a for Prime Farmland and the Applicant shall submit to Imperial O Plan prior to issuance of a grading pe Plan shall document the procedures by will be returned to its current agricultur shall also provide financial assurance/b equal to a cost estimate prepared by general contractor or civil engineer for Reclamation Plan in the even Permitte Reclamation Plan.	clarified the goal of a n: the land must be addition to Mitigation Non-Prime Farmland, county, a Reclamation rmit. The Reclamation which the project site al condition. Permittee bonding in the amount a California licensed implementation of the e fails to perform the
Impact 3.3-3: Conversion of Farmland, to non-agricultural	Potentially Significant	mplement Mitigation Measure AG-1b.	Less than Significant
use		AG-2 Pest Management Plan. Prior to the i permit or building permit (whichever Management Plan shall be developed b and approved by the County of Commissioner. The project applicant s Management Plan until reclamation is co provide the following:	ssuance of a grading occurs first), a Pest y the project applicant Imperial Agricultural shall maintain a Pest mplete. The plan shall
		 Monitoring, preventative, and man weed and pest control during co any portion of the project (e.g., tra 	agement strategies for nstruction activities at nsmission line);

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		 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; 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		 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; 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		• 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.	
		 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. 	
		 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. 	
Air Quality			
Impact 3.4-1: Conflict with or obstruct implementation of the applicable air quality plan	Less than Significant	Applicant Proposed Measure (APM) AQ-1 FugitiveDustControl.Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within RegulationVIIIVIIIFugitiveDustControlVersuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within RegulationVIIIFugitiveDustControlMeasures.WhereasWhereasWhereasTheseRegulationVIIImeasures are mandatory and are not considered	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		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. ICAPCD will verify implementation and compliance with these measures as part of the grading permit review/approval process.	
		ICAPCD Standard Measures for Fugitive Dust (PM ₁₀) 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 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		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. 	
		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. 	

Environmental Impact	Significance Before Mitigation		Proposed Mitigation Measures	Significance After Mitigation
			 Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use. 	
			 When commercially available, replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). 	
		APM AQ-2	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. The equipment list shall be submitted periodically to ICAPCD to perform a NOx analysis. 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.	
		APM AQ-3	Speed Limit. During construction and operation of the proposed project, the applicant shall limit the speed of all vehicles operating onsite on dirt roads to 15 miles per hour or less.	
		APM AQ-4	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	

Environmental Impact	Significance Before Mitigation		Proposed Mitigation Measures	Significance After Mitigation
			access/emergency entry/exit points as approved by Fire/Office of Emergency Services [OES] Department).	
		APM AQ-5	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.	
		APM AQ-6	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.	
Biological Resources	-			
Impact 3.5-1: Potential impacts on special-status species	Potentially Significant	BIO-1	General Impact Avoidance and Minimization Measures. The following measures will be applicable throughout the life of the project:	Less than Significant
			• To reduce the potential indirect impact on migratory birds, bats and raptors, the project will comply with the APLIC 2012 Guidelines for overhead utilities, as appropriate, to minimize avian collisions with transmission facilities (APLIC 2012)	
			 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. 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		The project proponent shall designate a Project Biologist who shall be responsible for overseeing compliance with protective measures for the biological resources during vegetation clearing and work activities within and adjacent to areas of native habitat. The Project Biologist will be familiar with the local habitats, plants, and wildlife. The Project Biologist will also maintain communications with the Contractor to ensure that issues relating to biological resources are appropriately and lawfully managed and monitor construction. The Project Biologist will monitor activities within construction areas during critical times, such as vegetation removal, the implementation of Best Management Practices (BMP), and installation of security fencing to protect native species. The Project Biologist will ensure that all wildlife and regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed.	
		 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. Alternatively, man-made ramps may be installed. 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 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		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 retention basins will be removed to avoid attracting wildlife to the active work areas. 	
		 To minimize the likelihood for vehicle strikes on wildlife, speed limits will not exceed 15 miles per hour when driving on access roads. All vehicles required for O&M must remain on designated access/maintenance roads. 	
		 Avoid night-time construction lighting or if nighttime construction cannot be avoided use shielded directional lighting pointed downward and towards the interior of the project site, thereby avoiding illumination of adjacent natural areas and the night sky. 	
		 All construction equipment used for the project will be equipped with properly operating and maintained mufflers. 	
		 Hazardous materials and equipment stored overnight, including small amounts of fuel to refuel hand-held 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		equipment, will be stored within secondary containment when within 50 feet of open water to the fullest extent practicable. Secondary containment will consist of a ring of sand bags around each piece of stored equipment/structure. A plastic tarp/visqueen lining with no seams shall be placed under the equipment and over the edges of the sandbags, or a plastic hazardous materials secondary containment unit shall be utilized by the Contractor.	
		 The Contractor will be required to conduct vehicle refueling in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species. Any fuel containers, repair materials, including creosote-treated wood, and/or stockpiled material that is left on site overnight, will be secured in secondary containment within the work area and staging/assembly area and covered with plastic at the end of each work day. 	
		 In the event that no activity is to occur in the work area for the weekend and/or a period of time greater than 48 hours, the Contractor will ensure that all portable fuel containers are removed from the project site. 	
		 All equipment will be maintained in accordance with manufacturer's recommendations and requirements. 	
		 Equipment and containers will be inspected daily for leaks. Should a leak occur, contaminated soils and surfaces will be cleaned up and disposed of following the guidelines identified in the Stormwater Pollution Prevention Plan or equivalent, Materials Safety Data Sheets, and any specifications required by other permits issued for the project. 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		 The Contractor will utilize off-site maintenance and repair shops as much as possible for maintenance and repair of equipment. 	
		 If maintenance of equipment must occur onsite, fuel/oil pans, absorbent pads, or appropriate containment will be used to capture spills/leaks within all areas. Where feasible, maintenance of equipment will occur in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species. 	
		 Appropriate BMPs will be used by the Contractor to control erosion and sedimentation and to capture debris and contaminants from bridge construction to prevent their deposition in waterways. No sediment or debris will be allowed to enter the creek or other drainages. All debris from construction of the bridge will be contained so that it does not fall into channel. Appropriate BMPs will be used by the Contractor during construction to limit the spread of resuspended sediment and to contain debris. 	
		 Erosion and sediment control devices used for the proposed project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard. 	
		 Firearms, open fires, and pets would be prohibited at all work locations and access roads. Smoking would be prohibited along the project alignment. 	
		 Cross-country vehicle and equipment use outside of approved designated work areas and access roads shall be prohibited to prevent unnecessary ground and vegetation disturbance. 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		 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 County, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery. 	
		 Stockpiling of material will be allowed only within established work areas. 	
		Actively manage the spread of noxious weeds	
		• The ground beneath all parked equipment and vehicles shall be inspected for wildlife before moving.	
		BIO-2 Worker Environmental Awareness Program. Prior to project construction, a Worker Environmental Awareness Program shall be developed and implemented by a qualified biologist, and shall be available in both English and Spanish. Handouts summarizing potential impacts to special-status biological resources and the potential penalties for impacts to these resources shall be provided to all construction personnel. At a minimum, the education program shall including the following:	
		• the purpose for resource protection;	l
		 a description of special status species including representative photographs and general ecology; 	
		 occurrences of USACE, RWQCB, and CDFW regulated features in the project survey area; 	
		 regulatory framework for biological resource protection and consequences if violated; 	
		 sensitivity of the species to human activities; 	ļ

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		 avoidance and minimization measures designed to reduce the impacts to special-status biological resources; 	
		 environmentally responsible construction practices; 	
		reporting requirements;	
		 the protocol to resolve conflicts that may arise at any time during the construction process; and 	
		 workers sign acknowledgement form indicating that the Environmental Awareness Training and Education Program that has been completed and would be kept on record. 	
		BIO-3 Burrowing Owl Avoidance and Minimization. Take avoidance (pre construction) surveys for burrowing owl shall be completed prior to project construction. Surveys shall be conducted as detailed within Appendix D of the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012). If burrowing owl is not detected, construction may proceed.	
		 If burrowing owl is identified during the non breeding season (September 1 through January 31), then a 50-meter buffer will be established by the biological monitor. Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until a CDFW approved exclusion plan has been implemented. The buffer distance may be reduced if noise attenuation buffers such as hay bales are placed between the occupied burrow and construction activities. 	
		 If burrowing owl is identified during the breeding season (February 1 through August 31), then an appropriate buffer will be established by the biological monitor in accordance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012). Construction within the buffer will be avoided until a 	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		qualified biologist determines that burrowing owl is no longer present or until young have fledged. The buffer distance may be reduced in consultation with CDFW if noise attenuation buffers such as hay bales are placed between the occupied burrow and construction activities.	
		BIO-4 Pre-Construction Nesting Bird Survey. If construction or other project activities are scheduled to occur during the bird breeding season (typically February 1 through August 31 for raptors and March 15 through August 31 for the majority of migratory bird species), a pre-construction nesting-bird survey shall be conducted by a qualified avian biologist to ensure that active bird nests, including those for the loggerhead shrike and mountain plover will not be disturbed or destroyed.	
		The survey shall be completed no more than three days prior to initial ground disturbance. The nesting-bird survey shall include the project site and adjacent areas where project activities have the potential to affect active nests, either directly or indirectly due to construction activity or noise. If an active nest is identified, the biologist shall establish an appropriately sized disturbance-limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance-limit buffer zones until the nest is deemed inactive by the qualified biologist. If construction activities cease for a period of greater than three days during the bird breeding season, a pre-construction nesting bird survey shall be conducted prior to the commencement of activities.	
		Final construction buffers or setback distances shall be determined by the qualified biologist in coordination with USFWS and CDFW on a case-by-case basis, depending on the species, season in which disturbance shall occur, the type of disturbance, and other factors that could influence susceptibility to disturbance (e.g., topography, vegetation, existing disturbance levels, etc.).	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
Cultural Resources				
Impact 3.6-1: Impact on historical resources	Potentially Significant C	CUL-1	Cultural Monitoring. Prior to construction, the project Applicant shall retain the services of a Qualified Professional Archaeologist meeting the Secretary of the Interior's Standards for a Qualified Archaeologist and require that all initial ground- disturbing work be monitored by someone trained in artifact and feature identification in monitoring contexts. A Supervising Archaeological Specialist and a Paleontological Monitor, to be retained by the project applicant, will be required to be present at the project construction phase kickoff meeting.	Less than Significant
		CUL-2	Worker Environmental Awareness Program. Prior to any ground disturbance, the supervising Archaeological Resources Specialist and Archaeological Resources Monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance and be performed periodically for new personnel coming on to the project as needed.	
		CUL-3	Discovery of Previously Unidentified Archaeological Materials. In the event of the discovery of previously unidentified archaeological materials, the construction contractor shall immediately cease all work activities within approximately 100 feet of the discovery. After cessation of excavation, the construction 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	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation	
		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 project 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 project Applicant shall implement an archaeological data recovery program.		
		CUL-4 Schedule of Ground-Disturbing Activities. The construction contractor shall provide the Supervising Archaeological Resources Specialist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.		
		As detailed in the schedule provided, an Archaeological Monitor shall be present on site at the commencement of ground- disturbing activities related to the project. The monitor, in consultation with the Supervising Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop- work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the project.		
Environmental Impact	Significance Before Mitigation		Proposed Mitigation Measures	Significance After Mitigation
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			The Supervising Archaeologist, Archaeological Monitor, and the lead contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance in order to provide appropriate oversight.	
		CUL-5	Discovery of Archaeological Resources. If archaeological resources are discovered, construction shall be halted within 50 feet of the find and shall not resume until a Qualified Archaeologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.	
		CUL-6	Archaeological Resources Monitoring Report. At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the South Coastal Information Center (SCIC), as required.	
Impact 3.6-2: Impact on archaeological resources	Potentially Significant	Implementl	Mitigation Measures CUL-1 through CUL-6.	Less than Significant
Impact 3.6-3: Impact on Human Remains	Potentially Significant	CUL-7	Discovery of Human Remains. In the unlikely event that human remains are discovered during ground-disturbing activities, then the proposed project would be subject to California Health and Safety Code 7050.5, CEQA Section 15064.5, and California Public Resources Code Section 5097.98 (NPS 1983). If human remains are found during ground-disturbing activities, State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Imperial County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the Imperial County Coroner shall be notified immediately. If the human remains are determined to be	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		prehistoric, the County Coroner shall notify the NAHC, which shall notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	
Geology and Soils			
Impact 3.7-2: Possible risks to people and structures caused by strong seismic ground shaking	Potentially Significant	 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 	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		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. The final geotechnical and/or civil engineering report shall be submitted to Imperial County Public Works Department, Engineering Division for review and approval prior to issuance of building permits.	
Impact 3.7-3: Possible risks to people and structures caused by seismic-related ground failure, including liquefaction	Potentially Significant	Implement Mitigation Measure GEO-1.	Less than Significant
Impact 3.7-5: Substantial soil erosion or the loss of topsoil	Potentially Significant	Implement Mitigation Measure GEO-1 and Mitigation Measure HYD-1.	Less than Significant
Impact 3.7-6: Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project	Potentially Significant	Implement Mitigation Measure GEO-1.	Less than Significant
Impact 3.7-7: Be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property	Potentially Significant	Implement Mitigation Measure GEO-1.	Less than Significant
Impact 3.7-9: Impact on paleontological resources	Potentially Significant	GEO-2 Paleontological Mitigation and Monitoring Plan. Once a geotechnical report has been completed for the project, a qualified paleontologist shall review the boring logs and determine how deep paleontologically sensitive formations may	Less than Significant

Environmental Impact	Significance Before Mitigation		Proposed Mitigation Measures	Significance After Mitigation
			be across the project site. The paleontologist shall use this information along with the results of the paleontological survey to determine if paleontological monitoring is warranted. If monitoring is warranted, a qualified paleontologist shall prepare a mitigation and monitoring plan to be implemented during project construction.	
		GEO-3	Paleontological Monitoring. Prior to construction, the project applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. A Supervising Paleontological Specialist and a Paleontological Monitor, to be retained by the project applicant, will be required to be present at the project construction phase kickoff meeting.	
		GEO-4	Worker Environmental Awareness Program. Prior to any ground disturbance, the Supervising Paleontological Resources Specialist and Paleontological Resources Monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance and be performed periodically for new personnel coming on to the project as needed.	
		GEO-5	Schedule of Ground-Disturbing Activities. During construction, the construction contractor shall provide the Supervising Paleontological Resources Specialist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided of commencement of any	

Environmental Impact	Significance Before Mitigation		Proposed Mitigation Measures	Significance After Mitigation
			initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.	
			As detailed in the schedule provided, a Paleontological Monitor shall be present on site at the commencement of ground- disturbing activities related to the project. The monitor, in consultation with the Supervising Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop- work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the project.	
			the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance in order to provide appropriate oversight.	
		GEO-6	Discovery of Paleontological Resources. During construction, if paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until a Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.	
		GEO-7	Paleontological Resources Monitoring Report. At the completion of all ground-disturbing activities, the Supervising Paleontological Specialist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds.	
Hydrology/Water Quality				

Imperial County

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Impact 3.10-1: Violation of water quality standards		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 appropriate agency 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 shall incorporate control measures in the following categories:	Less than Significant
		 Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching) 	
		 Sediment control practices (e.g., temporary sediment basins, fiber rolls) 	
		 Temporary and post-construction on- and off-site runoff controls 	
		 Special considerations and BMPs for water crossings 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, potential of hydrogen (pH), and turbidity 	
		 Waste management, handling, and disposal control practices 	
		Corrective action and spill contingency measures	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		 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 and/or Qualified SWPPP Developer 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 Incorporate Post-Construction Runoff BMPs into Project Drainage Plan. The project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer 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.	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Impact 3.10-3: Alter the existing drainage pattern of the site or area resulting in siltation or on- or off-site erosion	Potentially Significant	Implement Mitigation Measure HYD-1.	Less than Significant
Impact 3.10-4: Alter the existing drainage pattern of the site or area resulting in flooding on- or off-site	Potentially Significant	Implement Mitigation Measure HYD-2.	Less than Significant
Impact 3.10-5: Alter the existing drainage pattern of the site or area such that runoff increases would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	Potentially Significant	Implement Mitigation Measure HYD-1.	Less than Significant
Impact 3.10-8: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater man agement plan	Potentially Significant	Implement Mitigation Measures HYD-1 and HYD-2.	Less than Significant

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

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 potentially significant environmental impacts will be mitigated to a level less than significant.

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 and is located south of the project site on privately-owned agricultural lands, similar to the project site. The site, located on Assessor's Parcel Numbers (APN) 037-160-017, 037-160-018, and 037-160-019 totals approximately 282 acres of land.

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

• The alternative location site, as compared to the proposed project site, is located immediately north of State Route 78, a major U.S. State Highway traversed by large numbers of transient public viewers. When compared to the proposed project, the alternative site would result in potentially significant impacts associated with aesthetics and visual quality. While the proposed project identified no significant impacts for aesthetics and visual quality, implementation of the solar project at the alternative location site has the potential to permanently alter the existing visual character and visual quality of the alternative site, which is characterized by agricultural lands and minor agricultural development under existing viewer locations from SR 78, looking north. As such, aesthetic impacts at the alternative location site, adjacent to SR 78, would be greater than those at the proposed project site, which is located adjacent to small, less-traveled, agricultural roads (N Best Road and Baughman Road), approximately 0.7 mile east of the major thoroughfare, SR 111.

Similarly, a glare hazard analysis prepared for the project (Appendix B of this EIR) concluded that sensitive viewers near the proposed project, including residences, a nearby golf course, major roadways, and approach slopes associated with the Brawley Municipal Airport, would

not experience glare effects from the project. Comparatively, due to the alternative site location's close proximity immediately north of SR 78, potential glare impacts resulting from the solar array would be potentially significant to viewers traveling on SR 78.

- The alternative location site, as compared to the proposed project site, is bisected by the Shellenberger Drain. With the implementation of mitigation, impacts on surface water quality as attributable to the proposed project, which has been designed to avoid bisecting any waterways, would be reduced to a less than significant level. However, construction activities at the alternative site location have the potential to impact hydrology and water quality (due to the presence of the Shellenberger Drain) when compared to the proposed project site.
- 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 (to hydrology and water
 quality) that are currently not identified for the project at the currently proposed location.

As such, the County considers this alternative location infeasible and rejects further analysis of this alternative because of 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 within Renewable Energy Overlay Zone – Agricultural Lands; Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands; and Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative. A detailed discussion of the alternatives considered is included in Chapter 7. 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 a majority 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 Senate Bill 32).

Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands

The purpose of this alternative is to develop the proposed project within the existing boundary of County's Renewal Energy (RE) Overlay Zone. 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 areas.

The Alternative 2 project site is located entirely within the RE Overlay Zone. Alternative 2 would involve the construction and operation of a 40 MW solar energy facility and associated infrastructure on approximately 231-acre project site (APN 026-030-008) located approximately 11 miles northeast of Brawley in unincorporated Imperial County. The Alternative 2 project site is designated as Agriculture under the County's General Plan and zoned S-2-RE and A-3-RE (Open Space/Preservation and Heavy Agriculture, both within the RE Overlay Zone).

Similar to the proposed project, Alternative 2 would require approval of a CUP to allow for the construction and operation of a solar project. However, compared to the proposed project, the Alternative 2 project site is located within the RE Overlay Zone and, as such, would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. Additionally, while the proposed project (A-2-G Zone) would not require a Variance, the S-2-RE Zone associated with the Alternative 2 site allows a maximum height limit of 40 feet for non-residential structures and 100 feet for communication towers. As such, a Variance would be required under this alternative because the proposed height of the transmission towers (66 feet) and microwave tower (maximum of 100 feet) would exceed 40 feet. This alternative's gen-tie line could potentially interconnect to IID's existing Midway Substation located approximately 4.75 miles northwest of the solar facility. Consultation and coordination with IID would be required to determine if the Midway Substation has existing capacity or would require upgrades for this alternative's interconnection.

Alternative 2 would meet most of the basic objectives of the proposed project and should remain under consideration. However, this alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: cultural resources, hydrology and water quality, and tribal cultural resources. Further, the project applicant does not own, or otherwise control this property.

Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands

The purpose of this alternative is to develop the proposed project within the existing boundary of the County's RE Overlay Zone. The Alternative 3 project site is located entirely within the RE Overlay Zone. Alternative 3 would involve the construction and operation of a solar energy facility and associated infrastructure on five parcels totaling approximately 288 acres (APN 021-190-003; 021-380-004; 021-380-005; 021-380-012; and 021-380-013) located approximately 0.5 mile south of Slab City. This alternative is 61 acres larger than the proposed project site. Therefore, more solar panels could be installed on this site compared to the proposed project. The Alternative 3 project site is located on undeveloped desert land. Existing transmission lines traverse the southwest corner of the project site.

The Alternative 3 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. The Alternative 3 project site is designated as Recreation under the County's General Plan and zoned General Agricultural with a renewable energy overlay (A-2-RE).

Similar to the proposed project, Alternative 3 will require approval of a CUP to allow for the construction and operation of a solar project. Compared to the proposed project, the Alternative 3 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. Similar to the proposed project site, the A-2-RE zone allows a maximum height limit of 120 feet for non-residential structures. No Variance would be required under this alternative because the proposed height of the transmission towers (66 feet) would not exceed 120 feet. This alternative's gen-tie line could potentially interconnect to IID's existing Midway Substation located approximately 4 miles southeast of the solar facility. Consultation and coordination with IID would be required to determine if the Midway Substation has existing capacity or would require upgrades for this alternative's interconnection.

Alternative 3 would meet most of the basic objectives of the proposed project and should remain under consideration. However, this alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: aesthetics, air quality, biological resources, cultural resources, hydrology/water quality, tribal cultural resources, and utilities and service systems. Further, the project applicant does not own, or otherwise control this property.

Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative

This alternative would involve the development of a number of geographically distributed small to medium solar PV systems (100 kilowatts to 1 MW) within existing developed areas, typically on the rooftops of commercial and industrial facilities throughout Imperial County. Under this alternative, no new land would be developed or altered. Depending on the type of solar modules installed and the type of tracking equipment used, a similar or greater amount of acreage (i.e., greater than 200 acres of total rooftop area) may be required to attain the proposed project's capacity of 40 MW of solar PV generating capacity. This alternative would involve placement of PV structures, transmission lines, and development of additional supporting facilities, such as switching stations and substations at various locations throughout the County. This alternative assumes that rooftop development would occur primarily on commercial and industrial structures due to the greater availability of large, relatively flat roof areas necessary for efficient solar installations.

This alternative would require hundreds of installation locations across Imperial County, many of which would require approval of discretionary actions, such as design review, CUPs, or zone variances depending on local jurisdictional requirements. Similar to the proposed project, this alternative would be designed to operate year-round using PV panels to convert solar energy directly to electrical power. This alternative would involve the construction of transmission lines and development of additional supporting facilities, such as switching stations and substations at various locations throughout the County to distribute the energy.

Rooftop PV systems exist in small areas throughout California. Larger distributed solar PV installations are becoming more common. An example of a distributed PV system is 1 MW of distributed solar energy installed by Southern California Edison on a 458,000 square-foot industrial building in Chino, California.¹

Similar to utility-scale PV systems, the acreage of rooftops or other infrastructure required per MW of electricity produced is wide ranging, which is largely due to site-specific conditions (e.g., solar insolation levels, intervening landscape or topography, PV panel technology, etc.). Based on SCE's use of 458,000-square feet for 1 MW of energy, approximately 18,320,000 square feet (approximately 420 acres) would be required to produce 40 MW.

As shown on Table ES-2, implementation of Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative would avoid impacts on agricultural resources compared to the proposed project. It would result in reduced impacts for the following environmental issue areas as

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http://newsroom.edison.com/releases/califomia-regulators-approve-southern-california-edison-proposal-to-create-n ations-largest-solar-panel-installation-program

compared to the proposed project: hydrology/water quality. Overall, this alternative would result in greater impacts related to aesthetics, air quality, biological resources, cultural resources, tribal cultural resources, and utilities and service systems.

Environmentally Superior Alternative

Table ES-2 provides a qualitative comparison of the impacts for each alternative compared to the proposed project. 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 on Table ES-2, Alternative 2 would be the environmental superior alternative because it would reduce impacts for the following environmental issue areas as compared to the proposed project: aesthetics and agricultural resources. Alternative 2 would meet most of the basic objectives of the proposed project. However, the project applicant does not own, or otherwise control this property.

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative
Aesthetics	Less than Significant	CEQA Significance: No Impact Comparison to Proposed Project: Less Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Less Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact
Agricultural Resources	Less than Significant with Mitigation	CEQA Significance: No Impact Comparison to Proposed Project: Avoid	CEQA Significance: Less than Significant with Mitigation Comparison to Proposed Project: Less Impact	CEQA Significance: No Impact Comparison to Proposed Project: Avoid	CEQA Significance: No Impact Comparison to Proposed Project: Avoid
Air Quality	Less than Significant	CEQA Significance: No Impact Comparison to Proposed Project: Less Impact	CEQA Significance: Less than Significant Comparison to Proposed Project: Similar	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact
Biological Resources	Less than Significant with Mitigation	CEQA Significance: No Impact Comparison to Proposed Project: Less Impact (Avoid)	CEQA Significance: Less than Significant with Mitigation Comparison to Proposed Project: Similar Impact	CEQA Significance: Less than Significant with Mitigation Comparison to Proposed Project: Greater Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative
Cultural Resources	Less than	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
	Mitigation	No Impact	Potentially Significant	Potentially Significant	Potentially Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact (Avoid)	Greater Impact	Greater Impact	Greater Impact
Geology and Soils	Less than	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
Sig Mit	Significant with Mitigation	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact (Avoid)	Similar Impact	Similar Impact	Similar Impact
GHG Emissions Less than	Less than	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
	Significant	No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Similar Impact	Similar Impact
Hazards and	Less than	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
Hazardous Materials	Significant	No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Similar Impact	Similar Impact

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative
Hydrology/Water	Less than	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
Quality	Mitigation	No Impact	Less than Significant with Mitigation	Potentially Significant	Less than Significant with Mitigation
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact (Avoid)	Greater Impact	Greater Impact	Less Impact
Land Use/Planning	Less than	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
	Significant	No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Similar Impact	Similar Impact	Similar Impact	Similar Impact
Public Services	Less than	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
Significant	No Impact	Less than Significant	Less than Significant	Less than Significant	
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Similar Impact	Similar Impact
Transportation	Less than	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
	Significant	No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Similar Impact	Similar Impact

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative
Tribal Cultural Resources	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Potentially Significant	Potentially Significant	Potentially Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Similar Impact	Greater Impact	Greater Impact	Greater Impact
Utilities/Service Systems	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Greater Impact	Greater Impact

Notes:

CEQA=California Environmental Quality Act; GHG=greenhouse gas

1 Introduction

This environmental impact report (EIR) has been prepared to meet the requirements of the California Environmental Quality Act (CEQA) for purposes of evaluating the potential environmental impacts, mitigation measures, and alternatives associated with the proposed Brawley Solar Energy Facility Project. This EIR describes the existing environment that would be affected by, and the environmental impacts which could potentially result from the construction and operation of the proposed project as described in detail in Chapter 2.0 of this EIR.

1.1 Overview of the Proposed Project

The project site is located on approximately 227 acres of privately-owned land in the unincorporated area of Imperial County, California. The site is approximately one mile north from the City of Brawley's jurisdictional limit. The project site is south of Baughman Road, west of North (N) Best Avenue, and north of Andre Road. The City of Brawley Wastewater Treatment Plant is located along the western edge of the project site.

The proposed project involves the construction and operation of a 40 megawatt (MW) photovoltaic (PV) solar facility with an integrated 40 MW battery storage system (BESS) (not to exceed 80 MW) on approximately 227 acres of privately-owned land. The proposed project would be comprised of bifacial solar PV arrays panels, an on-site substation, BESS system, fiberoptic line or microwave tower, inverters, transformers, underground electrical cables and access roads. The proposed project would connect to the existing North Brawley Geothermal Power Plant substation located southwest of the project site via an approximately 1.8-mile long aboveground 92 kilovolt generation tie line.

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.

County of Imperial

Implementation of the project would involve the following approvals by the County of Imperial:

- General Plan Amendment. An amendment to the County's General Plan, Renewable Energy and Transmission Element is required to implement the proposed project. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. The northern portion of the project site (APNs 037-140-020 and 037-140-021) is located within the Geothermal Overlay Zone. However, the entire project site (APNs 037-140-020, 037-140-021, 037-140-022, 037-140-023, and 037-140-006) is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify all five project parcels into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.
- 2. **Zone Change.** The project site is currently zoned General Agricultural with a Geothermal Overlay (A-2-G). The applicant is requesting a Zone Change to include/classify all five project parcels into the Renewable Energy/Geothermal (REG) Overlay Zone (A-2-REG).

- 3. **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 energy facility with an integrated battery storage system. The project site is located on five privately-owned legal parcels zoned General Agricultural with a Geothermal Overlay (A-2-G). With approval of the zone change, the project site would be zoned General Agricultural with a REG Overlay Zone (A-2-REG). Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County: solar energy electrical generator, battery storage facility, electrical substations, communication towers, and facilities for the transmission of electrical energy.
- 4. **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 approval or denial of the project.

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

- Grading and clearing permits
- Building permits
- Reclamation plan
- Encroachment permits
- Transportation permit(s)

Other Agencies Reviews and/or Consultations

The following agencies may be involved in reviewing and/or consultations with the project proponent as it relates to construction of the project:

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).

UNITED STATES ARMY CORPS OF ENGINEERS

Section 404 Permit (Clean Water Act [CWA]). 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 United States Army Corps of Engineers (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.

State

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (TRUSTEE AGENCY)

• The California Department of Fish and Wildlife (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).
- Jurisdictional Waters. Agencies and/or project proponents must consultant with the California Regional Water Quality Control Board (RWQCB) regarding, when applicable, regarding compliance with the 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 COUNTY AIR POLLUTION CONTROL DISTRICT

 Review as part of the EIR process regarding consistency with the Imperial County Air Pollution Control District (ICAPCD) 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

1.2.1 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).

1.2.2 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 "... all 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 (AB) 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 X12 was signed by Governor Brown, in April 2011. This new RPS preempts the CARB'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 retails 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. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

1.2.3 Senate Bill 32

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

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

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

1.2.5 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 1970, and 1977.

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.

1.2.6 Imperial County Air Pollution Control District

The ICAPCD 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.

1.2.7 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 (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 USACE under guidelines developed by EPA pursuant to Section 404 of the CWA.

1.2.8 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.

1.2.9 Federal Endangered Species Act

The 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.

1.2.10 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.

1.2.11 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.

1.2.12 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 has been distributed to various federal, state, regional, local agencies and interested parties for a 45-day public review period, from December 27, 2021 through February 10, 2022, in accordance with Section 15087 of the CEQA Guidelines. 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. Documents may be reviewed during regular business hours.

David Black, Planner IV

County of Imperial, Planning and Development Services Department

801 Main Street El Centro, California 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

Notice of Preparation

The County of Imperial issued a notice of preparation (NOP) for the preparation of an EIR for the Brawley Solar Energy Facility Project on July 26, 2021. 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 July 25, 2021. 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:

- Native American Heritage Commission
- California Department of Conservation
- Imperial Irrigation District
- Imperial County Air Pollution Control District
- Carolyn Allen and on behalf of Donna Tisdale, Members of BackCountry Against Dumps and Donbee Farms
- Carolyn Allen and on behalf of Donna Tisdale, Larry Cox, and Michael Cox, Donbee Farms and Backcountry Against Dumps
- Donna Tisdale, Michael Cox, Carolyn Allen, Lawrence Cox; C/O Donbee Farms

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

Scoping Meeting and Environmental Evaluation Committee

During the NOP public review period, the Brawley Solar Energy Facility Project was discussed as an informational item at the County's Environmental Evaluation Committee meeting on August 12, 2021.

Additionally, a virtual scoping meeting for the general public as well public agencies was held on August 12, 2021 at 6:00 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 July 26, 2021. A virtual meeting was held by the Imperial County Planning & Development Services Department. 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. One comment letter was 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
- Agriculture Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- GHG Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Public Services (Fire Protection and Police Protection)
- Transportation
- Tribal Cultural Resources
- Utilities/Service Systems (Water Supply)

Eliminated from Further Review in Notice of Preparation

The Initial Study (IS)/NOP completed by the County (Appendix A of this EIR) determined that environmental effects to Forestry Resources, Energy, Mineral Resources, Noise, Population/Housing, Public Services, Recreation, Utilities (Wastewater, Stormwater, and Solid Waste), and Wildfire would not be potentially significant. Therefore, these impacts are not addressed in this EIR; however, the rationale for eliminating these issues is discussed in Chapter 6.0, Effects Found Not Significant.

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 this solar farm project, and other solar facility projects that are proposed in the County, is the corresponding land use compatibility and fiscal/economic impacts to the County. Through the environmental review process for this project, other areas of concern and issues to be resolved include potential impacts related to the conversion of farmland to non-agricultural uses, damage to crops, wildlife, water supply, fire hazards associated with the battery energy storage system, health effects from air pollution, noise and hazardous materials, and change of visual character.

1.4.5 Document Organization

The structure of the Draft EIR is identified below. The Draft EIR is organized into 10 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 Project Description** provides a description of the Brawley Solar Energy Facility 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 3 Environmental Analysis provides a description of the existing environmental setting and conditions, an analysis of the environmental impacts of the project for the following environmental issues: aesthetics; air quality; biological resources; cultural resources (includes tribal cultural resources); geology and soils; GHG emissions; hydrology/water quality; land use and planning; transportation/traffic; and utilities/service systems. This chapter also identifies mitigation measures to address potential impacts to the environmental issues identified above.
- **Chapter 4 Analysis of Long-Term Effects** provides an analysis of growth inducing impacts, significant irreversible environmental changes, and unavoidable adverse impacts.
- **Chapter 5 Cumulative Impacts** discusses the impact of the proposed project in conjunction with other planned and future development in the surrounding areas.
- **Chapter 6 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 7 Alternatives analyzes the alternatives to the proposed project.
- Chapter 8 References lists the data references utilized in preparation of the EIR.
- Chapter 9 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.

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2 Project Description

Chapter 2 provides a description of the Brawley Solar Energy Facility 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.

The proposed project consists of three primary components: 1) solar energy generation equipment and associated facilities including a substation and access roads (herein referred to as "solar energy facility"); 2) battery energy storage system; and, 3) gen-tie line that would connect the proposed on-site substation to the point of interconnection at the existing North Brawley Geothermal Power Plant substation. The solar energy facility, battery energy storage system and gen-tie are collectively referred to as the "proposed project" or "project."

2.1 Project Location

The project site is located on approximately 227 acres of privately-owned land in the unincorporated area of Imperial County, California (Figure 2-1). The site is approximately one mile north from the City of Brawley's jurisdictional limit. The project site is south of Baughman Road, west of North (N) Best Avenue, and north of Andre Road. The Union Pacific Railway transects the project site. As shown on Figure 2-2, the project site is proposed on five parcels. Table 2-1 identifies the individual assessor parcel numbers (APN) with their respective acreage and zoning.

As shown on Figure 2-2, the gen-tie line would originate from the southern edge of the project site and then head west along Andre Road to interconnect to the IID existing North Brawley Geothermal Power Plant substation, located at Hovley Road and Andre Road. The gen-tie route would be approximately 1.8 miles.

Currently, the project site contains alfalfa fields within different levels of harvest. North and east of the project site is undeveloped agricultural land. South of the project site is a mixture of undeveloped agricultural land and dirt lots used for staging activities. The Del Rio Country Club golf course is located to the south of the site. The City of Brawley Wastewater Treatment Plant is located along the western edge of the project site.

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APN	Acreage	Zoning
037-140-020	61.73	A-2-G
037-140-021	68.71	A-2-G
037-140-022	38.15	A-2-G
037-140-023	24.71	A-2-G
037-140-006	33.68	A-2-G
Total Gross Acres	227	

Table 2.1 Dra	inot Annon P	araal Numbara	Aaraaaaa	and Zoning
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APN = assessor parcel number; A-2-G = General Agricultural with Geothermal Overlay













2.1.1 Renewable Energy Overlay Zone

In 2016, the County adopted the Imperial County Renewable Energy and Transmission Element, which includes an 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. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone.

As shown on Figure 2-1, the northern portion of the project site (APNs 037-140-020 and 037-140-021) is located within the Geothermal Overlay Zone. However, the entire project site (APNs 037-140-020, 037-140-021, 037-140-022, 037-140-023, and 037-140-006) is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify all five project parcels into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.

2.2 Project Objectives

- Construct, operate and maintain an efficient economic, reliable, safe and environmentally sound solar-powered electricity generating facility.
- Help meet California's RPS requirements, which require that by 2030, California's electric utilities are to obtain 50 percent of the electricity they supply from renewable sources.
- Generate renewable solar-generated electricity from proven technology, at a competitive cost, with low environmental impact, and deliver it to markets as soon as possible.
- Develop, construct, own and operate the Brawley Solar Energy Facility, and ultimately sell its electricity and all renewable and environmental attributes to an electric utility purchaser under a long-term contract to meet California's RPS goals.
- Utilize a location that is in close proximity to an existing switching station and power lines.
- Minimize and mitigate any potential impact to sensitive environmental resources within the project area.

2.3 Project Characteristics

The proposed project involves the construction and operation of a 40 MW PV solar facility with an integrated 40 MW BESS (not to exceed 80 MW) on approximately 227 acres of privately-owned land. The proposed project would be comprised of bifacial solar PV arrays panels, an on-site substation, BESS, generation tie-line (gen-tie), fiberoptic line and microwave tower, inverters, transformers, underground electrical cables, access roads. These project components are described in detail below and depicted in Figure 2-3.

Figure 2-3. Site Plan



2 Project Description Draft EIR | Brawley Solar Energy Facility Project

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2.3.1 Photovoltaic Panels/Solar Arrays

Solar cells, also called PV cells, convert sunlight directly into electricity. PV cells combine to create solar modules, or panels, and many solar panels combined together to create one system is called a solar (or PV) array. The entire array would utilize 13 inverters and transformers collectively called a Power Conversion Station (PCS) for each block of solar panels. The inverters within the PCS are rated at 3496 kV amperes (KVA). The power produced from the solar panels would be low voltage DC, which is routed to the inverters to convert the DC power to alternating current (AC).

The proposed project's PV arrays would be comprised of solar bifacial high-power dual cell PV panels. Panels would be organized into electrical groups referred to as "blocks," where the proposed project would require 13 blocks. Each panel is 3.2 feet by 6.5 feet and is on single-axis horizontal trackers in blocks that each hold 3,809 PV panels in 28 strings. The panels would be oriented from east to west for maximum exposure and the foundation would be designed based on soil conditions. The PV panels are made of a poly-crystalline silicon semiconductor material encapsulated in glass.

Installation of the PV arrays would include installation of mounting posts, module rail assemblies, PV modules, inverters, transformers and buried electrical conductors. Concrete would be required for the footings, foundations and pads for the transformers and substation work. Tracker foundations would be comprised of either driven or vibrated steel posts/pipes, and/or concrete in some places (depending on soil and underground conditions).

2.3.2 Battery Energy Storage System

The proposed project's BESS component would be placed on a 54,000 square-foot concrete pad at the southern edge of the project site. The BESS would consist of 12 banks of batteries totaling up to 432 enclosures. Each bank of batteries would be supported by a DC Combiner, control panel, and inverter/transformer skid. Each of the enclosures would utilize self-contained liquid cooling systems and include built-in fire suppression systems. All batteries would be lithium-ion based capable of storing 40 MW (not to exceed 80 MW).

A lithium-ion battery is a type of rechargeable battery that moves from the negative electrode through an electrolyte to the positive electrode during discharge, and back when charging. Lithium-ion batteries use an intercalated lithium compound as the material at the positive electrode and typically graphite at the negative electrode. The batteries have a high energy density, no memory effect and low selfdischarge. Lithium-ion batteries would be mounted in racks. These racks would be integrated into containers. Lithium-ion battery racks sit side-by-side and typically have 48 inches of spacing in front of the rack and 18 inches of spacing in the rear of the rack. Spacing may be increased for serviceability. The project design would meet minimum spacing required by code.

2.3.3 Substation

The proposed substation would be a new 92/12 kV unstaffed, automated, low-profile substation. The dimensions of the fenced substation would be approximately 300 feet by 175 feet, with the footprint encompassing approximately 1.2 acres. The tallest feature would be the dead-end portal structure (39 feet 6 inches) coming in off the gen-tie line, which would have a lighting mast attached, making it 54 feet 6 inches total. The onsite substation control room would house the SCADA system, switchgear, breakers, and DC batteries. Additionally, a 20kV emergency backup generator would be located adjacent to this control room for the HVAC system. The proposed substation site would be located at

the southern edge of the project site, adjacent to the BESS. The California Building Code and the IEEE 693, Recommended Practices for Seismic Design of Substations, will be followed for the substation's design, structures, and equipment.

2.3.4 Gen-Tie Line

The proposed project would connect to a switchyard located at the southern edge of the project site and then routed through the BESS for energy storage. Power would then be transferred via a 1.8-milelong double circuit 13.8 and 92 kV gen-tie line with 66- foot-high poles to interconnect to the IID' existing North Brawley Geothermal Power Plant substation, located at Hovley Road and Andre Road, southwest of the project site. The transmission line would span the New River. A 12-inch diameter conduit railroad undercrossing would connect the PV arrays from the western side of the railroad tracks to the inverters on the eastern side.

2.3.5 Fiberoptic Cable and Microwave Tower

A proposed fiberoptic line from the project substation would be connected with the existing North Brawley Geothermal Power Plant substation approximately 1.8 miles to the southwest, which is required to connect the project substation to the region's telecommunications system. Overall, this would provide SCADA, protective relaying, data transmission, and telephone services for the proposed project substation and associated facilities. New telecommunications equipment would be installed at the project substation within the unmanned Mechanical and Electrical Equipment Room (MEER). The proposed fiber optic telecommunications cable, once past the point of interconnection, would utilize existing transmission lines to connect to the existing North Brawley Geothermal Power Plant substation. The length of this proposed fiber optic telecommunications cable route would be approximately 1.8 miles. Alternatively, a 40 to 100-feet tall microwave tower could replace the need for a fiberoptic line to transmit data offsite. If selected, this microwave tower would be located within the project substation footprint.

2.3.6 Security

Six-foot high chain link fencing topped with barbed wire would be installed around the perimeter of the project site at the commencement of construction and site access would be limited to authorized site workers. Points of ingress/egress would be accessed via locked gates. In addition, a motion detection system and closed-circuit camera system may also be installed. The site would be remotely monitored 24 hours per day, 7 days per week. In addition, routine unscheduled security rounds may be made by the security team monitoring the site security.

2.3.7 Site Access

As shown in Figure 2-3, primary access to the project site would be located off N Best Avenue. A secondary emergency access road would be located in the northwest portion of the project site. Access roads would be constructed with an all-weather surface, to meet the County Fire Department's standards. Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders. An all-weather surface access road would surround the perimeter of the project site, as well as around solar blocks no greater than 500 by 500 feet.

2.3.8 Fire Protection/Fire Suppression

Fire protection systems for battery systems would be designed in accordance with California Fire Code and would take into consideration the recommendations of the National Fire Protection Association (NFPA) 855.

Fire suppression agents such as Novec 1230 or FM 2000, or water may be used as a suppressant. In addition, fire prevention methods would be implemented to reduce potential fire risk, including voltage, current, and temperature alarms. Energy storage equipment would comply with Underwriters Laboratory (UL)-95401 and test methods associated with UL-9540A. The project would include lithium-ion batteries. For lithium-ion batteries storage, a system would be used that would contain the fire event and encourage suppression through cooling, isolation, and containment. Suppressing a lithium-ion (secondary) battery is best accomplished by cooling the burning material. A gaseous fire suppressant agent (e.g., 3M[™] Novec[™] 1230 Fire Protection Fluid or similar) and an automatic fire extinguishing system with sound and light alarms would be used for lithium-ion batteries.

Water for fire suppression would be obtained from a ground storage tank existing onsite which fills from the Best Canal along the eastern property boundary.

To mitigate potential hazards, redundant separate methods of failure detection would be implemented. These would include alarms from the Battery Management System (BMS), including voltage, current, and temperature alarms. Detection methods for off gas detection would be implemented, as applicable. These are in addition to other potential protective measures such as ventilation, overcurrent protection, battery controls maintaining batteries within designated parameters, temperature and humidity controls, smoke detection, and maintenance in accordance with manufacturer guidelines. Remote alarms would be installed for operations personnel as well as emergency response teams in addition to exterior hazard lighting. In addition, an Incidence Response Plan would be implemented. Additionally, the project applicant would contribute its proportionate share for purchase of any fire-suppression equipment, if determined warranted by the County fire department for the proposed project.

2.4 Project Construction

Construction activities would be sequenced and conducted in a manner that addresses storm water management and soil conservation. During construction, electrical equipment would be placed in service at the completion of each power-block, after the gen-tie line has been completed. The activation of the power-blocks is turned over to interconnection following the installation of transformer and interconnection equipment upgrades. This in-service timing is critical because PV panels can produce power as soon as they are exposed to sunlight, and because the large number of blocks and the amount of time needed to commission each block requires commissioning to be integrated closely with construction on a block-by-block basis.

2.4.1 Construction Personnel and Equipment

The proposed project's workforce would consist of laborers, electricians, supervisory personnel, support personnel and construction management personnel. Up to 120 people are expected to be onsite per day. Project laydown and construction staff parking is expected to be located on-site or at the existing North Brawley Geothermal Power Plant in an approximately 4-acre area.

Typical equipment to be used during project construction and commissioning is listed in Table 2-2.
Table	2-2.	Construction	Equipment
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Equipment	Use
1-ton crew trucks	Transport construction personnel
2-ton flatbed trucks; flatbed boom trucks	Haul and unload materials
Mechanic truck	Service and repair equipment
Aerial bucket trucks	Access poles, string conductor, and other uses
Shop vans	Store tools
Bulldozers	Grade pole sites; reclamation
Truck-mounted diggers or backhoes	Excavate
Small mobile cranes (12 tons)	Load and unload materials
Large mobile cranes (75 tons)	Erect structures
Transport	Haul poles and equipment
Drill rigs with augers	Excavate and install fences
Semi tractor-trailers	Haul structures and equipment
Splice trailers	Store splicing supplies
Air compressor	Operate air tools
Air tampers	Compact soil around structure foundations
Concrete trucks	Pour concrete
Dump trucks	Haul excavated materials/import backfill
Fuel and equipment fluid trucks	Refuel and maintain vehicles
Water trucks	Suppress dust and fires

2.4.2 Construction Schedule, Sequence, and Phasing

Construction is anticipated to start in quarter four of 2021 and would take approximately 6-9 months to complete. Construction would commence only after all required permits and authorizations have been secured. Construction would generally occur during daylight hours, Monday through Friday. However, non-daylight work hours may be necessary to make up schedule deficiencies, or to complete critical construction activities. For example, during hot weather, it may be necessary to start work earlier to avoid pouring concrete during high ambient temperatures. If construction is to occur outside of the County's specified working hours, permission in writing will be sought at the time. The County's 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. on Saturday. No commercial construction operations are permitted on Sunday or holidays.

Construction of the project would occur in phases beginning with site preparation and grading and ending with equipment setup and commencement of commercial operations. Overall, construction would consist of three major phases over a period of approximately 6-9 months.

- Site Preparation (1 month)
- PV System Installation and Testing (7 months)
- Site Clean-Up and Restoration (1 month)

Site Preparation

Project construction would include the renovation of existing dirt roads to all-weather surfaces (to meet the County standards) from N Best Avenue to the City of Brawley wastewater treatment plant. Construction of the proposed project would begin with clearing of existing brush and installation of fencing around the project boundary. Fencing would consist of a six-foot chain-link fence topped with barbed wire. A 20-foot road of engineering-approved aggregate would surround the site within the fencing.

Material and equipment staging areas would be established on-site within an approximate 4-acre area. The staging area would include an air-conditioned temporary construction office, a first-aid station and other temporary facilities including, but not limited to, sanitary facilities, worker parking, truck loading and unloading, and a designated area for assembling the support structures for the placement of PV modules. The size of the staging area would shrink as construction progresses throughout the project site. The project construction contractor would then survey, clear and grade road corridors in order to bring equipment, materials, and workers to the various areas under construction within the project site. Road corridors buried electrical lines, PV array locations and locations of other facilities may be flagged and staked in order to guide construction activities.

PV System Installation and Testing

PV system installation would include earthwork, grading and erosion control, as well as erection of the PV modules, mounting posts and associated electrical equipment.

The PV modules require a moderately flat surface for installation and therefore some earthwork, including grading, fill, compaction and erosion control, may be required to accommodate the placement of PV arrays, concrete for foundations, access roads and/or drainage features. Construction of the PV arrays would be expected to take place at a rate of approximately 0.10 MW to 0.25 MW per day. Construction of the PV arrays would include installation of the mounting posts, module assemblies, PV modules, inverters, transformers and buried electrical conductors. The module assemblies would then be cut off at the appropriate heights since the center posts must be completely level. Field welding would be required to attach the module assemblies. Heavy equipment lifters (e.g., forklift) would be required to get the module assemblies in position, while welding and cutting equipment would be necessary to cut off the posts at the appropriate height.

Concrete would be required for the footings, foundations and pads for the transformers and substation equipment. Concrete would be produced at an off-site location by a local provider and transported to the site by truck. The PCS housing the inverters utilize a precast concrete base. Final specifications for concrete would be determined during detailed design engineering, but any related production would meet applicable building codes. Wastes generated during construction would be non-hazardous and may contain any of the following: cardboard, wood pallets, copper wire, scrap steel, common trash and wood wire spools, and as much as possible of the waste that is generated during construction would be recycled.

No hazardous waste is expected to be generated during construction of the proposed project. However, field equipment used during construction would contain various hazardous materials such as hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints and other petroleum-based products contained in most construction vehicles. The storage, handling, and potential spills of these materials contained within the field equipment would adhere to all applicable local, State, and Federal regulations.

Site Clean-Up and Restoration

After construction is complete, all existing roads would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted.

Waste materials and debris from construction areas would be collected, hauled away, and disposed of at approved landfill sites. Cleared vegetation would be shredded and distributed over the disturbed site as mulch and erosion control or disposed of offsite, depending on agency agreements. Rocks removed during foundation excavation would be redistributed over the disturbed site to resemble adjacent site conditions. Interim reclamation would include also re-contouring of impacted areas to match the surrounding terrain, and cleaning trash out of gullies. Equipment used could include a blader, front-end loader, tractor, and a dozer with a ripper.

A covered portable dumpster would be kept on site to contain any trash that can be blown away. After completion of the proposed project, the project engineer would complete a final walk-through and note any waste material left on site and any ruts or terrain damage or vegetation disturbance that has not been repaired. The construction contractor would be given this list and final payment would not be received until all items are completed.

2.4.3 Water Use

Approximately 20,000 to 30,000 gallons of water per day would initially be required for grading, dropping to much less for the remainder of the project construction. Construction water needs would be limited to earthwork, soil conditioning, dust suppression, compaction efforts, and fire suppression. Water would be obtained from a ground storage tank existing onsite which fills from the Best Canal along the eastern property boundary. A dust palliative with low environmental toxicity would also be used to suppress dust as approved by CARB and the ICAPCD.

Potable water would be brought to the project site for drinking and domestic needs.

2.5 Operations and Maintenance

Once fully constructed, the project would be operated on an unstaffed basis and be monitored remotely, with periodic on-site personnel visitations for security, maintenance and system monitoring. Therefore, no full-time site personnel would be required on-site during operations and approximately two employees would only be onsite up to four times per year to wash the solar panels. As the project's PV arrays produce electricity passively, maintenance requirements are anticipated to be very minimal. Any required planned maintenance activities would generally consist of equipment inspection and replacement and would be scheduled to avoid peak load periods. Any unplanned maintenance would be responded to as needed, depending on the event.

2.5.1 Water Use

Estimated annual water consumption for operation and maintenance of the proposed project, including periodic PV module washing and fire suppression, would be approximately 3.1-acre feet per year (AFY), which would be supplied to the project site via the adjacent Best Canal and trucked to the project site as needed.

2.6 Restoration of the Project Site

Electricity generated by the facility could be sold under the terms of a power purchase agreement (PPA) with a power purchaser (i.e., utility service provider). At the end of the PPA term, the owner of the facility may choose to enter into a subsequent PPA, update technology and re-commission, or decommission and remove the generating facility and its components. Upon decommissioning, the site could be converted to other uses in accordance with applicable land use regulations in effect at that time. A collection and recycling program will be executed to promote recycling of project components and minimize disposal in landfills. All permits related to decommissioning would be obtained, where required.

Project decommissioning may include the following activities:

- The facility would be disconnected from the utility power grid.
- Project components would be dismantled and removed using conventional construction equipment and recycled or disposed of safely.
- PV panel support steel and support posts would be removed and recycled off-site by an approved metals recycler.
- All compacted surfaces within the project site and temporary on-site haul roads would be decompacted.
- Electrical and electronic devices, including inverters, transformers, panels, support structures, lighting fixtures, and their protective shelters would be recycled off-site by an approved recycler.
- All concrete used for the underground distribution system would be recycled off-site by a concrete recycler or crushed on-site and used as fill material.
- Fencing would be removed and recycled off-site by an approved metals recycler.
- Gravel roads would be removed; filter fabric would be bundled and disposed of in accordance with all applicable regulations. Road areas would be backfilled and restored to their natural contour.
- Soil erosion and sedimentation control measures would be re-implemented during the decommissioning period and until the site is stabilized.

2.7 Required Project Approvals

2.7.1 Imperial County

The following are the primary discretionary approvals required for implementation of the project:

 General Plan Amendment. An amendment to the County's General Plan, Renewable Energy and Transmission Element is required to implement the proposed project. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. As shown in Figure 2-1, the northern portion of the project site (APNs 037-140-020 and 037-140-021) is located within the Geothermal Overlay Zone. However, the entire project site (APNs 037-140-020, 037-140-021, 037-140-022, 037-140-023, and 037-140-006) is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify all five project parcels into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.

- 2. **Zone Change.** The project site is currently zoned General Agricultural with a Geothermal Overlay (A-2-G). The applicant is requesting a Zone Change to include/classify all five project parcels into the Renewable Energy/Geothermal (REG) Overlay Zone (A-2-REG).
- 3. **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 energy facility with an integrated battery storage system. The project site is located on five privately-owned legal parcels zoned General Agricultural with a Geothermal Overlay (A-2-G). With approval of the zone change, the project site would be zoned General Agricultural with a REG Overlay Zone (A-2-REG). Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County: solar energy electrical generator, battery storage facility, electrical substations, communication towers, and facilities for the transmission of electrical energy.
- 4. 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 approval or denial of the project.

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

- Grading and clearing permits
- Building permits
- Reclamation plan
- Encroachment permits
- Transportation permit(s)

2.7.2 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:

- California RWQCB Notice of Intent for General Construction Permit
- ICAPCD Fugitive Dust Control Plan, Rule 801 Compliance
- CDFW (Trustee Agency) ESA Compliance, Section 1600 Streambed Alteration Agreement
- USFWS ESA Compliance
- IID Water Supply Agreement

3 Environmental Analysis, Impacts, and Mitigation

3.1 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.

3.1.1 Organization of Issue Areas

Chapter 3 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 and responses received during the scoping process, including the NOP review period and public scoping meeting. Sections 3.2 through 3.15 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 3 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

3.1.2 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 2 and illustrated on Figure 2-2 (Chapter 2). Existing environmental conditions are based on the time at which the NOP was published on July 26, 2021. 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 California Code of Regulations (CCR) Section 15093, explaining why the lead agency would proceed with the project in spite of the potential for significant impacts.

3.2 Aesthetics

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. 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. The information provided in this section is summarized from the *Visual Impact Assessment for the Brawley Solar Project* (Appendix B of this EIR) prepared by Chambers Group, Inc.

3.2.1 Existing Conditions

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 Site and Vicinity

The project is located on five privately owned parcels designated for agricultural uses. Currently the project site contains alfalfa fields within different levels of harvest. The project site is approximately one mile north from the City of Brawley's jurisdictional limit. Brawley is relatively central within the agricultural portion of the Imperial Valley, which extends from the southeastern portion of the Salton Sea to the United States and Mexico border. The Salton Sea lies northwest of the project site and sits comparatively lower in the landscape than the project site, as does much of the agricultural land to the immediate west and south.

Because of this gradual downward slope from east to west, areas to the north and east of the project site would be more likely to have views of the project where not impeded by natural or built features. Viewers in this area are associated with residences and land uses. North of the project site is agricultural land. Along the eastern edge of the project site there are two residences and agricultural land. South of the project site is a mixture of agricultural land and dirt lots used for staging activities. The City of Brawley Wastewater Treatment Plant is located along the western edge of the project site.

Views in this area are expansive and are generally characterized by sparse development framed by topographical features. Low-profile, weedy plants, such as Quail Brush Scrub and Bush Seepweed, are widespread on undeveloped and unfarmed lands, and ruderal vegetation is along waterways

associated with IID canals. Individual residences, transmission lines, transportation corridors (including roads and railroads), and agricultural equipment are discernable in the foreground (within 0.25 mile) and middle ground (0.25 to 3-5 miles away) views throughout the area. They are identifiable by their vapor plumes. These views to the west from the project site are backdropped by the Coyote Mountains and Fish Creek Mountains while views to the east are backdropped by the Chocolate Mountains.

Visual Character

Aerial imagery was reviewed to identify where the proposed project would potentially be visible from visually sensitive areas and selected preliminary viewpoints for site photography. Field surveys were conducted in March 2021 to photo-document existing visual conditions and views toward the project site. A representative subset of photographed viewpoints was selected. Assessments of existing visual conditions were made based on professional judgment that took into consideration sensitive receptors and sensitive viewing areas in the project area.

Figure 3.2-1 illustrates the photo documented key observation points (KOP) and the direction to which the photographs were taken. The photographs depicting the existing condition at the project site are presented below, and the visual simulations at each KOP depicting the proposed condition are presented in Section 3.2.3. Descriptions of the existing KOPs are as follows:

KOP 1 – View from North Best Avenue. KOP 1 is located along N Best Avenue, at the northeast corner of the project site (Figure 3.2-2). The view from KOP 1 is to the southwest, toward the proposed project's solar arrays (Viewpoint 1). This viewpoint represents views from an identifiable point along the most proximate roadway, where topography allows visibility of the project site. Additionally, the viewpoint represents the residents located at 5210 N Best Avenue in Brawley, California. The view is characterized by flat agricultural land to the west, south, and east with the nearby residence to the northeast. The Coyote Mountains and Fish Creek Mountains are visible far off to the south. The view of the project site is mostly unobstructed except for utility poles traveling along the western side of N Best Avenue.

KOP 2 – View from North Best Avenue and Ward Road. KOP 2 is located at the intersection of N Best Avenue and Ward Road, at the southeast corner of the project site (Figure 3.2-3). The view from KOP 2 is to the northwest, toward the proposed project's solar arrays, BESS, and substation (Viewpoint 2). This viewpoint represents views from an identifiable point along the most proximate roadway, where topography allows visibility of the project site. Additionally, the viewpoint represents the residents located at 5000 N Best Avenue and 5002 N Best Avenue. The view is characterized by flat agricultural land to the north; an abandoned residence and fenced corral to the west; a vacant dirt lot to the south; and the nearby residences to the northeast. Vegetation along the New River is visible to the west and the Chocolate Mountains are visible far off to the north and west. The view of the project site is partially obstructed by vegetation along the old corral and utility poles traveling along the western side of N Best Road.

KOP 3 – View from north end of Del Rio Country Club and Golf Course. KOP 3 is located along the Union Pacific railroad tracks on the northwest end of Del Rio Country Club and Golf Course, approximately 0.25 mile from the project site (Figure 3.2-4). The view from KOP 3 is to the north, toward the proposed project's solar arrays, BESS, substation, and gen-tie line. This viewpoint represents golfers and staff at Del Rio Country Club, where topography allows views of the project site, as well as views from the Union Pacific railway line. The view is characterized by flat, undeveloped land with sparse vegetation to the north and northeast, agricultural land to the east, and the

landscaped golf course to the west. The railroad tracks travel north through the middle of the view, with the Chocolate Mountain Range visible far off to the north. The view of the project site is unobstructed.

KOP 4 – View from State Route 111 and Andre Road. KOP 4 is located at the corner of SR 111 and Andre Road, along the gen-tie line route (Figure 3.2-5). The view from KOP 4 is to the east, toward the proposed project's gen-tie line, BESS, substation, and solar arrays. This viewpoint represents views from an identifiable point along a well-traveled roadway in the County, where topography allows visibility of the project site. The view is characterized by mainly flat agricultural land to the north and south. The City of Brawley Wastewater Treatment Plant is within the northern portion of the view and a dirt access road leads to an industrial dirt lot with pipelines directly east of the view. The Chocolate Mountain Range is visible far off to the east. The view of the project site is partially obstructed by the City of Brawley Wastewater Treatment Plant, utility poles, and small amounts of vegetation in the foreground.



Figure 3.2-1. Key Observation Points



Project Location - Union Pacific Railway

- Gen-Tie Line \bigcirc

Point of Interconnection 8

Key Observation Point





Figure 3.2-2. Existing Key Observation Point 1



Figure 3.2-4. Existing Key Observation Point 3





Scenic Vista

Scenic vistas are typically expansive views from elevated areas. They may or may not be part of a designated scenic overlook or other area providing a static vista view of a landscape. 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.

Scenic Highways

According to the Conservation and Open Space Element, no State scenic highways have been designated in Imperial County (County of Imperial 2016). 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. The nearest road segment considered eligible for a State scenic highway designation is the portion of SR 111 from Bombay Beach to the County line. The project site is located approximately 25 miles south of Bombay Beach; therefore, it would not be visible from the location of the proposed projects.

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. The majority of the light and glare in the project area 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."

3.2.2 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 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 3.2-1 provides an analysis of the proposed project's consistency with the Conservation and Open Space Element Goal 5. 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 the Caltrans State Scenic Highway Program.

Table 3.2-1. Consistency with Applicable General Plan Conservation
and Open Space Policies

General Plan Policies	Consistency with General Plan	Analysis
Goal 5: 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 changes to the visual character of the project area, which is currently characterized as an agricultural landscape. As described in Section 3.2.1, 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 project area.
Objective 5.1: Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.	Consistent	The project site is located within an agricultural portion of the County and generally avoids both desert and mountain landscapes.

Source: County of Imperial 2016

County of Imperial Land Use Ordinance, Title 9

The County's Land Use Ordinance Code provides specific direction for lighting requirements.

Division 17: Renewable Energy Resources, Section 91702.00 – Specific Standards for All Renewable Energy Projects

(R) Lights should be directed or shielded to confine direct rays to the project site and muted to the maximum extent consistent with safety and operational necessity.

3.2.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to aesthetic and visual 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 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
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from

publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality

• 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 conducted in March 2021, as well as a review of maps and aerial photographs for the project area. A representative subset of photographed viewpoints was selected as KOPs, which collectively serve as the basis for this assessment. This selection was done in coordination with ORNI and the County. Assessments of existing visual conditions were made based on professional judgment that took into consideration sensitive receptors and sensitive viewing areas in the project area. The locations of the four KOPs in relation to the project site are presented in Figure 3.2-1 above.

The site photos were used to generate a rendering of the existing conditions and a proposed visualization of the implemented project. The visual simulations, as provided below, provide clear before-and-after images of the location, scale, and visual appearance of the features affected by and associated with the project. Design data — consisting of engineering drawings, elevations, site and topographical contour plans, concept diagrams, and reference pictures — were used as a platform from which digital models were created. In cases where detailed design data were unavailable, more general descriptions about alternative facilities and their locations were used to prepare the digital models.

Impact Analysis

Impact 3.2-1 Would the project have a substantial adverse effect on a scenic vista?

Scenic vistas are typically expansive views from elevated areas that may or may not be part of a designated scenic overlook or other area providing a static view of a landscape. During construction, the use of standard construction equipment including, but not limited to, trucks, cranes, and tractors would be required. The presence of this equipment within the project site during construction would alter views of the area from undeveloped and agricultural land to a construction site. However, the views of construction activity from the surrounding vicinity would be temporary and would not involve any designated scenic vistas as there are no designated scenic vistas in the project vicinity. According to the Imperial County General Plan, the closest scenic resource is the Salton Sea approximately 11 miles northwest of the project site (County of Imperial 2016).

Views from elevated areas near the project site could be considered scenic vistas given the expansiveness of the views and distance one can see under favorable conditions. However, as described further below for the view of the project from all KOPs, the project would not have a substantial adverse effect on such views. Rather, it would be absorbed into the natural and built features that comprise the existing landscape and would not substantially obstruct existing views. Therefore, less than significant impacts to scenic vistas would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.2-2 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no designated or eligible state scenic highways in the project vicinity. The nearest road segment among those identified by Imperial County as "having potential as state-designated scenic highways" is the portion of SR 111 from Bombay Beach to the Imperial County/Riverside County boundary. The project site is approximately 25 miles south of Bombay Beach. Therefore, no impacts to scenic resources within any state scenic highways would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.2-3 In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The existing visual character in views of the project (Figure 3.2-2 through Figure 3.2-5) would not be substantially altered based primarily on the proximity of viewpoints to the project site. Short-term visual impacts would occur in association with construction activities, including introducing heavy equipment (e.g., cranes), staging and materials storage areas and potential dust and exhaust to the project area. While construction equipment and activity may present a visual nuisance, it would be temporary (approximately 6-9 months) and would not represent a permanent change in views. Therefore, impacts associated with degrading the existing visual character or quality of the project site during construction are considered less than significant. The potential impacts on these KVs are discussed below.

KOP 1 – View from North Best Avenue. Viewpoint 1 shows the view from KOP 1 with the proposed project simulated (Figure 3.2-6). The solar arrays and the security fencing would be the most prominently visible portion of the project from this location. As conceptually shown in the simulation, the project would appear as a comparatively dark, horizontal bar across the majority of the view. The overall effect shown in Viewpoint 1 is the relatively small degree of contrast the project would have with its broader surroundings, which includes views of the Coyote Mountains and Fish Creek Mountains. Solar arrays would not substantially obscure the mountain skyline from this vantage point.

KOP 2 – View from North Best Avenue and Ward Road. Viewpoint 2 shows the view from KOP 2 with the proposed project simulated (Figure 3.2-7). The solar arrays and the security fencing would be the most prominently visible portion of the project from this location. With demolition of the abandoned residence and corral, the project's BESS and substation would also be visible from KOP 2 to the west. As conceptually shown in the simulation, the project would appear as a generally uniform dark line across the view. The overall effect shown in Viewpoint 2 is the relatively small degree of contrast the project would have with its broader surroundings, which include views of the Chocolate Mountains. The BESS, substation, and solar arrays would not substantially obscure the mountain skyline from this vantage point.

KOP 3 – View from north end of Del Rio Country Club and Golf Course. KOP 3 shows the view from KOP 3 with the proposed project simulated (Figure 3.2-8). The gen-tie structures would be the most

prominently visible portion of the project from this location. As conceptually shown in the simulation, the gen-tie structures would be visible in the center of the view, traveling from east to west approximately 1.75 miles. While appearing as new and highly visible features, the transmission structures would relate to the numerous lines visible throughout the landscape. They would also occupy a relatively narrow portion of the view to the north from KOP 3.

The substation for the proposed project has not yet been designed. However, the facility shown in KOP 3 is an approximation based on representative examples of substations of similar size and in similar environments. As simulated, the substation would be partially visible in views from KOP 3, alongside the solar arrays, which would appear as a comparatively dark, horizontal bar across a portion of the view's middle ground. Aside from the relatively narrow gen-tie structures, no project component would substantially obscure or appear above the mountain skyline from this vantage point.

KOP 4 – View from State Route 111 and Andre Road. Viewpoint 4 shows the view from KOP 4 with the proposed project simulated (Figure 3.2-9). The gen-tie structures would be the most prominently visible portion of the project from this location. As conceptually shown in the simulation, the gen-tie structures would be visible in the southern portion of the view, traveling from east to west approximately 0.5 mile. While appearing as new and highly visible features, the transmission structures would relate to the numerous lines visible throughout the landscape. They would also occupy a relatively narrow portion of the view to the south from KOP 4.

As simulated, views of the substation and BESS would be visible in the distance from KOP 4. These structures would relate to the nearby industrial features in the landscape, including the nearby pipelines. The solar arrays would appear as a comparatively dark, horizontal bar across the remainder of the view. No project component would substantially obscure or appear above the mountain skyline from this vantage point.

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Figure 3.2-6. Proposed Key Observation Point 1

Figure 3.2-7. Proposed Key Observation Point 2



Figure 3.2-8. Proposed Key Observation Point 3



Figure 3.2-9. Proposed Key Observation Point 4



Conclusion

The views from KOPs 1 and 2 show the project's solar arrays and the security fencing most prominently, which would appear as a comparatively dark, horizontal bar across the view. The overall effect of the project from these KOPs is relatively small degree of contrast the project would have with its broader surroundings and a small interruption of views of the surrounding mountains.

In the view from KOPs 3 and 4, new transmission structures that would be part of the project's interconnection would appear large in scale; however, the structures would be comparable in size and appearance to other structures visible throughout the surrounding landscape, including multiple existing transmission lines. As previously described, the project would not substantially degrade the existing visual character or quality of views from this distance; rather it would appear absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, and the City of Brawley Wastewater Treatment Plant. These effects would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.2-4 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The project would not include any source of nighttime lighting and therefore would not be a source of substantial light in the area outside of the project site. If constructed, lighting would be provided on the microwave tower. A glare hazard analysis was also prepared for the project (Appendix B of this EIR). It concluded that sensitive viewers near the project, including residences, a nearby golf course, major roadways, and approach slopes associated with the Brawley Municipal Airport, would not experience glare effects from the project. These effects would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.2.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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 proposed project, the proposed project will be decommissioned and dismantled. No grading or significant landform 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 site 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, nearby residences, or flights 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 proposed project would not result in residual significant unmitigable impacts to the visual character of the project site or add substantial amounts of light and glare.

3.3 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 3.3.3 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 2, Project Description. Section 3.3.4 provides a discussion of residual impacts, if any.

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

3.3.1 Existing Conditions

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 2019, agriculture contributed a total of \$2.01 billion to the county economy. Vegetable and melon crops were the single largest production category by dollar value (\$799 million). Livestock represented the second largest category (\$522 million) and consisted mostly of feedlot cattle (\$449 million). Field crops ranked third with \$498 million (Imperial County Agricultural Commissioner 2019).

Important Farmland

According to the California Department of Conservation's (DOC) California Important Farmland Finder and as shown on Figure 3.3-1, the majority of the project site is designated as Farmland of Statewide Importance (205 acres), with a pocket of Prime Farmland (4.4 acres) and Farmland of Local Importance (12 acres) located in the southern portion of the project site (DOC 2021). Approximately 1 acre of Unique Farmland occurs along the western boundary of the project site.

Williamson Act Contract Land

According to the 2016/2017 Imperial County Williamson Act Map produced by the DOC, the project site is not located on Williamson Act contracted land (DOC 2016).

Figure 3.3-1. Important Farmlands



3.3.2 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 landowner.

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 terminated 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 3.3-1 provides a summary of agricultural land within Imperial County converted to non-agricultural uses during the time frame from 2016 to 2018.

Total Acreage Inventoried		2016 to 2018 Acreage Changes				
Land Use Category	2016	2018	Acres Lost (-)	Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland	190,206	189,163	1,699	656	2,355	-1,043
Farmland of Statewide Importance	297,272	291,596	6,330	654	6,984	-5,676
Unique Farmland	2,071	1,905	190	24	214	-166
Farmland of Local Importance	38,923	39,711	1,587	2,375	3,962	788
Important Farmland Subtotal	528,472	522,375	9,806	3,709	13,515	-6,097
Grazing Land	0	0	0	0	0	0
Agricultural Land Subtotal	528,472	522,375	9,806	3,709	13,515	-6,097

Table 3.3-1. Imperial County Change in Agricultural Land Use Summary (2016 to 2018)

	Total Acreage Inventoried		2016 to 2018 Acreage Changes			
Land Use Category	2016	2018	Acres Lost (-)	Gained (+)	Total Acreage Changed	Net Acreage Changed
Urban and Built-Up Land	37,412	41,764	301	4,653	4,954	4,352
Other Land	461,891	463,488	712	2,309	3,021	1,597
Water Area	749	897	125	273	398	148
Total Area Inventoried	1,028,524	1,028,524	10,944	10,944	21,888	0

Table 3.3-1. Imperial County Change in Agricultural Land Use Summary (2016 to 2018)

Source: DOC 2018

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 3.3-2 provides a General Plan goal and policy consistency evaluation for the project.

General Plan Policies	Consistency with General Plan	Analysis
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.	Consistent	The project would temporarily convert land designated as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to non-agricultural uses, however, as part of the project, a reclamation plan when the project is decommissioned at the end of its life spans will be utilized. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, battery energy storage system, transformers and other structures on the site, as well as restoration of the site to its pre-project

Table 3.3-2. Project Consistency with Applicable General Plan Agricultural Policies

	Consistency with General	
General Plan Policies	Plan	Analysis condition. Therefore, the proposed project would not permanently convert Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural uses.
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.	Consistent	The project site is designated for agriculture land use in the County General Plan. The project would include development of a solar facility and associated infrastructure adjacent to productive agricultural lands to the north and east of the project site; however, the project is located adjacent to the City of Brawley Wastewater Treatment Plant along the western edge of the project site. The Union Pacific Railway transects the project site. Additionally, this development would not include a residential component that would induce urbanization adjacent to the projects.
		Furthermore, with the approval of a General Plan Amendment, Zone Change, and 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.
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.	Consistent	The project would include development of a solar facility adjacent to productive agricultural lands to the north and east of the project site; however, the project is located adjacent to the City of Brawley Wastewater Treatment Plant along the western edge of the project site. The Union Pacific Railway transects the project site. Neither construction nor operation of the solar facility would not make it difficult to economically or conveniently farm.
Objective 2.2. Encourage the infilling of development in urban areas as an alternative to expanding urban boundaries.	Consistent	The project involves the construction and operation of solar facility in a rural area. While the proposed project will introduce development in the area, it does not include residential uses that would, in turn, create a demand for other uses such as commercial, employment centers, and supporting services.
Objective 2.3. Maintain agricultural lands in parcel size configurations that help assure that viable farming units are retained.	Consistent	The project would temporarily convert agricultural land to non-agricultural uses. However, the project would not be subdivided into smaller parcels. A reclamation plan will be prepared for the project site, which when implemented, would return the site to pre-project conditions after the solar uses are discontinued.
Objective 2.4. Discourage the parcelization of large holdings.	Consistent	See response to Objective 2.3 above.
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	Consistent	Upon approval of a CUP and zone change into the RE Overlay Zone designation, the proposed project would be an allowable use within an applicable agricultural zone, and the existing zoning of the project site would be consistent

Table 3.3-2. Project Consistency with Applicable General Plan Agricultural Policies

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	Consistency with General	
General Plan Policies	Plan	Analysis
General Plan, or for necessary public facilities.		with the existing General Plan land use designation.
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.	Consistent	Upon approval of a CUP and zone change into the RE Overlay Zone designation, the proposed project would be an allowable use within an applicable agricultural zone. Additionally, the project does not include the development of housing.
Objective 3.2. Enforce the provisions of the Imperial County Right-to-Farm Ordinance (No. 1031).	Consistent	The Imperial County Right-to-Farm Ordinance would be enforced. With mitigation measures proposed in other resource sections (e.g., air quality, noise, etc.), project-related activities would not adversely affect adjacent agricultural operations. The proposed project will be required to comply with ICAPCD's rules and regulations to control emissions or hazardous air pollutants, including, but not limited to, Regulation VIII and Rule 407. Regulation VIII sets forth rules regarding the control of fugitive dust, including fugitive dust from construction activities. Regulation VIII 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. Rule 407 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
Objective 3.3. Enforce the provisions of the State nuisance law (California Code Sub-Section 3482).	Consistent	The provisions of the State nuisance law would be incorporated into the project. 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).

Table 3.3-2. Project Consistency with Applicable General Plan Agricultural Policies

Source: County of Imperial General Plan 2015

Notes:

CUP = conditional use permit; RE = renewable energy

County of Imperial "Right to Farm" Ordinance

On August 7, 1990, the County Board of Supervisors approved the "Right-to-Farm" Ordinance, which permits operation of properly conducted agricultural operations within Imperial County after recognizing the potential threats to agricultural productivity posed by increased nonagricultural land

uses throughout the County. The ordinance is intended to reduce the loss to the County of its agricultural resources and promote a good neighbor policy by advising purchasers and users of adjacent properties about the potential problems and inconveniences associated with agricultural operations. The ordinance also establishes a "County Agricultural Grievance Committee" to settle disputes between agriculturalists and adjacent property owners.

3.3.3 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 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
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use

Methodology

This analysis evaluates the potential for the project, as described in Chapter 2, Project Description, to adversely impact agricultural resources within the project site based on the applied significance criteria as identified above. The analysis prepared for this EIR relied on Important Farmland and Williamson Act maps for Imperial County produced by the California DOC's Division of Land Resource Protection. These sources were 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 and zoning ordinance. The conceptual site plan for the project (Chapter 2, Figure 2-3) was also used to evaluate potential impacts.

Impact Analysis

Impact 3.3-1 Would the project convert 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?

Implementation of the project would result in the temporary conversion of approximately 227 acres of land currently under or available for agricultural production to non-agricultural uses. Approximately 4.4 acres of the project site is classified as Prime Farmland, 205 acres as Farmland of Statewide Importance, and 1 acre as Unique Farmland. The loss of agricultural land designed Prime Farmland,

Farmland of Statewide Importance, and Unique Farmland is typically considered a significant impact under CEQA. Therefore, their conversion to non-agricultural use, albeit temporary, is considered a significant impact. Implementation of Mitigation Measures AG-1a and AG-1b would reduce this impact to a level less than significant.

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 for the project:

Mitigation for Non-Prime Farmland

Option 1: *Provide Agricultural Conservation Easement(s).* The Permittee shall procure Agricultural Conservation Easements on a "1 on 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; or

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 program 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.

Mitigation for Prime Farmland

Option 1: *Provide Agricultural Conservation Easement(s).* The Permittee shall procure Agricultural Conservation Easements on a "2 on 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; or

Option 2: Pay Agricultural In-Lieu Mitigation Fee. The Permittee shall pay an "Agricultural In-Lieu Mitigation Fee" in the amount of 30 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 program 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 steward ship, 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; the Project and other recipients of the Project's Agricultural Benefit Fee funds; or emphasis on creation of jobs in the agricultural sector of the local economy for the purpose of off-setting jobs displaced by this Project.

Option 4: Avoid Prime Farmland. The Permittee must revise their CUP Application/Site Plan to avoid Prime Farmland.

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 project site will be returned to its current agricultural condition. Permittee shall also 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 even 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 impact associated with 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 this impact to a less than significant level.

Impact 3.3-2 Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Williamson Act. The project site is not located on Williamson Act contracted land (DOC 2016). 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-2-G (General Agricultural with a Geothermal Overlay). Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County: solar energy electrical generator, battery storage facility, electrical substations, communication towers, and facilities for the transmission of electrical energy.

Upon approval of a CUP and zone change into the RE Overlay Zone designation, the project's uses 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 energy facility is not expected to inhibit or adversely affect adjacent agricultural operations through the placement of sensitive land uses or generation of excessive dust or shading. Based on these considerations, the impact is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.3-3 Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural 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 3.3-2. 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 3.3-1, although the project would convert lands currently under agricultural production, the project applicant is proposing agriculture as the end use and will 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 includes 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. The County is responsible for approving the reclamation plan for each project and confirming that financial assurances for the project is in conformance with Imperial County ordinances prior to the issuance of any building permits. This shall be made a condition of approval and included in the CUP. Additionally, the County is requiring Mitigation Measure AG-1b to ensure that post-restoration of the project facilitates result in no net reduction in Prime Farmland or Farmland of Statewide Importance.

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. Project construction would include the renovation of existing dirt roads to allweather surfaces (to meet the County standards) from N Best Avenue to the City of Brawley wastewater treatment plant. However, the proposed renovation would not otherwise affect other agricultural operations in the area. With mitigation measures proposed in other resource sections (e.g. air quality, noise, etc.), project-related activities would not adversely affect adjacent agricultural operations. The proposed project will be required to comply with ICAPCD's rules and regulations to control emissions or hazardous air pollutants, including, but not limited to, Regulation VIII and Rule 407. Regulation VIII sets forth rules regarding the control of fugitive dust, including fugitive dust from construction activities. Regulation VIII 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. Rule 407 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. 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.

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). 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. However, implementation of Mitigation Measure AG-1b would require the project applicant or its successor in interest for implementing a reclamation plan when the project is decommissioned at the end of its lifespan. The reclamation plan includes restoration of the site to its pre-project condition. 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 field if the area is 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 Pest Management Plan. 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.
- 5. 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 implementation of Mitigation Measure AG-1b, 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 their use for solar generation activities). In addition, the proposed project would be required to implement a weed and pest management control plan per Mitigation Measure AG-2. Compliance with these measures would reduce this impact to a level less than significant.

3.3.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. 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. With implementation of Mitigation Measure AG-1b, 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 their use for solar generation activities). 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 facility), the project would be decommissioned and the project site would be restored to 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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3.4 Air Quality

This section includes an overview of the existing air quality within the project area and identifies applicable local, state, and federal 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 ICAPCD's Air Quality Handbook in conjunction with actions proposed in Chapter 2, Project Description, of this EIR. Information contained in this section is summarized from the *Air Quality, Energy, and Greenhouse Gas Emissions Impact – Brawley Solar Energy Facility Project* prepared by Vista Environmental. This report is included in Appendix C of this EIR.

3.4.1 Existing Conditions

Regional Setting

The project is located in Imperial County within the Salton Sea Air Basin (SSAB). The SSAB consists of all of Imperial County and a portion of Riverside County. Both the ICAPCD and South Coast Air Quality Management District (SCAQMD) have jurisdiction within the SSAB. The ICAPCD has full jurisdiction within all Imperial County and SCAQMD only has jurisdiction within Riverside County.

The climate of Imperial County is governed by the large-scale sinking and warming of air in the semipermanent high-pressure zone of the eastern Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms, except in the winter, when it is weakest and located farthest south. The coastal mountains prevent the intrusion of any cool, damp air found in California coastal areas. Because of the barrier and weakened storms, Imperial County experiences clear skies, extremely hot summers, mild winters, and little rainfall. The sun shines, on the average, more in Imperial County than anywhere else in the United States.

Winters are mild and dry with daily average temperatures ranging between 65- and 75- degrees Fahrenheit (°F). During winter months it is not uncommon to record maximum temperatures of up to 80 °F. Summers are extremely hot with daily average temperatures ranging between 104 and 115 °F. It is not uncommon to record maximum temperatures of 120 °F during summer months.

The flat terrain of the valley and the strong temperature differentials created by intense solar heating, produce moderate winds and deep thermal convection. The combination of subsiding air, protective mountains, and distance from the ocean all combine to severely limit precipitation. Rainfall is highly variable, with precipitation from a single heavy storm able to exceed the entire annual total during a later drought condition. The average annual rainfall is just over three 3 inches, with most of it occurring in late summer or mid-winter.

Humidity is low throughout the year, ranging from an average of 28 percent in summer to 52 percent in winter. The large daily oscillation of temperature produces a corresponding large variation in the relative humidity. Nocturnal humidity rises to 50 to 60 percent but drops to about 10 percent during the day.

The wind in Imperial County follows two general patterns. Wind statistics indicate prevailing winds are from the west-northwest through southwest; a secondary flow maximum from the southeast is also evident. The prevailing winds from the west and northwest occur seasonally from fall through spring and are known to be from the Los Angeles area. Occasionally, Imperial County experiences periods of extremely high wind speeds. Wind speeds can exceed 31 miles per hour (mph), and this occurs

most frequently during the months of April and May. However, speeds of less than 6.8 mph account for more than one-half of the observed wind measurements.

Major Air Pollutants

Criteria Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone, coarse particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 3.4-1.

Pollutant	Major Manmade Sources	Human Health and Welfare Effects
со	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO ₂	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O ₃	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} and $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood- burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze)
SO ₂	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Table 3.4-1. Criteria Air Pollutants - Summary of Common Sources and Effects

Source: California Air Pollution Control Officers Association (CAPCOA) 2021

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TAC) are another group of pollutants of concern. TACs is a term that is defined under the California Clean Air Act and consists

of the same substances that are defined as Hazardous Air Pollutants (HAPs) in the Federal Clean Air Act. There are over 700 hundred different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different toxic air contaminants. The most important of these TACs, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

TACs are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to *The California Almanac of Emissions and Air Quality 2013 Edition*, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). DPM is a subset of PM₂₅ because the size of diesel particles are typically 2.5 microns and smaller. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of DPM as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources (Appendix C of this EIR).

Attainment Status

The U.S. Environmental Protection Agency (EPA) and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than ozone [O₃], PM₁₀ and PM_{2.5} and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O₃, PM₁₀, and PM_{2.5} are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period.

The attainment status for the portion of the SSAB encompassing the project site is shown in Table 3.4-2. As shown, the Imperial County portion of the SSAB is currently designated as nonattainment for O₃ and PM₁₀ under State standards. Under federal standards, the Imperial County portion of the SSAB is in nonattainment for O₃, PM₁₀, and PM_{2.5}. The area is currently in attainment or unclassified status for CO, NO₂, and SO₂.

Table 3.4-2. Attainment Status of Criteria Pollutants in the Imperial County Portion of the Salton Sea Air Basin

Pollutant	State Designation	Federal Designation
O ₃	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Nonattainment
PM _{2.5}	Attainment	Nonattainment
СО	Attainment	Unclassified/attainment
NO ₂	Attainment	Unclassified/attainment
SO ₂	Attainment	Unclassified/attainment

Source: Appendix C of this EIR

Local Ambient Air Quality

Ambient air quality at the project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. The ICAPCD operates a network of monitoring stations throughout the County that continuously monitor ambient levels of criteria pollutants in compliance with federal monitoring regulations.

Since not all air monitoring stations measure all of the tracked pollutants, the data from the following monitoring stations, listed in the order of proximity to the project site, have been used: Brawley-220 Main Street Monitoring Station (Brawley Station), Westmorland Monitoring Station (Westmorland Station) and El Centro – 9th Street Monitoring Station (El Centro Station).

The Brawley Station is located approximately 2.9 miles south of the project site at 220 Main Street, the Westmorland Station is located approximately 6.4 miles west of the project site at 202 W First Street, and the El Centro Station is located approximately 15.7 miles south of the project site at 150 9th Street. PM₁₀ and PM_{2.5} were measured at the Brawley Station, ozone was measured at the Westmorland Station, and NO₂ was measured at the El Centro Station. It should be noted that due to the air monitoring stations' distances from the project site, recorded air pollution levels at the air monitoring stations reflect with varying degrees of accuracy local air quality conditions at the project site. Table 3.4-3 shows the most recent three years of monitoring data from CARB.

	Year ¹		
Pollutant (Standard)	2017	2018	2019
Ozone: ¹			
Maximum 1-Hour Concentration (ppm)	0.078	0.086	0.071
Days > CAAQS (0.09 ppm)	0	0	0
Maximum 8-Hour Concentration (ppm)	0.067	0.068	0.060

Table 3.4-3. Summary	of Local Ambient	Air Quality Data
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	Year ¹		
Pollutant (Standard)	2017	2018	2019
Days > NAAQS (0.070 ppm)	0	0	0
Days > CAAQs (0.070 ppm)	0	0	0
Nitrogen Dioxide: ²			
Maximum 1-Hour Concentration (ppb)	48.8	34.1	41.4
Days > NAAQS (100 ppb)	0	0	0
Days > CAAQS (180 ppb)	0	0	0
Inhalable Particulates (PM10) : ³			
Maximum 24-Hour National Measurement (ug/m ³)	449.8	407.0	324.4
Days > NAAQS (150 ug/m ³)	9	13	2
Days > CAAQS (50 ug/m³)	58	106	53
Annual Arithmetic Mean (AAM) (ug/m ³)	45.4	52.2	35.8
Annual > NAAQS (50 ug/m ³)	No	Yes	No
Annual > CAAQS (20 ug/m ³)	Yes	Yes	Yes
Ultra-Fine Particulates (PM2.5): ³			
Maximum 24-Hour National Measurement (ug/m ³)	46.1	55.1	28.9
Days > NAAQS (35 ug/m ³)	1	2	0
Annual Arithmetic Mean (AAM) (ug/m ³)	9.4	10.4	8.3
Annual > NAAQS and CAAQS (12 ug/m ³)	No	No	No

Table 3.4-3. Summary of Local Ambient Air Quality Data

Source: Appendix C of this EIR

Notes:

Exceedances are listed in **bold**. CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available.

¹ Data obtained from the Westmorland Station.

² Data obtained from the El Centro Station.

³ Data obtained from the Brawley Station.

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 nearest sensitive receptors to the project site including the following:

- Single-family homes approximately 40 feet to the north side of the project site, located near the northwest corner of the project site.
- Single-family residence on the east side of N Best Avenue, located near the northeast corner of the project site
- Single-family residence on the east side of N Best Avenue, located across the proposed project's primary access road
- Two single-family residences located at the northeast corner of the intersection of N Best Avenue and Ward Road
- Single-family residence (with a horse boarding/training facility) on the west side of N Best Avenue, located south of the project site)

3.4.2 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 CAA, passed in 1970 and last amended in 1990, is the primary federal law that governs air quality. The Federal CAA delegates primary responsibility for clean air to the U.S. EPA. The U.S. EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. Under the act, the U.S. EPA has established the NAAQS for six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. Ozone, CO, NO₂, SO₂, Pb, and PM (Including both PM₁₀, and PM_{2.5}) are the six criteria air pollutants. Ozone is a secondary pollutant, nitrogen oxides (NO_x) and volatile organic compounds (VOC) are of particular interest as they are precursors to ozone formation. 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.

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 3.4-4.

State

California Clean Air Act

The California Clean Air Act (CCAA) was adopted by CARB in 1988. The CCAA is responsible for meeting the state requirements of the Federal CAA and for establishing the CAAQS. 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 CCAA, as amended in 1992, requires all air districts of the state to achieve and maintain the CAAQS by the earliest practical date.

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. As shown in Table 3.4-4, the CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. 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.

California State Implementation Plan

The CAA mandates that the state submit and implement a SIP for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met. 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.

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 Mean	50 µg/m ³	150 μg/m ³
		20 µg/m ³	
PM _{2.5}	24-hour Mean		35 μg/m ³
		12 µg/m ³	12.0 µg/m ³
СО	1-hour 8-hour	20 ppm	35 ppm
		9.0 ppm	9 ppm
NO ₂	1-hour Mean	0.18 ppm	100 ppb
		0.030 ppm	0.053 ppm
SO ₂	1-hour 24-hour	0.25 ppm	75 ppb
		0.04 ppm	
Pb	30-day Rolling 3-month	1.5 μg/m ³	
			0.15 µg/m ³
Sulfates	24-hour	25 μg/m ³	No federal standard
Hydrogen sulfide	1-hour	0.03 ppm	

Table 3.4-4. Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard
Vinyl chloride	24-hour	0.01 ppm	
Visibility-reducing	8-hour	Extinction coefficient of	
particles		0.23 per kilometer, visibility of 10 miles or more	
		because of particles when relative humidity is less than 70 percent	

Source: CARB 2016

Notes:

 $CO - carbon monoxide; mean - annual arithmetic mean; NO_2 - nitrogen dioxide; O_3 - ozone; Pb - lead; PM_{2.5} - particulate matter less than 2.5 microns in diameter; PM_{10} - particulate matter less than 10 microns in diameter; ppb - parts per billion; ppm - parts per million; SO_2 - sulfur dioxide; <math>\mu g/m^3$ - micrograms per cubic meter

Toxic Air Contaminants Regulation

TAC sources include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources. The TACs that are relevant to the implementation of the project include DPM and airborne asbestos.

In August 1998, CARB identified DPM emissions from diesel-fueled engines as a TAC. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel fueled engines and vehicles. The goal of the plan is to reduce diesel PM₁₀ (inhalable particulate matter) emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. The plan identified 14 measures that target new and existing on-road vehicles (e.g., heavy duty trucks and buses, etc.), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps, etc.), and stationary engines (e.g., stand-by power generators, etc.).

Tanner Air Toxics Act & Air Toxics "Hot Spots" Information and Assessment Act

CARB's Statewide comprehensive air toxics program was established in 1983 with AB 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA) and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In

September 1992, the "Hot Spots" Act was amended by SB 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Regional

Imperial County Air Pollution Control District

The ICAPCD is the agency responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the 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. ICAPCD is responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases. 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. The ICAPCD has developed the following plans to achieve attainment for air quality ambient standards.

- **2009 Imperial County Plan for PM₁₀.** 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 (ICAPCD 2009).
- 2013 Imperial County Plan for 2006 24-hour PM_{2.5} for Moderate Nonattainment Area. U.S. EPA designated Imperial County as nonattainment for the 2006 24-hr PM_{2.5} standard, effective December 14, 2009. The 2013 PM_{2.5} SIP demonstrates attainment of the 2006 PM_{2.5} NAAQS "but-for" transport of international emissions from Mexicali, Mexico. The City of Calexico, California shares a border with the City of Mexicali. Effective July 1, 2014, the City of Calexico was designated nonattainment, while the rest of the SSAB was designated attainment (ICAPCD 2014).
- 2017 Imperial County Plan for 2008 8-hour Ozone Standard. Because of Imperial County's "moderate" nonattainment status for 2008 federal 8-hour O₃ standards, ICAPCD was required to develop an 8-hour Attainment Plan for Ozone (ICAPCD 2017a). The plan includes control measures which are an integral part of how the ICAPCD currently controls the ROG and NOx emissions within the O₃ nonattainment areas. The overall strategy includes programs and control measures which represent the implementation of Reasonable Available Control Technology (40 CFR 51.912) and the assurance that stationary sources maintain a net decrease in emissions.
- 2018 Imperial County Plan for PM₁₀. Imperial Valley is classified as nonattainment for federal and state PM₁₀ standards. The 2018 SIP maintained previously adopted fugitive dust control measures (Regulation VIII) that were approved in the Imperial County portion of the California SIP in 2013 (see above) (ICAPCD 2018a).
- 2018 Imperial County Plan for PM_{2.5}. U.S. EPA designated Imperial County as nonattainment for the 2018 24-hr PM_{2.5} standard. The 2018 PM_{2.5} SIP concluded that the majority of the PM_{2.5} emissions resulted from transport in nearby Mexico. Specifically, the SIP demonstrates attainment of the 2006 PM_{2.5} NAAQS "but for" transport of international emissions from Mexicali, Mexico. In accordance with the CCAA, the PM_{2.5} SIP satisfies the attainment demonstration requirement satisfying the provisions of the CCAA (ICAPCD 2018b).

In addition to the above plans, the ICAPCD is working cooperatively with counterparts from Mexico to implement emissions reductions strategies and projects for air quality improvements at the border. The two countries strive to achieve these goals through local input from states, county governments, and citizens. Within the Mexicali and Imperial Valley area, the Air Quality Task Force has been organized to address those issues unique to the border region known as the Mexicali/Imperial air shed. The Air Quality Task Force membership includes representatives from federal, State, and local governments from both sides of the border, as well as representatives from academia, environmental organizations, and the general public. This group was created to promote regional efforts to improve the air quality monitoring network, emissions inventories, and air pollution transport modeling development, as well as the creation of programs and strategies to improve air quality.

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 106 – Abatement. The Board may, after notice and a hearing, issue, or provide for the issuance by the Hearing Board, of an order for abatement whenever the District finds that any person is in violation of the rules and regulations limiting the discharge of air contaminants into the atmosphere.

Rule 107 – Land Use. The purpose of this rule is to provide ICAPCD the duty to review and advise the appropriate planning authorities within the District on all new construction or changes in land use which the Air Pollution Control Officer believes could become a source of air pollution problems.

Rule 201 – Permits Required. The construction, installation, modification, replacement, and operation of any equipment which may emit or control Air Contaminants require ICAPCD permits.

Rule 207 – New and Modified Stationary Source Review. Establishes preconstruction review requirements for new and modified stationary sources to ensure the operations of equipment does not interfere with attainment or maintenance of ambient air quality standards.

Rule 208 – Permit to Operate. The ICAPCD would inspect and evaluate the facility to ensure the facility has been constructed or installed and will operate to comply with the provisions of the Authority to Construct permit and comply with all applicable laws, rules, standards, and guidelines.

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 401 – Opacity of Emissions. Sets limits for release or discharge of emissions into the atmosphere, other than uncombined water vapor, that are dark or darker in shade as designated as No.1 on the Ringelmann Chart¹ or obscure an observer's view to a degree equal to or greater than smoke does as compared to No.1 on the Ringelmann Chart, for a period or aggregated period of more than three minutes in any hour.

¹ The Ringelmann scale is a scale for measuring the apparent density or opacity of smoke.

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.

Rule 407 – Nuisance. Rule 407 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 801 – Construction and Earthmoving Activities. Rule 801 aims to reduce the amount of PM₁₀ entrained in the ambient air as a result of emissions generated from construction and other earthmoving activities by requiring actions to prevent, reduce, or mitigate PM₁₀ emissions. This rule applies to any construction and other earthmoving activities, including, but not limited to, land clearing, excavation related to construction, land leveling, grading, cut and fill grading, erection or demolition of any structure, cutting and filling, trenching, loading or unloading of bulk materials, demolishing, drilling, adding to or removing bulk of materials from open storage piles, weed abatement through disking, back filling, travel on-site and travel on access roads to and from the site.

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 for 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 – 2020-2045 Regional Transportation *Plan/Sustainable Communities Strategy*

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.

On September 3, 2020, SCAG adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2020). The RTP/SCS or "Connect SoCal" includes a strong

commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the NAAQS as set forth by the federal CAA. The following SCAG goal is applicable to the project:

• Reduce greenhouse gas emissions and improve air quality.

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. Table 3.4-5 summarizes the project's consistency with the applicable air quality goal and objectives from the Conservation and Open Space Element. While this EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Applicable Policies	Consistency Determination	Analysis
Conservation and Open Space Element		
Protection of Air Quality and Addressing Climate Change Goal 7: The County shall actively seek to improve the quality of air in the region.	Consistent	The proposed project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed project would improve air quality and reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from fossil fuel burning facilities. Therefore, the proposed project is consistent with this goal.
Objective 7.1: Ensure that all project and facilities comply with current Federal, State and local requirements for attainment of air quality objectives.	Consistent	The proposed project would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard Measures (Applicant Proposed Measure AQ-1). Therefore, the proposed project is consistent with this objective.
Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Consistent	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard Measures (Applicant Proposed Measure AQ-1). Therefore, the proposed project is consistent with this objective.

Table 3.4-5. Project Consistency with Applicable Plan Policies

Source: County of Imperial 2016

3.4.3 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
- 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
- Result in other emissions (such as those leading to odors) adversely 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 2017b). 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

Air quality analyses should compare all operational emissions of a project, including motor vehicle, area source, and stationary or point sources to the thresholds in Table 3.4-6. Projects can be classified as either Tier 1 or Tier 2 projects, depending on the project's operational emissions. As shown in Table 3.4-6, Tier 1 projects are projects that emit less than 137 pounds per day of nitrogen oxide (NOx) or reactive organic gases (ROGs); less than 150 pounds per day of PM10 or SOx; 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 (ICAPCD 2017b). Alternatively, Tier 2 projects are projects that emit 137 pounds per day of NOx or ROG or greater; 150 pounds per day of PM₁₀ or SOx 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 (ICAPCD 2017b).

 Table 3.4-6. Imperial County Air Pollution Control District Significance Thresholds for

 Operation

Criteria Pollutant	Tier 1 Thresholds	Tier 2 Thresholds
NO _x and ROG	Less than 137 pounds per day	137 pounds per day and greater

Table 3.4-6. Imperial County Air Pollution Control District Significance Thresholds for	
Operation	

Criteria Pollutant	Tier 1 Thresholds	Tier 2 Thresholds
PM ₁₀ and SO ₂	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 2017b

 $CO - carbon monoxide; NO_x - nitrogen oxide; O_3 - ozone; Pb - lead; PM_{25} - particulate matter less than 2.5 microns in diameter; PM_{10} - particulate matter less than 10 microns in diameter; ROG - reactive organic gas; SOx - sulfur oxide$

CONSTRUCTION

For construction projects, the *Air Quality Handbook* indicates that the significance threshold for NO_x is 100 pounds per day and for ROG is 75 pounds per day. As discussed in the ICAPCD's *Air Quality 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. Table 3.4-7 presents the construction emission thresholds that are identified by ICAPCD.

Table 3.4-7. Imperial County	Air Pollution Control District Significance	• Thresholds
for Construction Activities		

Pollutant	Thresholds
PM ₁₀	150 pounds per day
ROG	75 pounds per day
NOx	100 pounds per day
СО	550 pounds per day

Source: ICAPCD 2017b

 $CO - carbon monoxide; NO_x - nitrogen oxide; PM_{10} - particulate matter less than 10 microns in diameter; ROG - reactive organic gas$

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 U.S. 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 (μ g/m³) 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 proposed project would result in both short-term and long-term emissions of air pollutants associated with construction and operation of the proposed project.

Construction emissions would include exhaust from the operation of conventional construction equipment, on-road emissions from employee vehicle trips and haul truck trips, fugitive dust as a result of grading, and vehicle travel on paved and unpaved surfaces.

Once fully constructed, the proposed project would be operated on an unstaffed basis and be monitored remotely from the Brawley Geothermal Power Plant control room, with periodic on-site personnel visitations for security, maintenance and system monitoring. Therefore, no full-time site personnel would be required on-site during operations and employees would only be on-site up to four times per year to wash the panels. As the project's PV arrays produce electricity passively, maintenance requirements are anticipated to be very minimal. Any required planned maintenance activities would generally consist of equipment inspection and replacement and would be scheduled to avoid peak load periods. Any unplanned maintenance would be responded to as needed, depending on the event. Operational emissions would include vehicle trips from employees who commute to and from the project site (i.e., to control site operation and perform equipment maintenance).

The ICAPCD's *Air Quality Handbook* establishes aggregate emission calculations for determining the potential significance of a project. In the event that the emissions exceed the established thresholds (Table 3.4-6 and Table 3.4-7), air dispersion modeling may be conducted to assess whether the project results in an exceedance of an air quality standard.

An air quality technical report was prepared by Vista Environmental (Appendix C of this EIR). This report was used in the evaluation of project-related construction and operational air quality impacts. The emissions of criteria air pollutants were estimated using methodologies recommended by the ICAPCD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2020.4.0.² Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults, with some refinements, for Imperial County as well as timing and equipment identified by the project proponent. The following On-Road Fugitive Dust construction parameters were revised in the CalEEMod model: (1) The percent on-road pavement was changed to 85 percent to account for Best Avenue that is adjacent to the project site being paved; and (2) The Material Silt Content was changed to 3 percent in order to account for ICAPCD Rule 805 F.1.c that requires the installation of gravel or other low silt material with less than 5 percent silt content on all onsite roads. Operational air pollutant emissions were based on the project site plan. Associated emissions calculations and assumptions are included in Appendix C of this EIR.

² CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

The air quality impacts are mainly attributable to construction phases of the project, including site preparation, facility installation, and gen-tie and site restoration. Operational impacts include inspection and maintenance operations, which includes washing of the solar panels.

Impact Analysis

Impact 3.4-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The air quality attainment plan (AQAP) for the SSAB, through the implementation of the air quality management plan (AQMP) (previously AQAP) and SIP for PM₁₀, 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. As the project does not contain a residential component, the project would not result in an increase in the regional population. While the project would contribute to energy supply, which is one factor of population growth, the proposed project is a solar energy project and would not significantly increase employment or growth within the region. Moreover, development of the proposed project would increase the amount of renewable energy and help California meet its RPS.

As shown in Table 3.4-5, the project is consistent with the applicable air quality goal and objectives from the Conservation and Open Space Element of the General Plan. The proposed project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed project would improve air quality by reducing the amount of emissions that would be generated in association with electricity production from fossil fuel burning facilities.

Furthermore, the thresholds of significance adopted by the air district (ICAPCD), determine compliance with the goals of the attainment plans in the region. As such, emissions below the ICAPCD regional mass daily emissions thresholds presented in Table 3.4-6 and Table 3.4-7 would not conflict with or obstruct implementation of the applicable air quality plans. 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 Emissions. Air emissions are generated during construction through activities. Two basic sources of short-term emissions will be generated through project construction: operation of heavy-duty equipment (i.e., excavators, loaders, haul trucks) and the creation of fugitive dust during clearing and grading. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. 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 8 months from the commencement of the construction process to complete. Construction activities would primarily involve demolition and grubbing, grading of the project site to establish access roads and pads for electrical equipment, trenching for underground electrical collection lines, and the installation of solar equipment and security fencing. The construction emissions were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Table 3.4-8 shows the maximum summer or winter daily emissions for each year of construction activities for the proposed project with implementation of ICAPCD's standard measures for fugitive dust (PM10) control and standard mitigation measures for construction combustion equipment from the ICAPCD's CEQA Air Quality Handbook (ICAPCD 2017b). These standard mitigation measures are identified in Applicant Proposed Measure (APM) AQ-1.

As shown in Table 3.4-8, with implementation of APM AQ-1, the project's daily construction emissions would not exceed the ICAPCD thresholds for ROG, NOx, CO, SO₂, PM₁₀, and PM_{2.5}. Although the proposed project would not exceed the ICAPCD threshold for NO_x, the project applicant would implement APM AQ-2, which requires the construction equipment list to be submitted periodically to ICAPCD to perform a NO_x analysis to verify that equipment use does not exceed significance thresholds. To further reduce dust emissions during project construction, the project applicant will implement APM AQ-3, which limits the speed of all vehicles operating onsite on dirt roads to 15 miles per hour or less. Implementation of APM AQ-1 through AQ-3 would provide reduction strategies to further improve air quality and ensure that this potential impact would remain less than significant.

	Pollutant (pounds per day)						
Construction Year	ROG	NOx	CO	SO₂	PM ₁₀	PM _{2.5}	
2021	6.11	51.82	39.73	0.08	67.20	12.54	
2022	4.57	39.74	36.41	0.12	128.90	14.44	
Maximum Daily Emissions	6.11	51.82	39.73	0.12	128.90	14.44	
ICAPCD Significance Threshold	75	100	550	Ι	150	—	
Exceed ICAPCD Significance Threshold?	No	No	No	No	No	No	

Table 3.4-8. Project Construction-Generated Emissions with Implementation of Imperial County Air Pollution Control District's Standard Measures for Fugitive Dust (PM₁₀) Control and Standard Mitigation Measures for Construction Combustion Equipment

Source: Appendix C of this EIR

Operational Emissions. The proposed project requires minimal operations and maintenance activities conducted by two employees. Project-generated increases in emissions would be predominately associated with motor vehicle use for routine maintenance work and site security as well as panel upkeep and cleaning. Long-term operational emissions attributable to the project are identified in Table 3.4-9 and compared to the operational significance thresholds promulgated by the ICAPCD.

	Pollutant (pounds per day)					
Activity	ROG	NOx	со	SO₂	PM ₁₀	PM _{2.5}
Area Sources ¹	5.35	0.00	0.04	0.00	0.00	0.00
Energy Usage ²	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources ³	0.17	0.18	1.31	0.00	2.35	0.27
Backup Generator ⁴	0.05	0.17	0.18	0.00	0.01	0.01
Total Emissions	5.57	0.35	1.53	0.00	2.35	0.28
ICAPCD Significance Threshold	137	137	150	550	550	150
Exceed ICAPCD Significance Threshold?	No	No	No	No	No	No

Table 3.4-9. Project Operational Emissions

Source: Appendix C of this EIR

Notes:

¹ Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

Energy usage consist of emissions from natural gas usage (no natural gas usage during operation of the project).

³ Mobile sources consist of emissions from vehicles and road dust.

⁴ Backup Generator based on a 20 kW (62 Horsepower) diesel generator that has a cycling schedule of 30 minutes per week.

As shown in Table 3.4-9, the project's operational emissions would not exceed the ICAPCD thresholds for CO, ROG, NOX, PM₁₀ and PM_{2.5}. The proposed project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the proposed project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. 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 operation in order to reduce fugitive dust emissions. Implementation of APM AQ-4 through AQ-6 would ensure that a Dust Suppression Management Plan is implemented, thereby ensuring that this potential impact would remain less than significant. To further reduce dust emissions during operation of the project, the project applicant will implement APM AQ-3, which limits the speed of all vehicles operating onsite on dirt roads to 15 miles per hour or less.

As described above, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections and comparing assumed emissions in the AQMP to proposed emissions. Because the proposed project complies with local land use plans and population projections and would not exceed ICAPCD's regional mass daily emissions thresholds during construction and operation, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. This is considered a less than significant impact.

Applicant Proposed Measure(s)

AQ-1 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. ICAPCD 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.

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.

- When commercially available, replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).
- AQ-2 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. The equipment list shall be submitted periodically to ICAPCD to perform a NOx analysis. 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-3 Speed Limit. During construction and operation of the proposed project, the applicant shall limit the speed of all vehicles operating onsite on dirt roads to 15 miles per hour or less.
- AQ-4 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-5 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-6 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.

Mitigation Measure(s)

No mitigation measures are required.

Significance After Mitigation

Although the proposed project would not exceed ICAPCD's significance thresholds, APM AQ-1 through AQ-6 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. Given the above, the proposed project would not conflict with implementation of applicable air quality plans, and impacts would be less than significant impact.

Impact 3.4-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an

applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)?

As shown in Table 3.4-2, the criteria pollutants for which the project area is in State non-attainment under applicable air quality standards are O₃ and PM₁₀. The ICAPCD's application of thresholds of significance for criteria air pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As discussed above in Impact 3.4-1, the emissions of criteria pollutants from project construction and operation activities are below the ICAPCD thresholds of significance. Furthermore, the proposed project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the proposed project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. Therefore, the project's potential to result in a cumulatively considerable net increase of any criteria pollutant is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.4-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

The nearest sensitive receptors to the project site include the following:

- Single-family homes approximately 40 feet to the north side of the project site, located near the northwest corner of the project site.
- Single-family residence on the east side of N Best Avenue, located near the northeast corner of the project site
- Single-family residence on the east side of N Best Avenue, located across the proposed project's primary access road
- Two single-family residences located at the northeast corner of the intersection of N Best Avenue and Ward Road
- Single-family residence (with a horse boarding/training facility) on the west side of N Best Avenue, located south of the project site)

The ICAPCD CEQA Guidelines detail that any development project that is located within close proximity to sensitive receptors and where the proposed project either 1) Has the potential to emit toxic or hazardous pollutant; or 2) Exceeds the ICAPCD criteria pollutant thresholds for construction and operation of the proposed project. In addition, any proposed industrial or commercial project located within 1,000 feet of a school must be referred to the ICAPCD for review.

As discussed above in Impact 3.4-1, the proposed project would not exceed the ICAPCD criteria pollutant threshold from either construction or operation of the proposed project. However, construction and operation of the proposed project would have the potential to emit TAC emissions, which have been analyzed separately below.

Toxic Air Contaminants Impacts from Construction. The greatest potential for toxic air contaminant emissions would be related to diesel particulate matter (DPM) emissions associated with heavy equipment operations during construction of the proposed project. According to CARB methodology,

health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk." "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. It should be noted that the most current cancer risk assessment methodology recommends analyzing a 30-year exposure period for the nearby sensitive receptors.

Given the relatively limited number of heavy-duty construction equipment, the varying distances that construction equipment would operate to the nearby sensitive receptors, and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 30 or 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. In addition, California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 regulates emissions from off-road diesel equipment in California. This regulation limits idling of equipment to no more than five minutes, requires equipment operators to label each piece of equipment and provide annual reports to CARB of their fleet's usage and emissions. This regulation also requires systematic upgrading of the emission Tier level of each fleet, and currently no commercial operator is allowed to purchase Tier 0 or Tier 1 equipment and by January 2023 no commercial operator is allowed to purchase Tier 2 equipment. In addition to the purchase restrictions, equipment operators need to meet fleet average emissions targets that become more stringent each year between years 2014 and 2023. By January 2022, 50 percent or more of all contractors' equipment fleets must be Tier 2 or higher. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project. As such, construction of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Operations-Related Sensitive Receptor Impacts. The proposed project would consist of the development of a solar facility with a BESS and a substation. Although the proposed solar PV panels, the lithium batteries utilized in the BESS, and the transformers utilized in the substation are made with toxic materials, only a negligible amount of TAC emissions are emitted from off-gassing from the PV panels, which would not create TAC concentrations high enough to create a significant cancer risk from TAC emissions. In addition, the proposed project would include a backup diesel generator, which would emit DPM emissions, which is categorized as a TAC. The backup diesel generator would be located in the southwest portion of the project site, where the nearest offsite sensitive receptor is a home on the east side of Best Avenue located approximately 1,900 feet to the east. Due to the distance that the nearest sensitive receptor, a less than significant TAC impact would occur from the backup diesel generator. Therefore, a less than significant TAC impact would occur during the ongoing operations of the proposed project.

In summary, construction and operation of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.4-4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

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 VOCs 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.

Potential sources that may emit odors during construction activities include the application of coatings such as asphalt pavement, paints and solvents and from emissions from diesel equipment. The project would comply with standard construction requirements which include limitations of when construction may occur. Furthermore, the proposed project would be required to adhere to ICAPCD Rule 407 which limits the discharge of any emissions that create odors in quantities that may cause a nuisance or annoyance to any considerable number of persons. As such, the objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the project site's boundaries. Through compliance with the applicable regulations that reduce odors and due to the transitory nature of construction odors, a less than significant odor impact would occur and no mitigation would be required.

The proposed project would consist of the development of a solar energy facility, which does not include any components that are a known sources of odors. Therefore, a less than significant odor impact would occur and no mitigation would be required.

Mitigation Measure(s)

No mitigation measures are required.

3.4.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. 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 3.4-8. Solar equipment has a lifespan of approximately 20 to 25 years. The emissions from on- and off-road equipment during decommissioning are expected to be significantly lower than project construction activity. 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. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate

stationary sources. 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. Operation of the project, subject to the approval of a CUP, would be consistent with applicable federal, state, regional, and local plans and policies. The project would not result in any residual operational significant and unavoidable impacts with regards to air quality.

3.5 Biological Resources

This section identifies the biological and aquatic jurisdictional resources that may be impacted by the proposed Brawley Solar Energy Project. The following identifies the existing biological and jurisdictional resources in the project area, analyzes potential impacts of the proposed project, and recommends mitigation measures to avoid or reduce potential impacts of the proposed project. The information for this section is summarized from the *Biological Technical Report for the Brawley Solar Project* prepared by Chambers Group Inc. (Appendix D of this EIR)

As part of the *Biological Resources Technical Report*, Chambers Group Inc. conducted a literature review, desktop survey, and biological reconnaissance survey of the project site to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wild life species, and to determine the potential impacts of the projects on biological resources.

For the purposes of this EIR, the term project survey area refers to the project site's boundaries, the area immediately along the proposed gen-tie line along Andre Road, and a portion of the existing North Brawley Geothermal Power Plant substation where the gen-tie line would interconnect.

3.5.1 Existing Conditions

Vegetation Communities and Land Cover Types

Nine vegetation communities were observed within the project survey area. The acreage of each vegetation community and land cover type within the project survey area is summarized in Table 3.5-1 and depicted in Figure 3.5-1. The majority of vegetation communities and land cover types mapped within the project survey area consisted of agriculture and bare ground.

Vegetation Community or Land Cover Type	Acres within Project Survey Area ^a
Quail Bush Scrub*	4.86
Agricultural	91.96
Bare Ground	148.07
Developed	4.40
Disturbed	6.38
Bush Seepweed Scrub*	3.52
Arrow Weed Thickets*	6.23
Ornamental	1.87
Tamarisk Thickets	5.16
Project Survey Area Total	272.45

Table 3.5-1. Vegetation Communities or Land Cover	Types within the Project Survey
Area	

Source: Appendix D of this EIR

^a Vegetation and land cover type acreages are rounded to the nearest hundredth acre.

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Figure 3.5-1. Vegetation Communities and Land Cover Types in the Project Survey Area

3.5 Biological Resources Draft EIR | Brawley Solar Energy Facility Project

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Detailed descriptions of the applicable vegetation communities and land cover types occurring within the project survey area are described below.

QUAIL BUSH SCRUB

Quail bush scrub is dominated by quail bush with scattered bush seepweed (*Sueda nigra*) present in areas where the habitat gently slopes into more alkaline soils. The shrub layer is thick and continuous with a nonexistent herbaceous layer. Stands occur in areas where less alkaline or saline soils are present, favoring clay soils and more consistent topography where water does not accumulate easily. Plant species observed within the project site included bush seepweed, big saltbush, and spiny chlorocantha (*Chloracantha spinosa*).

AGRICULTURAL

Large swaths of the project site consist of plots of agricultural fields that are no longer in use. Bermuda grass (*Cynodon dactylon*) is found in these areas with alfalfa (*Medicago sativa*) seedlings in lower numbers. Agricultural fields are similar to Bare Ground habitat where areas have higher water permeability and higher fossorial rodent habitat potential.

Mexican palo verde are planted along the outside of several agriculture fields to serve as wind breaks for agricultural purposes and are considered agricultural habitat. Trees are mature, averaging 15 meters in height and are continuously planted alongside the agricultural fields. Isolated honey mesquite (*Prosopis glandulosa*) shrubs were also observed along the northwestern portion of the poroject site along the tree line. Other plant species observed within the project site included alfalfa (*Medicago sativa*), Mexican palo verde, big saltbush, and tamarisk.

BARE GROUND

Bare Ground areas are generally devoid of vegetation but do not contain any form of pavement. Bare Ground has higher water permeability and higher fossorial rodent habitat potential. Bare Ground is present throughout the entire project site, with small patches between agricultural land and long swaths that include dirt access roads that receive very little use. Isolated alfalfa was the only vegetation observed in these areas.

DEVELOPED

Developed areas are areas that have been altered by humans and now display man-made structures such as urban areas, houses, paved roads, buildings, parks, and other maintained areas.

DISTURBED

Disturbed areas generally have altered topography and soils due to man-made reasons, usually pertaining to development or agricultural purposes. Any shrubs in the shrub canopy are isolated, and the herbaceous layer is sparse to intermittent with pockets of advantageous non-native species that spread from a singular location. Species observed included Bermuda grass (*Cynodon dactylon*), Mediterranean schismus (*Schismus barbatus*), and lamb's quarters (*Chenopodium album*).

BUSH SEEPWEED SCRUB

Bush seepweed is dominant in the shrub canopy with scattered quail bush present. The shrub layer is intermittent to continuous with an herbaceous layer that is very sparse. Stands occur in gently sloping plains bordering agricultural fields or irrigation ditches and areas with disturbed hydrology due to man-

made alteration. Soils are deep and saline or alkaline. Species observed within the project site included bush seepweed and big saltbush.

ARROYO WEED THICKETS

The shrub canopy is intermittent to continuous with shrubs reaching 2 to 3 meters in height. Vegetation is dominated by arrow weed and extends along the water feature, occasionally extending over the bank and into the access road. The herbaceous layer is open and intermittent, existing in between stands of cattail and arrow weed. The habitat exists in irrigation ditches consisting of soils that are sandy and loamy where water is permeable. Plant species observed included arrow weed, tamarisk, cattail, big saltbush, saltgrass (*Distichlis spicata*), and salt heliotrope (*Heliotropium curassavicum*).

ORNAMENTAL

Ornamental Landscaping includes areas where the vegetation is dominated by non-native horticultural plants. Typically, the species composition consists of introduced trees, shrubs, flowers, and turf grass.

TAMARISK THICKETS

Tamarisk dominates the tree canopy and is thick and continuous. This non-native shrub layer is sparse with isolated quail bush present, while the herbaceous layer contains very little vegetation. Trees average 15 meters in height and exist in irrigation ditches or on the upper banks along water features. Species observed within the project site included tamarisk and big saltbush.

Sensitive Natural Communities

Quailbush scrub, bush seepweed scrub, and arrow weed thickets occur within the project survey area and are considered sensitive natural communities by CDFW (CDFW 2021).

Special-Status Species

Literature Review

Prior to conducting field surveys, a literature search was conducted to identify special-status plant and animal species with potential to occur within the project survey area. Special-status plants and animal species were evaluated for their potential to occur within the project survey area where impacts could potentially occur.

Using information from the literature review and observations in the field, a list of special-status plant and animal species that have potential to occur within the project survey area was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal or California ESAs;
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California FGC Sections 3511, 4700, 5050, or 5515; and
- are of expressed concern to resource and regulatory agencies or local jurisdictions.

Biological Reconnaissance Survey

Chambers Group biologists conducted the general reconnaissance survey within the project site to identify the potential for occurrence of sensitive species, vegetation communities, or habitats that could

support sensitive wildlife species, including those identified in the literature review. The survey was conducted on foot throughout the project site between on October 22, 2020 to identify the potential for occurrence of sensitive species, vegetation communities, or habitats that could support sensitive wildlife species. Plant and wildlife species, including any special-status species that were observed during the survey, were recorded (see Appendix D of this EIR).

Potential for Occurrence Determinations

Special-status species reported for the region in the literature review or for which suitable habitat occurs on the BSAs were assessed for their potential to occur based on the following guidelines listed in Table 3.5-2.

Potential for Occurrence	Criteria
Absent:	Species is restricted to habitats or environmental conditions that do not occur within the project site. Additionally, if the survey was conducted within the blooming period of the species and appropriate habitat was observed in the surrounding area but the species was not observed within the Project impact area, it was considered absent.
Low:	Historical records for this species do not exist within the immediate vicinity (approximately 5 miles) of the project site, and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate:	Either a historical record exists of the species within the immediate vicinity of the project site (approximately 3 miles) and marginal habitat exists on the project site, or the habitat requirements or environmental conditions associated with the species occur within the project site, but no historical records exist within 5 miles of the Project site.
High:	Both a historical record exists of the species within the project site or its immediate vicinity (approximately 1 mile), and the habitat requirements and environmental conditions associated with the species occur within the project site.
Present:	Species was detected within the project site at the time of the survey.

Table 2 5 2	Critoria	for Evaluating	Soncitivo	Spacias	Dotontial	for Occur	ronco
I able 3.3-2.	Griteria		Sensitive	Species	F Ulenliai		rence

Source: Appendix D of this EIR

Plant Species

Numerous special-status plant species have been recorded within project site, according to the CNDDB and CNPSEI. Special-status plant species identified in the literature review, and their potential to occur within the project site are discussed below.

Available records resulted in a list of five federally and/or state listed threatened and endangered or rare sensitive plant species that may potentially occur within the project site. After the literature review and the reconnaissance-level survey, it was determined that one species had a low potential to occur, and four of these species are considered Absent from the project site due to lack of suitable habitat.

The following four plant species are considered **absent** from the project site due to lack of suitable habitat:

- gravel milk-vetch (Astragalus sabulonum)
- Munz's cholla (Cylindropuntia munzii)
- glandular ditaxis (*Ditaxis claryana*)
- Thurber's pilostyles (*Pilostyles thurberi*)

The following species that is considered to have a **low potential** to be observed in the project site due to lack of suitable habitat includes:

• Abram's spurge (*Euphorbia abramsiana*). Abram's spurge is an annual herb in the spurge family that mostly exists in Sonoran or Mojave Desert habitats, favoring sandy flats where water is permeable. Although the habitats available at the project site are not typically where this plant would grow, it has the low potential to occur in fields, irrigation ditches, and other disturbed areas that all exist within the project site. In addition, this species was positively identified less than 2 miles from the project site. This identification, however, was made before 1940 and the population is presumed to be extirpated due to agricultural and residential development.

Wildlife Species

A database search resulted in a list of 23 federally and/or state listed endangered or threatened, Species of Concern, or otherwise sensitive wildlife species that may potentially occur within the project site. After a literature review and the assessment of the various habitat types within the project site, it was determined that 17 sensitive wildlife species were considered absent from the project site, three species have a low potential to occur, two species have a high potential to occur, and one species was present within the project site. Factors used to determine potential for occurrence included the quality of habitat and the location of prior CNDDB records of occurrence.

The following 17 wildlife species are considered **absent** from the project site due to lack of suitable habitat present on the project site:

- American badger (*Taxidea taxus*)
- black skimmer (*Rynchops niger*)
- California black rail (Laterallus jamaicensis coturniculus)
- Colorado Desert fringe-toed lizard (Uma notata)
- crissal thrasher (*Toxostoma crissale*)
- desert pupfish (*Cyprinodon macularius*)
- Gila woodpecker (*Melanerpes uropygialis*)
- gull-billed tern (*Gelochelidon nilotica*)
- Le Conte's thrasher (*Toxostoma lecontei*)
- lowland leopard frog (Lithobates yavapaiensis)
- Palm Springs pocket mouse (*Perognathus longimembris bangsi*)
- razorback sucker (*Xyrauchen texanus*)
- Sonoran Desert toad (*Incilius alvarius*)
- western snowy plover (Charadrius alexandrinus nivosus)
- yellow warbler (Setophaga petechia)
- Yuma hispid cotton rat (Sigmodon hispidus eremicus)
- Yuma Ridgway's rail (*Rallus obsoletus yumanensis*)

The analysis of the CNDDB search and field survey resulted in three species with a **low** potential to occur on the project site due to low quality habitat:

- flat-tailed horned lizard (*Phrynosoma mcallii*)
- short-eared owl (Asio flammeus)
- western yellow bat (*Lasiurus xanthinus*)

The analysis of the CNDDB search and field survey resulted in two species with a **high** potential to occur on the project site. These species are described below:

- Burrowing owl. The burrowing owl (BUOW) is a California Species of Special Concern. The burrowing owl breeds in open plains from western Canada and the western United States, Mexico through Central America, and into South America to Argentina. This species inhabits dry, open, native or non-native grasslands, deserts, and other arid environments with low-growing and low-density vegetation. It may occupy golf courses, cemeteries, road rights-of way, airstrips, abandoned buildings, irrigation ditches, and vacant lots with holes or cracks suitable for use as burrows. Burrowing owls typically use burrows made by mammals such as California ground squirrels (*Otospermophilus beecheyi*), foxes, or badgers. When burrows are scarce, the burrowing owl may use man-made structures such as openings beneath cement or asphalt pavement, pipes, culverts, and nest boxes. High quality habitat exists within the project site. In addition, burrowing owl have recently been recorded within 0.14 mile of the project site. Therefore, this species has a high potential to occur within the project site.
- Mountain plover. The mountain plover (wintering) is a California Species of Special Concem and a federally Proposed Threatened Species. This species breeds from the prairie and sagebrush country of north-central Montana, eastern Wyoming, and the area around southeastern Colorado. It winters from central California along the southern border southward to northern Mexico. Common wintering habitats consist of dry, barren ground, smooth dirt fields, agricultural fields, and shortgrass prairies. This species tends to form small flocks in the winter. It is one of the few shorebird species that prefers habitats away from water. The project site contains suitable habitat of moderate to high quality. In addition, mountain plover have been recorded to occur within 1 mile of the project site. Therefore, this species has a high potential to occur with the project site.

One species was **present** within and directly adjacent to the project site during the survey. In addition, this species has been recorded to nest within and surrounding the project site. This species is described below:

Loggerhead shrike. The loggerhead shrike (nesting) is a California Species of Special Concern. Habitats may include oak savannas, open chaparral, desert washes, juniper woodlands, Joshua tree woodlands, and other semi-open areas. It can occupy a variety of semi-open habitats with scattered trees, large shrubs, utility poles, and other structures that serve as lookout posts while searching for potential prey. Loggerhead shrikes prefer dense, thorny shrubs and trees, brush piles, and tumbleweeds for nesting. During the survey, one individual was observed just outside the northwest boundary of the project site, and an additional individual was observed within the southwest portion of the project site. In addition, suitable nesting and foraging habitat is present within and directly adjacent to the project site.
Aquatic Resources

A general assessment of jurisdictional waters regulated by the Porter-Cologne Water Quality Act, California Fish and Game Code Sections 1600 and 1602, United States Army Corps of Engineers (USACE), and California Regional Water Quality Control Board (RWQCB) was conducted for the project site. The assessment was conducted by a desktop survey through the USGS National Hydrography Dataset for hydrological connectivity.

The western portion of the project site is located within the New River watershed (Hydrologic Unit Code [HUC-10] 1810020411) and within the Federal Emergency Management Agency (FEMA) 100year flood zone. The New River watershed at the project site is bordered to the south by Imperial Valley, to the west by the Vallecito Mountains, to the north by the Salton Sea, and to the east by the Chocolate Mountains. The New River is the major water source for the watershed, which drains into the Salton Sea. Along its watercourse, several tributaries, including mostly agricultural drains and canals discharge into the New River.

The eastern portion of the project site is located within the Alamo River watershed (HUC-10 1810020408) and is within the FEMA 100-year flood zone. The Alamo River is the major water source for the watershed, which also drains into the Salton Sea. The primary tributaries to the Alamo River are agricultural drains and canals. Both rivers are known to be heavily polluted with agricultural and bacterial toxins.

Several jurisdictional and non-jurisdictional features were observed within the project survey area. The New River, a National Wetlands Inventory (NWI) mapped blueline, flows through the middle portion of the project survey area (Figure 3.5-2). In addition, several NWI mapped blueline canals, drains, and ditches owned by IID flow along the borders of the project survey area. The locations of the features observed during the field survey are shown in Figure 3.5-3.



Figure 3.5-2. NWI Mapped Waters in Project Survey Area

Source: Appendix D of this EIR



Figure 3.5-3. Jurisdictional Waters in the Project Survey Area

Source: Appendix D of this EIR

WETLAND FEATURES

Feature 1 (IID "Spruce Three Drain"). This feature occurs along the proposed gen-tie line located in the southwest portion of the project site along Andre Road. The Spruce Three drain is a mapped NWI stream (Riverine Intermittent Stream Bed, Seasonally Flooded, Excavated). The drainage is manmade and receives flow from surface runoff from Andre Road and surrounding agricultural fields. Bankto-bank measurements ranged from 13 to 80 feet.

Ordinary High Water Mark (OHWM) measurements ranged from 6 to 40 feet. The drain flows into the project site from the west at Hovley Road along the south side of Andre Road, flows east for approximately 0.50 mile and crosses under Andre Road to the north side of the road, and appears to continue to flow eastward until it empties into the New River, which terminates at the Salton Sea. The feature is lined with riparian vegetation dominated by arrow weed (Pluchea sericea) a Facultative Wetland (FACW) species, meaning one that usually occurs in wetlands but is also found in non-wetlands.

Feature 2. This feature occurs along the gen-tie line portion of the project site, on the north side of Andre Road. Feature 2 is a man-made, unvegetated cement-lined ditch. Bank-to-bank measured 10 feet; the OHWM measured 4 feet. The feature flows into the project site from the west for approximately 0.50 mile, where it appears to connect to the Spruce Three Drain. Feature 2 receives flow from road runoff and agricultural runoff from the surrounding agricultural fields.

Feature 3 (New River). This feature flows through the eastern portion of the gen-tie line. The New River is an NWI mapped blueline wetland riverine system (Riverine Lower Perennial, Unconsolidated Bottom Wetland, Permanently Flooded). Bank-to bank-measurements ranged from 110 to 170 feet. OHWM measurements ranged from 42 to 107 feet. The river flows south to north from Mexico and terminates in the Salton Sea. Within the project site, the vegetation along the banks of the river consists completely of tamarisk (*Tamarix* spp.) a Facultative (FAC) species, one that is equally likely to occur in wetlands or non-wetlands.

Feature 4 (IID "Livesly Drain"). This feature occurs east of the New River in the eastern portion of the gen-tie line. The Livesly Drain is a NWI mapped blueline stream. This feature is man-made and receives flow from agricultural runoff. The Livesly Drain flows into the project site from the east, turns north, and exits into the New River. Bank-to-bank measurements ranged from 20 to 120 feet. The OHWM measurements ranged from 13 to 20 feet. The portion of the drainage within the project site is composed completely of tamarisk.

Feature 5 (IID "Oakley Canal"). This feature occurs just south of the Livesly Drain. The Oakley Canal is a NWI mapped blueline stream (Riverine Intermittent Stream Bed, Seasonally Flooded, Excavated). Feature 5 is man-made and receives flow from agricultural runoff. The Oakley Canal flows south to north and empties into the Livesly Canal. Bank-to-bank measurements ranged from 25 feet to 48 feet. OHWM measured 15 feet. The vegetation along the banks of Feature 5 consists primarily of tamarisk.

Feature 6 (IID "Best Canal"). This feature occurs along the eastern border of the project site on the west side of N Best Avenue. The canal is a NWI mapped blueline stream (Riverine Intermittent Stream Bed, Seasonally Flooded, Excavated) that receives flow from agricultural and road run-off. Bank-tobank the canal measured 15 feet; OHWM measured 5 feet. The canal is unvegetated throughout the project site and flows south to north, exits the project site, turns west and eventually empties into the New River. **Feature 7.** This feature occurs in the southeast portion of the project site on the south side of Andre Road along the gen-tie line. Feature 7 consists of two man-made detention ponds with riparian vegetation and are mapped NWI wetlands (Palustrine Unconsolidated Bottom Wetland, Permanently Flooded, Excavated). The vegetation within Feature 7 is dominated by tamarisk and cattail (*Typha* spp.), an Obligate (OBL) species, one that almost always occurs naturally in wetlands. In addition, arrow weed and big saltbush (*Atriplex lentiformis*), also known as quail bush, a FAC species, were observed.

MANMADE FEATURES

Several man-made unvegetated ditches were observed throughout the project site. When a field is irrigated, water is allowed to flow through smaller man-made earthen or concrete-lined ditches (typically referred to as a "head ditch"), which distributes the water evenly across the field. At the opposite, lower elevation side of the field, excess water is collected into another ditch (typically referred to as a "tail ditch").

The ditches present on the project site are both earthen and concrete-lined and are frequently rebuilt when the fields are plowed and disked. These ditches occur primarily along the edges of the agricultural fields and across portions of the fields. None of these ditches connect directly to a major feature, and most terminate at small, man-made detention areas. Therefore, these features are not considered jurisdictional under CDFW, RWQCB, or USACE.

The Imperial County Fire Department (ICFD) Fire Prevention Bureau requires two points of emergency access for the project along the west side of the railroad tracks. One access route may be extended from the main access road located off N Best Avenue utilizing an existing access road that crosses over a concrete lined channel and a second access route is proposed to be constructed in the northwest portion of the project site crossing over a non-jurisdictional irrigation ditch. Vegetation within this feature comprised of quail bush, and non-native Mexican palo verde (*Parkinsonia aculeata*) and tamarisk.

Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor is varied, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges, for example. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. Naturally, the nature of corridor use and wildlife movement patterns varies greatly among species.

Habitat Conservation Plans

The project site is located within the designated boundaries of the Desert Renewable Energy Natural Community Conservation Plan & Habitat Conservation Plan (NCCP/HCP). However, the project is not located within or adjacent to an Area of Critical Environmental Concern.

3.5.2 Regulatory Setting

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

Federal

Bald and Golden Eagle Protection Act of 1940

The Bald Eagle Protection Act of 1940 protects bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. '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" (72 *Federal Register* [FR] 31132; 50 CFR 22.3). All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this Act.

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) protects federally listed threatened and endangered species and their habitats from unlawful take and ensures that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. 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. The U.S. Fish and Wildlife Service (USFWS) regulations define harm to mean "an act which actually kills or injures wildlife" (50 CFR 17.3).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits 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. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

Section 404 Permit (Clean Water Act)

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredge and fill material into waters of the U.S., including wetlands, without a permit from the U.S. Army Corps of Engineers (USACE). 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.

State

California Endangered Species Act

Provisions of CESA protect state-listed threatened and endangered species. The California Department of Fish and Wildlife (CDFW) regulates activities that may result in "take" of individuals ("take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code (FGC). Additionally, California FGC contains lists of vertebrate species designated as "fully protected" (California FGC Sections 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], 5515 [fish]). Such species may not be taken or possessed.

In addition to state-listed species, CDFW has also produced a list of Species of Special Concern to serve as a "watch list." Species on this list are of limited distribution or the extent of their habitats has been reduced substantially such that threats to their populations may be imminent. Species of Special Concern may receive special attention during environmental review, but they do not have statutory protection.

Birds of prey are protected in California under California FGC. Section 3503.5 states it is "unlawful to take, possess, or destroy any birds of prey (in the order Falconiformes or Strigiformes) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment.

California Fish and Game Code Section1600 et. seq (as amended)

The California FGC Section 1600 et. seq. requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement (SAA). Often, projects that require an SAA also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the SAA may overlap.

California Fish and Game Code Sections 3503, 3503.5, and 3513

Under Sections 3503, 3503.5, and 3513 of the California FGC, activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory nongame bird as designated by the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to FGC Section 3800 are prohibited. 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.

California Fish and Game Code Sections 1900-1913 (Native Plant Protection Act)

California's Native Plant Protection Act prohibits the taking, possessing, or sale within the state of any plant listed by CDFW as rare, threatened, or endangered. This allows CDFW to salvage listed plant species that would otherwise be destroyed.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, all projects proposing to discharge waste that could affect waters of the State must file a waste discharge report with the appropriate regional board. The project falls under the jurisdiction of the Colorado River RWQCB.

California Environmental Quality Act

Title 14 CCR, Section 15380 requires the identification of endangered, rare, or threatened species or subspecies of animals or plants that may be impacted by a project. If any such species are found, appropriate measures should be identified to avoid, minimize, or mitigate the potential effects of projects.

Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan 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 this element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public and to protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and for public health and safety. In addition, the purpose of this 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. Table 3.5-3 analyzes the consistency of the project with specific policies contained in the Imperial County General Plan associated with biological resources.

General Plan Policies	Consistency with General Plan	Analysis
 Conservation and Open Space Element - Open Space and Recreation Conservation Policy No. 2 - The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County. 	Consistent	A biological assessment has been conducted at the project site to evaluate the proposed project's potential impacts on biological resources. Implementation of the proposed project has the potential to impact special-status wildlife species, including burrowing owl, mountain plover, and loggerhead shrike.
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.		Applicable agencies responsible for protecting plants and wildlife will be notified of the proposed projects and provided an opportunity to comment on this EIR prior to the County's consideration of any approvals for the project. As described in Chapter 2, Project Description, implementation of the project would require the approval of a CUP, General Plan Amendment, and Zone Change by the County to allow for the construction and operation of the project.
Conservation of Environmental Resources for Future Generations Goal 1 - Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value. Objective 1.6 - Promote the conservation of ecological sites and preservation of cultural resource sites through scientific investigation and public education.	Consistent	A biological assessment has been conducted at the project site to evaluate the project's potential impacts on biological resources. Implementation of the proposed project has the potential to impact special-status wildlife species, including burrowing owl, mountain plover, and loggerhead shrike. However, with implementation of mitigation (Mitigation Measures BIO-1 through BIO-4), the project would not result in residual significant or unmitigable impacts on biological resources.

Source: County of Imperial 1993

3.5.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering the respective project's impacts on 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 or USFWS

- Have a substantial adverse effect on state or federally-protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, 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 2, Project Description, to interact with local biological resources 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.

A biological resources technical report was prepared for the project. 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 3.5-1 Would the project 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?

Construction

SPECIAL-STATUS PLANTS

One plant species, Abram's spurge, has a low potential to occur on the project site. However, the project site has low quality habitat for this species and this plant species has not been recorded within 3 miles of the project site in the last 25 years. Therefore, no impacts to these species are anticipated to occur due to project related construction activities.

SPECIAL-STATUS WILDLIFE

Three species have a low potential to occur (flat-tailed horned lizard, short-eared owl, and western yellow bat), two species have a high potential to occur (BUOW and mountain plover), and one species (loggerhead shrike) was present within the project site. During the site reconnaissance, two loggerhead shrikes were observed within the project site.

Flat-tailed horned lizard, short-eared owl, and western yellow bat have a low potential to occur on the project site. However, low quality habitat for these species occurs within the project site and none of these species have been recorded within the project site within the last 25 years. Therefore, no impacts to these species are anticipated to occur as a result of project activities.

Burrowing owl and mountain plover are considered to have a high potential to occur within the project site. Two loggerhead shrikes were observed within the project site. Direct impacts to these species that could occur include injury, mortality, nest failures, and loss of young. Indirect impacts include loss of nesting and foraging habitat, increase in anthropogenic effects (i.e., noise levels, introduction of invasive and nonnative species, increase in human activity, increase in dust). Implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4 would reduce potential impacts to a level less than significant. Mitigation Measure BIO-1 requires implementation of general impact avoidance and minimization measures during construction such as designating a Project Biologist to oversee compliance with protective measures for biological resources, delineating construction zones, and working and traveling only in designated work areas and access roads. Mitigation Measure BIO-2 requires that all construction personnel to complete a Worker Environmental Awareness Program prior to the start of construction. Mitigation Measure BIO-3 requires pre-construction surveys for burrowing owl. If burrowing owl is identified during the breeding season (February 1 through August 31), then an appropriate buffer will be established by the biological monitor in accordance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012). Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until young have fledged. Mitigation Measure BIO-4 required a pre-construction nesting bird survey to be conducted by a gualified avian biologist to ensure that active bird nests, including those for the loggerhead shrike and mountain plover will not be disturbed or destroyed.

Operation

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. Additionally, based on the Avian Powerline Interaction Committee's (APLIC) 1996 report on power line electrocution in the U.S., 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. Therefore, no impact to avian is anticipated to occur due to electrocution along the proposed gen-tie line.

Mitigation Measure(s)

- **BIO-1** General Impact Avoidance and Minimization Measures. The following measures will be applicable throughout the life of the project:
 - To reduce the potential indirect impact on migratory birds, bats and raptors, the project will comply with the APLIC 2012 Guidelines for overhead utilities, as appropriate, to minimize avian collisions with transmission facilities (APLIC 2012)
 - 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 project proponent shall designate a Project Biologist who shall be responsible for overseeing compliance with protective measures for the biological resources during vegetation clearing and work activities within and adjacent to areas of native habitat. The Project Biologist will be familiar with the local habitats, plants, and wildlife. The Project Biologist will also maintain communications with the Contractor to ensure that issues relating to biological resources are appropriately and lawfully managed and monitor construction. The Project Biologist will monitor activities within construction areas during critical times, such as vegetation removal, the implementation of Best Management Practices (BMP), and installation of security fencing to protect native species. The Project Biologist will ensure that all wildlife and regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed.
- 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. Alternatively, man-made ramps may be installed. 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 retention basins will be removed to avoid attracting wildlife to the active work areas.
- To minimize the likelihood for vehicle strikes on wildlife, speed limits will not exceed 15 miles per hour when driving on access roads. All vehicles required for O&M must remain on designated access/maintenance roads.
- Avoid night-time construction lighting or if nighttime construction cannot be avoided use shielded directional lighting pointed downward and towards the interior of the

project site, thereby avoiding illumination of adjacent natural areas and the night sky.

- All construction equipment used for the project will be equipped with properly operating and maintained mufflers.
- Hazardous materials and equipment stored overnight, including small amounts of fuel to refuel hand-held equipment, will be stored within secondary containment when within 50 feet of open water to the fullest extent practicable. Secondary containment will consist of a ring of sand bags around each piece of stored equipment/structure. A plastic tarp/visqueen lining with no seams shall be placed under the equipment and over the edges of the sandbags, or a plastic hazardous materials secondary containment unit shall be utilized by the Contractor.
- The Contractor will be required to conduct vehicle refueling in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species. Any fuel containers, repair materials, including creosote-treated wood, and/or stockpiled material that is left on site overnight, will be secured in secondary containment within the work area and staging/assembly area and covered with plastic at the end of each work day.
- In the event that no activity is to occur in the work area for the weekend and/or a period of time greater than 48 hours, the Contractor will ensure that all portable fuel containers are removed from the project site.
- All equipment will be maintained in accordance with manufacturer's recommendations and requirements.
- Equipment and containers will be inspected daily for leaks. Should a leak occur, contaminated soils and surfaces will be cleaned up and disposed of following the guidelines identified in the Stormwater Pollution Prevention Plan or equivalent, Materials Safety Data Sheets, and any specifications required by other permits issued for the project.
- The Contractor will utilize off-site maintenance and repair shops as much as possible for maintenance and repair of equipment.
- If maintenance of equipment must occur onsite, fuel/oil pans, absorbent pads, or appropriate containment will be used to capture spills/leaks within all areas. Where feasible, maintenance of equipment will occur in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species.
- Appropriate BMPs will be used by the Contractor to control erosion and sedimentation and to capture debris and contaminants from bridge construction to prevent their deposition in waterways. No sediment or debris will be allowed to enter the creek or other drainages. All debris from construction of the bridge will be contained so that it does not fall into channel. Appropriate BMPs will be used by the Contractor during construction to limit the spread of resuspended sediment and to contain debris.

- Erosion and sediment control devices used for the proposed project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.
- Firearms, open fires, and pets would be prohibited at all work locations and access roads. Smoking would be prohibited along the project alignment.
- Cross-country vehicle and equipment use outside of approved designated work areas and access roads shall be prohibited to prevent unnecessary ground and vegetation disturbance.
- 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 County, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery.
- Stockpiling of material will be allowed only within established work areas.
- Actively manage the spread of noxious weeds
- The ground beneath all parked equipment and vehicles shall be inspected for wildlife before moving.
- **BIO-2** Worker Environmental Awareness Program. Prior to project construction, a Worker Environmental Awareness Program shall be developed and implemented by a qualified biologist and shall be available in both English and Spanish. Handouts summarizing potential impacts to special-status biological resources and the potential penalties for impacts to these resources shall be provided to all construction personnel. At a minimum, the education program shall including the following:
 - the purpose for resource protection;
 - a description of special-status species including representative photographs and general ecology;
 - occurrences of USACE, RWQCB, and CDFW regulated features in the project survey area;
 - regulatory framework for biological resource protection and consequences if violated
 - sensitivity of the species to human activities;
 - avoidance and minimization measures designed to reduce the impacts to special-status biological resources
 - environmentally responsible construction practices;
 - reporting requirements;
 - the protocol to resolve conflicts that may arise at any time during the construction process; and

- workers sign acknowledgement form indicating that the Environmental Awareness Training and Education Program that has been completed and would be kept on record.
- BIO-3 Burrowing Owl Avoidance and Minimization. Take avoidance (pre-construction) surveys for burrowing owl shall be completed prior to project construction. Surveys shall be conducted as detailed within Appendix D of the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012). If burrowing owl is not detected, construction may proceed.
 - If burrowing owl is identified during the non-breeding season (September 1 through January 31), then a 50-meter buffer will be established by the biological monitor. Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until a CDFW-approved exclusion plan has been implemented. The buffer distance may be reduced if noise attenuation buffers such as hay bales are placed between the occupied burrow and construction activities.
 - If burrowing owl is identified during the breeding season (February 1 through August 31), then an appropriate buffer will be established by the biological monitor in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until young have fledged. The buffer distance may be reduced in consultation with CDFW if noise attenuation buffers such as hay bales are placed between the occupied burrow and construction activities.
- **BIO-4 Pre-Construction Nesting Bird Survey.** If construction or other project activities are scheduled to occur during the bird breeding season (typically February 1 through August 31 for raptors and March 15 through August 31 for the majority of migratory bird species), a pre-construction nesting-bird survey shall be conducted by a qualified avian biologist to ensure that active bird nests, including those for the loggerhead shrike and mountain plover will not be disturbed or destroyed.

The survey shall be completed no more than three days prior to initial ground disturbance. The nesting-bird survey shall include the project site and adjacent areas where project activities have the potential to affect active nests, either directly or indirectly due to construction activity or noise. If an active nest is identified, the biologist shall establish an appropriately sized disturbance-limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance-limit buffer zones until the nest is deemed inactive by the qualified biologist. If construction activities cease for a period of greater than three days during the bird breeding season, a pre-construction nesting bird survey shall be conducted prior to the commencement of activities.

Final construction buffers or setback distances shall be determined by the qualified biologist in coordination with USFWS and CDFW on a case-by-case basis, depending on the species, season in which disturbance shall occur, the type of disturbance, and other factors that could influence susceptibility to disturbance (e.g., topography, vegetation, existing disturbance levels, etc.).

Significance After Mitigation

The proposed project has the potential to impact special-status wildlife species during construction. However, implementation of Mitigation Measures BIO-1 through BIO-4 would reduce potential impacts to a level less than significant.

Impact 3.5-2 Would the project 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 or USFWS?

Quailbush scrub, bush seepweed scrub, and arrow weed thickets occur within the project survey area and are considered sensitive natural communities by CDFW (CDFW 2021). The proposed project has been designed to avoid these sensitive natural communities. Access routes would be constructed in an area that will avoid or minimize impacts to native vegetation found within the irrigation ditch, and flagging and/or staking would be used to clearly define the work area boundaries to avoid impacts to adjacent native communities. Therefore, the proposed project would have no impact on sensitive natural communities.

Mitigation Measure(s)

No mitigation is required.

Impact 3.5-3 Would the project have a substantial adverse effect on state or federally-protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means?

As shown in Figure 3.5-2 and Figure 3.5-3, several jurisdictional features were observed within the project site. The New River, a NWI mapped blueline, flows through the middle portion of the project site. In addition, several NWI mapped blueline canals, drains, and ditches owned by IID flow along the borders of the project site. However, the proposed project has been designed to avoid impacts to waters of the State and waters of the U.S. As shown on the Site Plan (Figure 2-3), project components would not be sited on the project site where aquatic resources are present.

The emergency access route from the northwest portion of the project site will be designed to cross a non-jurisdictional agricultural ditch. Potential access route options include converting a non-vegetated portion of an open cement culvert to a corrugated metal pipe (CMP) or a closed concrete pipe of similar size and establishing an access road above the pipe. Native quail bush and non-native tamarisk and Mexican palo verde are located within the irrigation ditch. However, the access routes would be constructed in an area that will avoid impacts to native vegetation found within the irrigation ditch. Therefore, implementation of the project would result in no impact on state or federally protected aquatic resources.

Mitigation Measure(s)

No mitigation is required.

Impact 3.5-4 Would the project 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?

The project site does not function as a wildlife corridor. The project site is located adjacent to areas containing existing disturbances (i.e., roads, railroad tracks, and active agricultural land). The majority of the project site does not contain suitable vegetation or cover to support wildlife movement and are nestled between agricultural and development; therefore, wildlife movement opportunities connecting the project site to large, undeveloped natural areas is limited. 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 is required.

Impact 3.5-5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project consists of the construction and operation of a solar energy facility, BESS, and associated electrical transmission lines. Development of the solar facility would be subject to the County's zoning ordinance.

The project is located on 5 privately owned legal parcels zoned General Agricultural with Geothermal Overlay (A-2-G). Pursuant to Title 9, Division 5, Chapter 8 (County of Imperial 2019a), the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County: solar energy electrical generator, battery storage facility, electrical substations, communication towers, and facilities for the transmission of electrical energy.

As demonstrated in Table 3.5-3 and discussed further in Section 3.11 Land Use Planning, with approval of a CUP, General Plan Amendment, and Zone Change, the project would be consistent with Imperial County General Plan, and with biological resources policies contained therein. 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 is required.

Impact 3.5-6 Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is located within the designated boundaries of the Desert Renewable Energy Natural Community Conservation Plan & Habitat Conservation Plan (NCCP/HCP). However, the project is not located within or adjacent to an Area of Critical Environmental Concern. Implementation of the proposed project would result in no impact associated with the potential to conflict with local conservation plans. No impact would occur.

Mitigation Measure(s)

No mitigation is required.

3.5.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. Project decommissioning activities will require construction vehicles to drive across the solar facility, transmission line, and access roads. Concrete footings, foundations, and pads would be removed using heavy equipment and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. Similar to project construction, decommissioning activities have the potential to directly impact special-status species. his is a potentially significant impact; however, implementation of Mitigation Measures BIO-1 through BIO-4 at the time of decommissioning would reduce impacts to a level less than significant.

Residual

The proposed project would not impact sensitive vegetation communities, state or federally-protected wetlands, would not conflict with any local policies or ordinances protecting biological resources and would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

With the implementation of Mitigation Measures BIO-1 through BIO-4, potential impacts to specialstatus species, including BOUW, mountain plover, and loggerhead shrike would be reduced to a level less than significant. Therefore, the project would not result in residual significant and unmitigable impacts related to biological resources.

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3.6 Cultural Resources

This section discusses cultural resources that may be potentially 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 *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* prepared by Chambers Group, Inc. This report is included in Appendix E of this EIR. The cultural resources inventory included a records search, literature review, and pedestrian survey.

3.6.1 Existing Conditions

Cultural Setting

Prehistory

The project site is located in the mid-section of the lower Colorado Desert, in which ancient Lake Cahuilla was situated – the present-day Salton Sea is illustrative of lower stands of the former Ancient Lake Cahuilla. In addition to paleontological potential, archaeological deposits found around the shoreline of Lake Cahuilla radiocarbon date to at least 1,440 years before present (B.P.) and shows demonstrable evidence of cultural activity in the area. Lake Cahuilla presented a massive freshwater oasis, allowing seasonal occupations resulting in archaeological deposits that include pottery, ground and chipped stone artifacts, and archaeological features such as rock fish traps. As an ethnographic landscape, the Cahuilla, Kumeyaay, Kamia, and the tribes which now comprise the Colorado River Indian Tribes (CRIT), the Mojave, Chemehuevi, Hopi, and Navajo settled in various locations around the basin, including the Colorado delta. Cultural resources located in the area tend to be associated with Lake Cahuilla due to its temporal context and functional use as a landscape, which yield archaeological data of high significance regarding how people adapted to the changing environment around the lake.

The three general time periods accepted in the region are the San Dieguito Complex, the Archaic period, and the Late Prehistoric period. These periods are briefly described below.

The earliest recognized occupation of the region, dating to 10,000 to 8,000 years B.P., is known as the San Dieguito complex. Assemblages from this occupation generally consist of flaked stone tools. Evidence of milling activities is rare for sites dating to this period. It is generally agreed that the San Dieguito complex shows characteristics of the Western Pluvial Lakes Tradition (WPLT), which was widespread in California during the early Holocene. The WPLT assemblage generally includes scrapers, choppers, and bifacial knives. Archaeologists theorize this toolkit composition likely reflects a generalized hunting and gathering society.

The following period, the Archaic (8,500 to 1,300 B.P.), is traditionally seen as encompassing both coastal and inland adaptations, with the coastal Archaic represented by the shell middens of the La Jolla complex and the inland Archaic represented by the Pauma complex. Coastal settlement is also thought to have been significantly affected by the stabilization of sea levels around 4,000 years ago that led to a general decline in the productivity of coastal ecosystems. Artifacts associated with this period include milling stones, unshaped manos, flaked cobble tools, Pinto-like and Elko projectile points, and flexed inhumations. Colorado Desert rock art studies have led researchers to suggest

Archaic-Period origins for many petroglyph and pictograph styles and elements common in later times. More recently, several important late Archaic-period sites have been documented in the northern Coachella Valley, consisting of deeply buried middens with clay-lined features and living surfaces, cremations, hearths, and rock shelters. Faunal assemblages show a high percentage of lagomorphs (rabbits and hares). The larger sites suggest a more sustained settlement type than previously known for the Archaic period in this area.

The Late Prehistoric period (1,300 to 200 B.P.) is marked by the appearance of small projectile points indicating the use of the bow and arrow, the common use of ceramics, and the general replacement of inhumations with cremations, all characteristic of the San Luis Rey complex. The San Luis Rey complex is divided temporally into San Luis Rey I and San Luis Rey II, with the latter distinguished mainly by the addition of ceramics. Along the coast of northern San Diego County, deposits containing significant amounts of Donax shell are now often assigned to the Late Prehistoric, based on a well-documented increase in the use of this resource at this time.

Ethnohistory

The project site was occupied by the Cahuilla, Quechan, Kumeyaay, Kamia, and the CRIT. The two closest tribal reservations to the project site are the Torres-Martinez Reservation located to northwest of the project site and Fort Yuma reservation located to the southeast of the project site. The Torres-Martinez Indian Reservation is currently home to the desert Cahuilla Indians and is on the northwest side of the Salton Sea, roughly 55 miles from the project site. Fort Yuma is located approximately 51 miles closer to the California-Arizona border and is the home of the Quechan. An ethnographic and archaeological summary of the Cahuilla, Quechan, Kumeyaay, Kamia, and CRIT is provided in Section 3.14, Tribal Cultural Resources of this EIR.

Regional History

The first significant European settlement of California began during the Spanish Period (1769 to 1821) when 21 missions and four presidios were established between San Diego and Sonoma. Although located primarily along the coast, the missions dominated economic and political life over the greater California region. The purpose of the missions was primarily for political control and forced assimilation of the Native American population into Spanish society and Catholicism, along with economic support to the presidios.

In the 1700s, due to pressures from other colonizers (Russians, French, British), New Spain decided that a party should be sent north with the idea of founding both military presidios and religious missions in Alta California to secure Spain's hold on its lands. The aim of the party was twofold. The first was the establishment of presidios, which would give Spain a military presence within its lands. The second was the establishment of a chain of missions along the coast slightly inland, with the aim of Christianizing the native population. By converting the native Californians, they could be counted as Spanish subjects, thereby bolstering the colonial population within a relatively short time.

The party was led by Gaspar de Portolá and consisted of two groups: one would take an overland route, and one would go by sea. All parties were to converge on San Diego, which would be the starting point for the chain of Spanish colonies. What became known as the Portolá Expedition set out on March 24, 1769. Portolá, who was very loyal to the crown and understood the gravity of his charge, arrived in what would become San Diego on July 1, 1769. Here, he immediately founded the presidio of San Diego. Leaving one group in the southern part of Alta California, Portolá took a smaller group and began heading north to his ultimate destination of Monterey Bay. Continuing up the coast, Portolá

established Monterey Bay as a Spanish possession on June 3, 1770, although it would take two expeditions to accomplish this task.

Having established the presidios at San Diego and Monterey, Portolá returned to Mexico. During the first four years of Spanish presence in Alta California, Father Junípero Serra, a member of the Portolá expedition and the Catholic leader of the new province, began establishing what would become a chain of 21 coastal missions in California. The first, founded concurrently at San Diego with the presidio, was the launching point for this group. During this time, four additional missions (San Carlos Borromeo de Carmelo, San Antonio de Padua, San Gabriel Arcángel, and San Luis Obispo de Tolosa) were established.

The Mexican Period (1821-1848) began with the success of the Mexican Revolution in 1821, but changes to the mission system were slow to follow. When secularization of the missions occurred in the 1830s, the missions' vast land holdings in California were divided into large land grants called ranchos. The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers. Even after the decree of secularization was issued in 1833 by the Mexican Congress, missionaries continued to operate a small diocesan church. In 1834, the San Gabriel Mission, including over 16,000 head of cattle, was turned over to the civil administrator.

In 1848, the Treaty of Guadalupe Hidalgo ended the Mexican American War and marked the beginning of the American Period (1848 to present). The discovery of gold that same year sparked the 1849 California Gold Rush, bringing thousands of miners and other new immigrants to California from various parts of the United States, most of whom settled in the northern part of the state. For those settlers who chose to come to southern California, much of their economic prosperity was fueled by cattle ranching rather than by gold. This prosperity, however, came to a halt in the 1860s because of severe floods and droughts, as well as legal disputes over land boundaries, which put many ranchos into bankruptcy.

Imperial County was formed in 1907 from a portion of San Diego County known as Imperial Valley and is the newest of California's counties. It is known for being one of California's most prosperous agricultural communities because of its vast canal systems stemming from the Colorado River. The first diversion of the Colorado River was in 1905 and continued through 1942 when the All-American Canal was completed. It is this water, conveyed from the Colorado River, that makes Imperial County so rich.

City of Brawley

Just as the Imperial Valley was starting to develop, a circular was released by the U.S. Government in 1902 claiming nothing would grow in this desert area, even with plentiful water. This now famous "libel" changed the name of Brawley, which was initially slated to be called Braly. A man named J.H. Braly from Los Angeles had underwritten shares of water stock and was assigned 4,000 acres of land at the center of the site where Brawley now stands. When Braly read this circular, he appealed to the Imperial Land Company to be released from his bargain. They told him they expected to build a city on his land and call it Braly. However, J.H. Braly wanted no part of it; he did not want his name connected with what he envisioned as a failure. George E. Carter, who was building the grade for the new railroad, heard of Braly's wish and took over Braly's contract for the 4,000 acres.

The Imperial Land Company got wind of the deal and sent emissaries to Carter, who sold out. Meanwhile, A.H. Heber (a principal in the townsite organizing company) had a friend in Chicago by the name of Brawley and suggested the town be called that name. The company ordered the new town platted in October of 1902. Brawley had a petition signed and was ready to incorporate in June

1907 but deferred the matter until the new Imperial County was formed out of a portion of San Diego County that year. Then in February 1908, a petition was filed, and Brawley was allowed to call an election. The vote was 34 to 22 in favor of incorporation.

For more than a century, Brawley has remained close to its roots of being a small, agricultural community. Many of its businesses cater to area farmers and ranchers who also call Brawley home. From the beginning, those who believed in Brawley were successful in creating imaginative ways to develop an oasis in what was once a hostile environment. Now as then, the town folk of Brawley pull together to create a united vision that is attractive to visitors, homeowners, consumers, developers and businesspeople alike. Incorporated in 1908, was a "tent city" of only 100 persons who were involved in railroads and the earliest introduction of agriculture. It had a population of 11,922 in 1950, but population growth was slow from the 1960s to the early 1990s.

Records Search

A records search dated October 14, 2020, was obtained from the South Coastal Information Center (SCIC) at San Diego State University. The records search provided information on all documented cultural resources and previous archaeological investigations within the 1-mile record search radius. Resources consulted during the records search conducted by the SCIC included the NRHP, California Historical Landmarks, California Points of Historical Interest, and the CRHR Inventory. Results of the records search and additional research are detailed below.

Previous Research

Based upon the records search conducted by the SCIC, 14 cultural resource studies have previously been completed within the 1-mile records search radius. Of the 14 previous studies, 9 of the studies were within the project site. A list of previous cultural resource studies within the 1-mile records search radius is provided in the *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* (Appendix E of this EIR).

Previously Recorded Resources

Based upon the records search conducted by the SCIC, 5 previously recorded cultural resources were recorded within the 1-mile record search radius. Results show that none of the previously recorded resources are mapped within the project site boundaries. A list of previously recorded resources within the 1-mile records search radius is provided in the *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* (Appendix E of this EIR).

Field Survey

A pedestrian survey was conducted on the project site between November 2 and 5, 2020. The purpose of the field survey was to visually inspect the ground surface for both paleontological and archaeologically significant materials. The archaeologists assessed the ground surface for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), historic-period artifacts (e.g., metal, glass, ceramics), and sediment discoloration that might indicate the presence of a cultural midden, as well as depressions and other features indicative of the former presence of structures or buildings (e.g., post holes, foundations). When an artifact or feature was observed during survey, the GPS data were recorded using the ArcGIS Collector application; photographs and measurements were taken; and, when applicable, for historic glass artifacts, the maker's marks and date codes were recorded for further analysis and post-processing.

During completion of the survey, resource CA-IMP-08166H was relocated. Although not mapped within the actual project site boundaries, a segment of CA-IMP-08166H was relocated due to its bisecting position between the two adjacent project areas. Additionally, six newly recorded historic-period resources were identified (Table 3.6-1). The new historic-period resources were fully documented with the appropriate DPR 523 series forms for each of the new resources and will be submitted to the SCIC for inclusion in the archaeological database.

Resource Name (Temporary)	Trinomial Number	Date Recorded	Age	Description	Recommended Evaluation
21267-001	Pending	November 2, 2020	Historic	Single-story residence	Recommended not eligible
21267-002	Pending	November 2, 2020	Historic	House/pads;glass and ceramic scatter	Not evaluated
21267-003 (Iso)	Pending	November 3, 2020	Historic	Green glass bottle base	Not evaluated
21267-004	Pending	November 5, 2020	Multi-component	Glass bottle, sanitary and food can scatter	Not evaluated
21267-005	Pending	November 5, 2020	Multi-component	Historic glass bottle, sanitary and food can scatter, modern refuse	Not evaluated
21267-006	Pending	November 5, 2020	Historic	Canals/water conveyance, part of irrigation district	Not evaluated

Table 3.6-1. Newly Identified Cultural Resources within the Project Site

Source: Appendix E of this EIR

Historical Resources

Historical resources significant under CEQA include those designated or eligible for designation in the NRHP, the CRHR or other state program, or a local register of historical resources. Historical resources may also include resources listed in the State Historic Resources Inventory as significant at the local level or higher, and resources evaluated as potentially significant in a survey or other professional evaluation.

As shown in Table 3.6-1, a total of 6 cultural resources were identified within the project site: four historic-period and two multi-component sites. Five of the resources have yet to be evaluated. A detailed description of these five resources is provided in the *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* (Appendix E of this EIR).

Resource 21267-001 was evaluated and not recommended eligible for designation in the NRHP, the CRHR or other state program, or a local register of historical resources. The NRHP and CRHR eligibility criteria are described below.

- **NRHP Eligibility Criteria.** Four criteria have been established to determine if a resource is significant to American history, architecture, archaeology, engineering, or culture and should be listed in the NRHP. These criteria include:
 - A. It is associated with events that have made a significant contribution to the broad patterns of our history;
 - B. It is associated with the lives of persons significant in our past;
 - C. It embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and
 - D. It yields, or may be likely to yield, information important in prehistory or history.
- **CRHR Eligibility Criteria.** For the purposes of CEQA review, a historical resource is defined as follows (14 CCR 15064.5[a]):
 - 1. A resource listed in, or determined eligible by the State Historical Resources Commission for listing in, the California Register of Historical Resources (CRHR)
 - 2. A resource included in a local register of historical resources
 - 3. A resource identified as significant in a historical resource survey meeting the requirements specified in PRC 5024.1(g)
 - 4. Any resource that the lead agency determines to be historically significant

Site 21267-001

Site 21267-001 is a historic farm/ranch complex, including a single-story house, numerous miscellaneous outbuildings, and a fenced area on the east side of the property. The farm/ranch is located at 5003 N Best Avenue, Brawley, CA 92227, at the northwest corner of N Best Avenue and Ward Road, which runs parallel to the east-west Livesley Drain. The complex is in the southeastern most location within the project site boundaries and is bordered to the north and northwest by agricultural fields. The complex is visible as early as 1945 on the USGS map and 1953 in aerial imagery. The house and associated structures are still present. The building appears to correspond to typical minimal traditional style of form and construction, resting on a perimeter foundation of poorly consolidated concrete made with local materials. Wood joists are noted in the interior where exposed, suggesting a post-and-pier foundation for the floor of the building. The outline is a simple rectangle with a low, gabled roofline and minimal pitch. Roof eaves minimally extend, with boxed in soffits. The exterior is treated in stucco, using techniques typical of the period; tarpaper wrap, with wire mesh, a brown/scratch coat, and a finish coat. There are several wood-trimmed piercings for wood-cased double-sash windows. Cast-iron waste pipes are embedded into the exterior surface along one wall.

Several outbuildings are present, but their function remains unknown at this time. These are woodframed and sided, and most are in a state of collapse or disrepair. Construction techniques and the greater fullness of the dimensions of the dimensional lumber suggest that these buildings are contemporaneous with the main residential building.



ELIGIBILITY CONSIDERATION

Site 21267-001 was evaluated in March 2021 by Chambers Group. Based on the evaluation of the residence, either as a complex or as individual structures, none of the four criteria are met for inclusion in the CRHR and the resource is recommended not eligible.

Criterion 1: This resource does not meet the criteria under Criterion 1 as it is not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. Therefore, this resource is recommended not eligible for the CRHR under Criterion 1.

Criterion 2: This resource does not meet Criterion 2 as it is not associated with the lives of persons who are important to local, California history. While research has yielded information to suggest that one of the original land patent holders, Thomas A. Livesley, was fairly prominent in Salem, Oregon, neither he nor his family, or those also listed on the 1911 land patent, were specifically associated with Brawley or Imperial Valley, California history. There is no evidence that Mr. Livesley or his family ever resided at 5003 N Best Avenue and were not mentioned as being influential in literature regarding the Imperial Irrigation District between the 1900s and 1940s or the history of Imperial Valley between the 1900s and 1930s (Dowd 1956; Tout 1931). It is likely that Mr. Livesley and the other parties listed on the land patent were involved in speculative agriculture but were not personally invested in the overall development of Brawley or within Imperial Valley.

Additionally, there is no evidence that the subsequent property titles holders, namely the Flammangs, were of particular significance in Brawley. The Flammangs were owners of a few farms over the decades, but there is no documentation stating any noteworthy influence in Brawley, Imperial Valley, or California. Therefore, this resource is recommended not eligible for the CRHR Criterion 2.

Criterion 3: This resource does not meet Criterion 3 for embodying the distinctive characteristics of a type, period, or method of construction; or as a representative work of a master; or for possessing high artistic values. represent a very common property type throughout the United States, California, and San Diego. Many Traditional Style residences were constructed throughout the United States during the twentieth century and these examples are neither unique nor innovative for the period in which they were constructed. Therefore, this resource is recommended not eligible for the CRHR under Criterion 3.

Criterion 4: This resource does not meet Criterion 4 since it is unlikely to yield information important to prehistory or history. It is unlikely that this property has the potential to broaden our understanding of the history of the United States, California, or San Diego during the twentieth century. Therefore, this resource is recommended not eligible for the CRHR under Criterion 4.

Regulatory Setting 3.6.2

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 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; 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 (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.

State

California Office of Historic Preservation

The California Office of Historic Preservation (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 (HSC Section 7050.5, PRC Sections 5097.94 et seq.).

CEQA Guidelines: Historical Resources Definition

CEQA Guidelines Section 15064.5(a) defines a historical resource as:

- (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC Section 5024.1; Title 14 CCR, Section 4850 et seq.).
- (2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC Section 5024.1; Title 14 CCR, Section 4852) including the following:
 - (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - (B) Is associated with the lives of persons important to our past;

- (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (D) Has yielded, or may be likely to yield, information important in prehistory or history.¹
- (4) The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

- (1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Section 15064.5 of CEQA Guidelines provides specific guidance on the treatment of human remains pursuant to PRC § 5097.98, which provides specific guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the NAHC:

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the NAHC as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the

¹ Ibid.

appropriate Native Americans as identified by the NAHC. Action implementing such an agreement is exempt from:

- (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (HSC Section 7050.5).
- (2) The requirements of CEQA and the Coastal Act.
- (e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
 - (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - (A) The coroner or the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
 - (B) If the coroner determines the remains to be Native American:
 - 1. The coroner shall contact the NAHC within 24 hours.
 - 2. The NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
 - 3. The mostly descendent may make recommendations to the landowner of the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or
 - (2) Where the following conclusions occur the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - (A) The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - (B) The descendant fails to make a recommendation; or
 - (C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.
- (f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource."

California Health and Safety Code, Section 7050.5

California HSC 7050.5 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 3.9, Land Use 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 3.6-2.

General Plan Policies	Consistency with General Plan	Analysis	
Conservation and Open Space Element - <i>Open Space and</i> <i>Recreation Conservation</i>	Consistent	A cultural resources inventory was prepared for the project area. Known archaeological resources within the project area will be avoided	
Goal 1 - Environmental resources shall be conserved for future generations by minimizing		below, the proposed project has the potential to encounter undocumented historical, archaeological resources, and human remains.	
environmental impacts in all land use decisions and educating the public on their value.		Implementation of Mitigation Measure CUL-1 and CUL-2 would require a supervising monitor to monitor all ground disturbing activity and to provide WEAP training to workers to reduce potential impacts on historical resources to a level less than significant. Implementation of Mitigation Measures CUL-3, CUL-4, and CUL-5 would reduce the potential impact associated with the inadvertent disagreement for the potential	
Objective 1.4 - Ensure the conservation and management of the County's natural and cultural resources.			
Objective 3.1 - Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	resources to a level less than significant.	
		At the completion of construction, an Archaeological Resources Monitoring Report will be prepared to summarize all monitoring efforts and observations, as performed, and all prehistoric or historic archaeological finds per Mitigation Measure CUL-6. Mitigation Measure CUL-7 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA.	

Table 3.6-2. Project Consistency with Applicable General Plan Goals and Objectives

Source: County of Imperial 1993

Notes:

CUL=cultural; WEAP= Worker Environmental Awareness Program

3.6.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering proposed project impacts related to cultural and archeological 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 pursuant to §15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5
- Disturb any human remains, including those interred outside of dedicated cemeteries

Methodology

This analysis evaluates the potential for the proposed project, as described in Chapter 2, Project Description, to interact with cultural 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, the *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* (Appendix E of this EIR) was prepared for the project. The cultural resources inventory provides the results of a SCIC records search and a field survey which have been completed for the project area pursuant to CEQA.

The information from the cultural resources inventory 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 3.6-1 Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

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 the CRHR, 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 shown in Table 3.6-1, six newly recorded cultural resources were identified within the project site during field surveys. Newly identified cultural resources comprise both historic-period and two multicomponent sites. Resource 21267-001 is recommended not eligible for listing and the other five resources have not been formally evaluated for potential eligibility for listing in the CRHR. The project applicant will avoid ground-disturbing activities within and in close proximity to these resources. However, if-ground disturbing activities must occur within and in close proximity to these resources, a significant impact may potentially occur. Mitigation Measure CUL-1 and CUL-2 would involve retaining a Qualified Archaeologist to monitor ground disturbing work and provide WEAP training to construction personnel If ground disturbing activities encounter unanticipated discoveries that are potentially significant historical resources pursuant to CEQA. Mitigation Measures CUL-3, CUL-4, and CUL-5 would require construction to be halted in the area surrounding the discovery so that the Qualified Archaeologist can conduct formal site evaluations to assess whether resource(s) are potentially eligible for listing in the CRHR. At the completion of construction, an Archaeological Resources Monitoring Report will be prepared to summarize all monitoring efforts and observations, as performed, and all prehistoric or historic archaeological finds per Mitigation Measure CUL-6. Implementation of Mitigation Measures CUL-1 through CUL-6 would reduce potential impacts associated with cultural resources to a level less than significant.

Mitigation Measure(s)

CUL-1 Cultural Monitoring. Prior to construction, the project Applicant shall retain the services of a Qualified Professional Archaeologist meeting the Secretary of the Interior's Standards for a Qualified Archaeologist and require that all initial ground-disturbing work be monitored by someone trained in artifact and feature identification in monitoring contexts. A Supervising Archaeological Specialist and a Paleontological Monitor, to be retained by the project applicant, will be required to be present at the project construction phase kickoff meeting.

- **CUL-2** Worker Environmental Awareness Program. Prior to any ground disturbance, the supervising Archaeological Resources Specialist and Archaeological Resources Monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance and be performed periodically for new personnel coming on to the project as needed.
- CUL-3 Discovery of Previously Unidentified Archaeological Materials. In the event of the discovery of previously unidentified archaeological materials, the construction contractor shall immediately cease all work activities within approximately 100 feet of the discovery. After cessation of excavation, the construction 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 project 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 project Applicant shall implement an archaeological data recovery program.
- **CUL-4** Schedule of Ground-Disturbing Activities. The construction contractor shall provide the Supervising Archaeological Resources Specialist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

As detailed in the schedule provided, an Archaeological Monitor shall be present on site at the commencement of ground-disturbing activities related to the project. The monitor, in consultation with the Supervising Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the project.

The Supervising Archaeologist, Archaeological Monitor, and the lead contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance in order to provide appropriate oversight.

- CUL-5 Discovery of Archaeological Resources. If archaeological resources are discovered, construction shall be halted within 50 feet of the find and shall not resume until a Qualified Archaeologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.
- **CUL-6** Archaeological Resources Monitoring Report. At the completion of all grounddisturbing activities, the Qualified Archaeologist shall prepare an Archaeological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds as well as providing follow-up reports of any finds to the South Coastal Information Center (SCIC), as required.

Significance After Mitigation

With the implementation of Mitigation Measures CUL-1 through CUL-6, impacts to potential historical resources during construction would be reduced to a level less than significant by requiring construction monitoring, WEAP training, and proper handling and documentation of previously undiscovered historic resources.

Impact 3.6-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

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 3.6-1. If an archaeological site does not meet any of the criteria outlined in the provisions under Impact 3.6-1, 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 project on those resources shall not be considered a significant effect on the environment.

Based on the field survey conducted for the project, much of the proposed project survey area was vegetated by agricultural fields while others were in areas previously disturbed for placement of water channels and culverts for agricultural purposes. The disturbed surface and subsurface of the project area from agricultural activity and construction of channels and culverts have likely destroyed any intact potential prehistoric or historic-era cultural resources. 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 CUL-1 through CUL-6 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant.

Impact 3.6-3 Would the project disturb any human remains, including those interred outside of dedicated 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 construction. The potential to encounter human remains is considered a significant impact. Mitigation Measure CUL-7 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA.

Mitigation Measure(s)

CUL-7 Discovery of Human Remains. In the unlikely event that human remains are discovered during ground-disturbing activities, then the proposed project would be subject to California Health and Safety Code 7050.5, CEQA Section 15064.5, and California Public Resources Code Section 5097.98 (NPS 1983). If human remains are found during ground-disturbing activities, State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Imperial County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains are determined to be prehistoric, the County Coroner shall notify the NAHC, which shall notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Significance After Mitigation

With the implementation of Mitigation Measure CUL-7, potential impacts from encountering human remains during ground-disturbing construction activities would be reduced to a level than significant with adherence to California Health and Safety Code 7050.5, CEQA Section 15064.5, and California Public Resources Code Section 5097.98 (NPS 1983).

3.6.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. 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 proposed project.

Residual

Implementation of Mitigation Measure CUL-1 and CUL-2 would require a supervising monitor to monitor all ground disturbing activity and to provide WEAP training to workers to reduce potential impacts on historical resources to a level less than significant. Implementation of Mitigation Measures CUL-3, CUL-4, and CUL-5 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant. At the completion of decommissioning construction activities, an Archaeological Resources Monitoring Report will be prepared to summarize all monitoring efforts and observations, as performed, and all prehistoric or historic archaeological finds per Mitigation Measure CUL-6. Mitigation Measure CUL-7 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA. No unmitigable impacts on cultural resources would occur with implementation of the proposed project.
3.7 Geology and Soils

This section includes 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 *Geotechnical Feasibility Study* prepared by Chambers Group (Appendix F of this EIR) and the *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* prepared by Chambers Group (Appendix E of this EIR).

3.7.1 Existing Conditions

Regional Geology

The project site is located in Imperial County in the Salton Trough geomorphic province of California. The Salton Trough encompasses the Coachella, Imperial and Mexicali Valley which extend from northeast of Palm Springs near San Gorgonio Pass to the Gulf of California. The Imperial Valley is bounded by the Chocolate Mountains to the northeast, the Salton Sea to the north, the Peninsular Ranges to the Southwest, and Mexicali Valley to the south, and is dominated by lacustrine and alluvial sediments. Unexposed succession of Tertiary- and Quaternary-aged sedimentary rocks lie below the alluvial and lake sediments from depths of 11,000 feet or more. Basement rocks consisting of Mesozoic granite and probably Paleozoic metamorphic rocks are estimated to exist at depths between 15,000 and 20,000 feet (Appendix F of this EIR).

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. The primary seismic hazard at the project site is the potential for strong ground shaking. The Salton Trough is a seismically active area and the Imperial Valley in particular has numerous northwest-treading active faults.

Local Geology and Surface Conditions

The project site is generally within the floodplain of the New River and underlain by Quaternary Lake Deposits. The Western Boundary of the project site which has a descending slope is the former bank of the New River. The surface of the project site is observed to contain a topsoil/tilled horizon related to previous agricultural usage of the project site, and minor amounts of undocumented artificial fill related to the boundary roads and paths, adjacent drainage channels, and the railway that bisects the site. The fill in these areas include local lean, to fat clay derived from the native lake deposits. The dominant geologic unit below the project site is young lake deposits which consist of silts and clays with occasional interbeds of silty sand (Appendix F of this EIR). As shown on Figure 3.7-1, soil series mapped on the project site include:

- 102 Badland
- 110 Holtville silty clay, wet
- 114 Imperial silty clay, wet
- 115 Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
- 122 Meloland very fine sandy loam, wet

Figure 3.7-1. Soils Mapped on the Project Site



Badland Holtville silty clay, wet

Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes Meloland very fine sandy loam, wet



Groundwater Conditions

Groundwater was encountered at approximately 42 feet below the existing grade in the western end of the project site, and perched groundwater was encountered at approximately 12 feet below grade in the northeast corner of the site. Within the project site, water is channeled within the drainage ditches and channels along the northern and southern property lines just below surface elevation. Additionally, six geothermal wells are present throughout the site.

Faulting and 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.

Southern California straddles the boundary between two global tectonic plates known as the North American Plate (on the east) and the Pacific Plate (on the west). The main plate boundary is represented by the San Andreas Fault, which extends northwest from the Gulf of California in Mexico, through the desert region of the Imperial Valley, through the San Bernardino region, and into Northern California, where it eventually trends offshore, north of San Francisco (Appendix F of this EIR).

In Southern California, the plate boundary is a complex system of numerous faults known as the San Andreas Fault System that spans a 150-mile-wide zone from the main San Andreas fault in the Imperial Valley westward to offshore of San Diego. As shown in Figure 3.7-2, the closest active faults to the project site include: the Brawley Seismic Zone which is approximately 2.4 miles to the west, the Imperial Fault which is approximate 8.3 miles to the south, the Superstition Hills Fault which is approximately 11.9 miles to the southwest, the Superstition Mountain Fault which is approximately 14.5 miles to the southwest, the Elmore Ranch Fault which is approximately 15.8 miles to the west, and the San Andreas Fault which is 25.5 miles to the northwest (Appendix F of this EIR).

The project site is within an active tectonic area with several significant faults that are capable of producing moderate to strong earthquakes. The Imperial Fault, Superstition Hills Fault, and Superstition Mountain Fault are the three closest faults to the project site. Based on probabilistic analysis from the California Geological survey website, the peak ground acceleration at the project site is estimated to be approximated 0.48g, based on a probability of 10 percent in 50 years (Appendix F of this EIR).

Seismic Ground Shaking

Ground shaking is the byproduct of an earthquake and is the energy created as rocks break and slip along a fault during an earthquake. 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.

As the project site is located in the seismically active southern California region, strong ground shaking can be expected at the project site during moderate to severe earthquakes in the general region.

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.

The California Geologic Survey (CGS) established criteria for faults as active, potentially active, and inactive. Active faults are those that show evidence of surface displacement within the last 11,000 years (Holocene age). Potentially active faults are those that demonstrate displacement within the past 1.6 million years (Quaternary age). Faults showing no evidence of displacement within the last 1.6 million years may be, in general, considered inactive for most structures, except for critical structures (Appendix F of this EIR).

In 1972 the Alquist-Priolo Special Studies Earthquake Hazards Act (APEHA) was passed, which required fault studies within 500 feet of active or potentially active faults. The APEHA designates "active" and "potentially active" faults utilizing the same age criteria as that used by the CGS. The project site is not located within a currently mapped APEHA zone. As previously mentioned above, the nearest active major fault is the Brawley Seismic Zone which is approximately 2.4 miles to the west of the project site (Appendix F of this EIR). Based on this distance, the potential for surface fault rupture to occur on the project site is considered low.





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). The factors known to influence liquefaction potential include soil type, relative density, grain size distribution, confining pressure, depth to groundwater, and the intensity and duration of the seismic ground shaking. Liquefaction is most prevalent in loose- to medium-dense, silty, sandy, and gravelly soils below the groundwater table.

The predominate soil type encountered in the borings include fine-grained silts and clays. Based on site observation of the soil encountered during drilling for exploratory borings and the lack of shallow groundwater table, the potential for liquefaction at the project site is considered to be very low. (Appendix F of this EIR).

Landslides

Landslides are the 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 has a relatively flat topography; therefore, the potential for landsliding is considered negligible (Appendix F of this EIR). Additionally, according to the County of Imperial General Plan, Seismic and Public Safety Element (County of Imperial 1997a), the project site is not within an area with moderate or low potentials for landslides.

Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat lying alluvial material toward an open or "free" face such as an open body of water, channel, or excavation. This movement is generally due to failure along a weak plane, and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally toward the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. Based on the site conditions and gentle to relatively flat topography across the majority of the project site, lateral spreading is considered unlikely (Appendix F of this EIR).

Land Subsidence

Land 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. Based on the site conditions and gentle to relatively flat topography across the majority of the project site, ground subsidence is considered unlikely (Appendix F of this EIR).

Expansive Soils

Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or

other factors and may result in unacceptable settlement or heave of structures. Expansive soils are known to be present throughout the Imperial Valley and based on preliminary laboratory testing, medium to highly expansive soils were encountered within the upper 5 feet of the project site. As previously stated, the project site is predominately underlain by fine-grained silts and clays. Generally, sands are considered not expansive while soils and clays may exhibit moderate to high expansion potential due to variation in moisture content (Appendix F of this EIR).

Collapsible Soils

Collapsible soil is generally defined as soil that will undergo a sudden decrease in volume and its internal support is lost under applied loads when water is introduced into the soil. The internal support is considered to be a temporary strength and is derived from a number of sources including capillary tension, cementing agents, e.g. iron oxide and calcium carbonate, clay-welding of grains, silt bonds, clay bonds and clay bridges. Soils found to be most susceptible to collapse include loess (fine grained wind-deposited soils), valley alluvium deposited within a semi-arid to arid climate, and residual soil deposits. It is unknown whether collapsible soils are present on the project site.

Corrosive Soils

Corrosive soils can damage underground utilities including pipelines and cables, or weaken roadway structures. Based on screening tests conducted on a representative sample of near surface soils, severely corrosive soils to both concrete material and metallic elements are present (Appendix F of this EIR).

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.

Late Pleistocene to Holocene Lake Cahuilla deposits exposed and/or underlying the proposed project area consist of dark brown to gray, silty clays interpreted as freshwater lacustrine; and, in drainages where exposed, these same sediments are interbedded with finer to medium sands containing pebbles. The Lake Cahuilla Beds have yielded well-preserved subfossil remains of freshwater clams and snails and sparse remains of freshwater fish. The paleontological resources of the Lake Cahuilla Beds are considered significant because of the paleoclimatic and palaeoecological information they can provide, and these deposits are therefore assigned a high paleontological potential. Therefore, although no paleontological resources were discovered during the survey within exposed cuts, the site does have paleontological sensitivity, with high potential for paleontological resource discovery (Appendix E of this EIR).

3.7.2 Regulatory Setting

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

Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

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

State

Alquist-Priolo Special Studies Earthquake Hazards Act

The APEHA was passed into law following the destructive February 9, 1971 San Fernando earthquake. The APEHA provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the APEHA 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. The project site is not located within a currently mapped APEHA 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 govem 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 Health and Safety Code (HSC) Section and 18980 HSC Section 18902 give CCR Title 24 the name of California Building Standards Code. The updates to the 2019 California Building Standards Code were published on January 1, 2021, with an effective date of July 1, 2021.

Local

County of Imperial 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.

County of Imperial General Plan

The County of Imperial General Plan, Seismic and Public Safety Element identifies potential natural and human-induced hazards and provides policy to avoid or minimize the risk associated with hazards. The Seismic and Public Safety Element identifies 'lifelines and critical facilities' whose disruption could endanger the public safety. Lifelines are defined as networks of services that extend over a wide area and are vital to the public welfare, and can be classified into four categories: energy, water, transportation, and communications. The IID has a formal Disaster Readiness Standard Operating Procedure for the Water Department, Power Department, and the entire District staff for response to earthquakes and other emergencies.

Table 3.7-1 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.

General Plan Policies	Consistency with General Plan	Analysis
Seismic and Public Safety Element		
Goal 1. Include public health and safety considerations in land use planning.	Consistent	Division 15 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones.
Objective 1.1. Ensure that data on geological hazards is incorporated into the land use review process, and future development process.		Per County regulations, construction of buildings intended for human occupancy which are located across the trace of an activ fault are prohibited. An exception exists whe such buildings located near the fault or within
Objective 1.3. Regulate development adjacent to or near all mineral deposits and geothermal operations.		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 1.4. 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.		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 0.48 gravity. It should be noted

Table 3.7-1. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Objective 1.7. Require developers to provide information related to geologic and seismic hazards when siting a proposed project.		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
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property		outlined in the impact analysis, the risks associated with seismic hazards would be minimized.
resulting from both natural and human-related phenomena.		A preliminary geotechnical study has been prepared for the proposed project. The preliminary geotechnical study has been
Objective 2.2. Reduce risk and damage due to seismic hazards by appropriate regulation. Objective 2.5 Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		referenced in this environmental document. Additionally, a design-level geotechnical investigation will be conducted to evaluate the
		potential for site specific hazards associated with seismic activity.
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.		

Table 3.7-1. Project Consistency with Applicable General Plan Policies

Source: County of Imperial 1997

3.7.3 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:

- Directly or indirectly cause 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
 - o 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 Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Methodology

This analysis evaluates the potential for the project, as described in Chapter 2, Project Description, to interact with local geologic and soil conditions, as well as paleontological resources on the project site. A *Geotechnical Feasibility Study* prepared by Chambers Group (Appendix F of this EIR) and *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* prepared by Chambers Group (Appendix E of this EIR) was prepared for the project. The information obtained from these studies were reviewed and summarized to present the existing geologic and soil conditions on 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.

Impact Analysis

Impact 3.7-1 Would the project directly or indirectly cause 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)?

As previously discussed above, the project site is located in the seismically active Imperial Valley of southern California with several mapped faults of the San Andreas Fault System traversing the region. As shown in Figure 3.7-2, the project site is not located on an active fault. Furthermore, no portion of the project site is within or near a designated APEHA zone, and, therefore, the potential for ground rupture to occur within the project site is considered unlikely. As such, the probability of surface fault rupture within the project site during construction and operation is considered low and the project would not increase or exacerbate existing hazards related to fault rupture. The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a major fault as delineated on the most recent Alquist-Priolo Fault Zoning map. This impact would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.7-2 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Strong seismic ground shaking?

As previously discussed above, the closest mapped fault to the project site is the Brawley Seismic Zone which is approximately 2.4 miles to the west. In the event of an earthquake along this fault or another regional fault, 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.

Even with the integration of building standards that are designed to resist the effects of strong ground motion, 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 result in structural damage or collapse of electrical distribution facilities. Given the potentially hazardous nature of the project facilities, 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. However, the proposed project would be constructed in accordance with the applicable geotechnical and seismic design standards as well as the site-specific design recommendations in the final geotechnical report per Mitigation Measure GEO-1; and upon operation, the project site when compared to existing conditions, nor would project operation increase or exacerbate the potential for strong seismic ground shaking to occur. Impacts would be less than significant.

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. The final geotechnical and/or civil engineering report shall be submitted to Imperial County Public Works Department, Engineering Division for review and approval prior to issuance of building permits.

Significance after Mitigation

With implementation of Mitigation Measure GEO-1, potential impacts associated with strong seismic ground shaking would be reduced to a level less than significant 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 3.7-3 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Seismic related ground failure, including liquefaction?

As previously discussed above, the factors known to influence liquefaction potential include soil type, relative density, grain size distribution, confining pressure, depth to groundwater, and the intensity and duration of the seismic ground shaking. Liquefaction is most prevalent in loose- to medium-dense, silty, sandy, and gravelly soils below the groundwater table.

The predominate soil type encountered in the borings include fine-grained silts and clays. Based on site observation of the soil encountered during drilling for exploratory borings, the potential for liquefaction at the project site is considered to be very low (Appendix F of this EIR). However, given that the project site is underlain by fine-grained silts and clays, 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, which requires the preparation of a design-level geotechnical report, would reduce the potential impact associated with liquefaction 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 seismic ground failure such as liquefaction would be reduced to a level less than significant 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 3.7-4 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Landslides?

Along the western boundary of the project site, there is a descending slope where there is a potential for general slope instability. The southern portion of this slope does appear to have been recently graded while the northern portion appears to be natural and in a somewhat over-steepened condition. Minor slumping was also observed within localized areas of this natural descending slope, as well as several areas that were heavily eroded. However, as stated above, the project site has a relatively flat topographic gradient to the north, east, and west of the site; and runoff water is allowed to freely drain over the top of the observed slope. Based on these factors the potential for a landslide is considered negligible (Appendix F of this EIR). Therefore, the project would not directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving landslides and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.7-5 Would the project result in substantial soil erosion or the loss of topsoil?

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 due to ICAPCD dust suppression requirements. Unvegetated soils are much more likely to erode from precipitation than vegetated areas because plants act to disperse, infiltrate, and retain water. Construction activities will involve demolition and grubbing, grading of the project site to establish access roads and pads for electrical equipment, trenching for underground electrical collection lines, and the installation of solar equipment and security fencing which 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.

As provided in Mitigation Measure GEO-1, during final engineering for the project, a design-level geotechnical study would identify appropriate measures for the project related to soil erosion. In addition, as part of Mitigation Measure HYD-1 provided in Section 3.10 Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a level less than significant with the preparation of a SWPPP for sediment and erosion control and implementation of BMPs to reduce erosion from the construction site.

The project is not expected to result in substantial soil erosion or the loss of topsoil over the long term. 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. Therefore, with implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1 identified in Section 3.10 Hydrology/Water Quality, impacts from construction-related erosion would be reduced to a level less than significant.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure GEO-1 and Mitigation Measure HYD-1 are required.

Significance after Mitigation

With implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1 in Section 3.10 Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a level less than significant with the preparation of a SWPPP and implementation of BMPs to reduce erosion from the construction site.

Impact 3.7-6 Would the project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Based on the site conditions and gentle to relatively flat topography across the majority of the project site, lateral spreading is considered unlikely. However, additional geotechnical investigation would be required in order to assess the risk of lateral spreading to occur on the project site. The potential impact associated with lateral spreading is considered a significant impact.

The general project area is not experiencing subsidence which it typically attributed to the extraction of groundwater. The proposed project facility is not expected to exacerbate or otherwise trigger significant subsidence; however, there are six geothermal wells on the project site that could potentially result in subsidence if large quantities of ground water are extracted, lowering the water table. Therefore, further geotechnical investigation would be required in order to address the issue of potential subsidence related to the operation of these geothermal wells. The potential impact associated with lateral spreading is considered a significant impact.

As described above, given that the project site is predominately underlain by fine-grained silts and clays and based on site observation of the soil encountered during drilling for exploratory borings and the lack of shallow groundwater table, the potential for liquefaction at the project site is considered to be very low. 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.

It is unknown whether collapsible soils are present on the project site. Additional geotechnical investigation would be required in order to assess the risk of collapsible soils to occur on the project site. The potential impact associated with collapsible soils is considered a significant impact.

Implementation of Mitigation Measure GEO-1, which requires the preparation of a design-level geotechnical report, would reduce the potential impacts associated with lateral spreading, liquefaction, and collapsible 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 lateral spreading, liquefaction, and collapsible soils would be reduced to a level less than significant 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 3.7-7 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

As stated above, expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures. The project site is predominately underlain by fine-grained silts and clays. According to Section 1803.5.3 of the 2010 CBC, these soils should be considered "expansive." Further, based on preliminary laboratory testing, medium to highly expansive soils were encountered within the upper 5 feet of the project site.

Therefore, 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. This potential impact would be significant as structures could be damaged by these types of soils.

Additionally, based on screening tests conducted on a representative sample of near surface soils, it was found that the soils contain a water-soluble sulfate content of 0.27 percent; therefore, a severe exposure to sulfates may be expected for concrete placed in contact with soil materials. Careful control of water-cement ratio and concrete compressive strength will be necessary in order to provide proper resistance again concrete deteriorate from sulfates. Further, the on-site soils, particularly clay/silty clay, are severely corrosive to ferrous metals and copper and can damage underground utilities including pipelines and cables or weaken roadway structures. Therefore, any ferrous metal or copper components of proposed project features that would be buried in direct contact with the site's soil would also need to be protected against detrimental effects of severely corrosive soil materials. A site-specific geotechnical investigation would be required at the project site to determine the extent and effect of problematic soils which have been identified during preliminary laboratory screenings of near surface on-site soils. Implementation of Mitigation Measure GEO-1, which requires the preparation of a design-level geotechnical report, would reduce potential impacts associated with expansive and corrosive soils to a level less than significant.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measure GEO-1 are required.

Impact 3.7-8 Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?

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.

Impact 3.7-9 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Lake Cahuilla Beds have yielded well-preserved subfossil remains of freshwater clams and snails and sparse remains of freshwater fish. The paleontological resources of the Lake Cahuilla Beds are considered significant because of the paleoclimatic and palaeoecological information they can provide, and these deposits are therefore assigned a high paleontological potential. Therefore, the project site is considered to be paleontologically sensitive with a high potential for paleontological resource discovery (Appendix E of this EIR). Project construction has the potential to unearth and/or potentially destroy previously undiscovered paleontological resources. This potential impact is considered a significant impact. However, implementation of Mitigation Measures GEO-2, through GEO-7 would reduce the potential impact on paleontological resources to a level less than significant.

Mitigation Measure(s)

- **GEO-2 Paleontological Mitigation and Monitoring Plan.** Once a geotechnical report has been completed for the project, a qualified paleontologist shall review the boring logs and determine how deep paleontologically sensitive formations may be across the project site. The paleontologist shall use this information along with the results of the paleontological survey to determine if paleontological monitoring is warranted. If monitoring is warranted, a qualified paleontologist shall prepare a mitigation and monitoring plan to be implemented during project construction.
- **GEO-3 Paleontological Monitoring.** Prior to construction, the project applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. A Supervising Paleontological Specialist and a Paleontological Monitor, to be retained by the project applicant, will be required to be present at the project construction phase kickoff meeting.
- **GEO-4 Worker Awareness Program.** Prior to any ground disturbance, the Supervising Paleontological Resources Specialist and Paleontological Resources Monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the project construction work phase, for which the Lead Contractor and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance and be performed periodically for new personnel coming on to the project as needed.
- **GEO-5** Schedule of Ground-Disturbing Activities. During construction, the construction contractor shall provide the Supervising Paleontological Resources Specialist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.

As detailed in the schedule provided, a Paleontological Monitor shall be present on site at the commencement of ground-disturbing activities related to the project. The monitor, in consultation with the Supervising Paleontologist, shall observe initial ground-disturbing activities and, as they proceed, make adjustments to the number of

monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the project.

The Supervising Paleontologist, Paleontological Monitor, and the Lead Contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground-disturbing activities in advance in order to provide appropriate oversight.

- **GEO-6 Discovery of Paleontological Resources.** During construction, if paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until a Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.
- **GEO-7 Paleontological Resources Monitoring Report.** At the completion of all grounddisturbing activities, the Supervising Paleontological Specialist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds.

Significance after Mitigation

Implementation of Mitigation Measures GEO-2 through GEO-7 would reduce the potential impact on paleontological resources to a level less than significant. 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.

3.7.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. 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.

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

Residual

With implementation of Mitigation Measure GEO-1, impacts related to strong seismic ground shaking, liquefaction, lateral spreading, collapsible soils, expansive soils, and corrosive soils would be reduced to a level less than significant. With implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1 in Section 3.10 Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a level less than significant. Implementation of Mitigation Measures GEO-2 through GEO-7 would reduce the potential impact on paleontological resources to



a level less than significant. The project would not result in residual significant and unmitigable impacts related to geology and soil resources.

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3.8 Greenhouse Gas Emissions

This section includes an overview of existing greenhouse gas (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 the CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description. Information contained in this section is summarized from the *Air Quality, Energy, and Greenhouse Gas Emissions Impact – Brawley Solar Energy Facility Project* prepared by Vista Environmental. This report is included in Appendix C of this EIR.

3.8.1 Existing Conditions

Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHGs), play a critical role in the Earth's radiation amount by trapping infrared radiation from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO₂), methane (CH₄), ozone, water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases 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. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Emissions of CO₂ and N₂O are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO₂, where CO₂ is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the GHGs.

Water Vapor. Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher, leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere.

Carbon Dioxide. The natural production and absorption of CO₂ is achieved through the terrestrial biosphere and the ocean. However, 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 were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent. Left unchecked, the IPCC projects that concentration of CO₂ in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This could result in an

average global temperature rise of at least two degrees Celsius or 3.6 degrees Fahrenheit (Appendix C of this EIR).

Methane. CH₄ is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO₂. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO₂, N₂O, and CFCs). CH₄ has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production. 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 methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide. N₂O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N₂O is also commonly used as an aerosol spray propellant.

Chlorofluorocarbons. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons. Hydrofluorocarbons (HFCs) are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF₃), HFC-134a (CF₃CH₂F), and HFC-152a (CH₃CHF₂). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons. Perfluorocarbons (PFCs) 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. Two common PFCs are tetrafluoromethane (CF4) and hexafluoroethane (C2F6). Concentrations of CF4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

Sulfur Hexafluoride. Sulfur Hexafluoride (SF₆) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF₆ has the highest global warming potential of any gas evaluated; 23,900 times that of CO₂. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Aerosols. Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil

fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

Greenhouse Gas Emissions Inventory

In 2020, CARB released the 2020 edition of the California GHG inventory covering calendar year 2018 emissions. In 2018, California emitted 425.3 million gross metric tons of CO₂e including from imported electricity. The current inventory covers the years 2000 to 2018 and is summarized in Table 3.8-1. 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 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.

As shown in Table 3.8-1, combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2018, accounting for approximately 30 percent of total GHG emissions in the state.

Sector	Total 2000 Emissions (MMTCO ₂ e)	Total 2018 Emissions (MMTCO ₂ e)
Agriculture	30.97	32.57
Commercial and Residential	43.95	41.37
Electric Power	104.75	63.11
Industrial	96.18	89.18
Transportation	178.40	169.50
Recycling and Waste	7.67	9.09
High GWP Gases	6.28	20.46

Table 3.8-1.	California	Greenhouse G	as Emissions	Inventor	y 2000 to	2018
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Source: CARB 2020

Notes:

GWP=global warming potential; MMTCO₂e=million metric tons of CO₂ equivalent

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California.

The California Natural Resources Agency's Fourth Climate Change Assessment (Fourth Assessment) produced updated climate projections that provide state-of-the-art understanding of different possible climate futures for California. The science is highly certain that California (and the world) will continue to warm and experience greater impacts from climate change in the future. While the IPCC and the National Climate Assessment have released descriptions of scientific consensus on climate change for the world and the U.S., respectively, the Fourth Assessment summarizes the current understanding of climate impacts and adaptation options in California (California Natural Resources Agency 2018). Projected changes in California include:

- **Temperatures:** If GHG emissions continue at current rates then California will experience average daily high temperatures that are warmer than the historical average by:
 - 2.7 Fahrenheit (°F) from 2006 to 2039
 - o 5.8°F from 2040 to 2069
 - o 8.8°F from 2070 to 2100
- Wildfire: One Fourth Assessment model suggests large wildfires (greater than 25,000 acres) could become 50 percent more frequent by the end of century if emissions are not reduced. The model produces more years with extremely high areas burned, even compared to the historically destructive wildfires of 2017 and 2018. By the end of the century, California could experience wildfires that burn up to a maximum of 178 percent more acres per year than current averages.
- Sea-Level Rise: If emissions continue at current rates, the Fourth Assessment model results indicate that total sea-level rise by 2100 is expected to be 54 inches, almost twice the rise that would occur if GHG emissions are lowered to reduce risk.
- **Snowpack:** By 2050, the average water supply from snowpack is projected to decline to 2/3 from historical levels. If emissions reductions do not occur, water from snowpack could fall to less than 1/3 of historical levels by 2100.
- **Agriculture:** Agricultural production could face climate-related water shortages of up to 16 percent in certain regions. Regardless of whether California receives more or less annual precipitation in the future, the state will be dryer because hotter conditions will increase the loss of soil moisture (California Natural Resources Agency 2018).

3.8.2 Regulatory Setting

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

Federal

At the federal level, there is currently no overarching law related to climate change or the reduction of GHGs. The U.S. EPA is developing regulations under the CAA to be adopted in the near future, pursuant to the U.S. EPA's authority under the CAA. Foremost amongst recent developments have been the settlement agreements between the U.S. EPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries; the U.S. Supreme Court's decision in Massachusetts v. EPA; and U.S. EPA's "Endangerment Finding," "Cause or Contribute Finding," and "Mandatory Reporting Rule." On September 20, 2013, the U.S. EPA issued

a proposal to limit carbon pollution from new power plants. The U.S. EPA is proposing to set separate standards for natural gas-fired turbines and coal-fired units.

Although periodically debated in Congress, no federal legislation concerning GHG limitations has yet been adopted. In Coalition for Responsible Regulation, Inc., et al. v. EPA, the United States Court of Appeals upheld the U.S. EPA's authority to regulate GHG emissions under CAA. Furthermore, under the authority of the CAA, the EPA is beginning to regulate GHG emissions starting with large stationary sources. In 2010, the U.S. EPA set GHG thresholds to define when permits under the New Source Review Prevention of Significant Deterioration standard and Title V Operating Permit programs are required for new and existing industrial facilities. In 2012, U.S. EPA proposed a carbon pollution standard for new power plants.

Corporate Average Fuel Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. EPA jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by U.S. EPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (U.S. EPA 2011). In 2012, the U.S. EPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (U.S. EPA 2016).

State

Executive Order S-3-05 – Statewide Greenhouse Gas Emissions Targets

On June 1, 2005, the Governor issued EO S-3-05 which set the following GHG mission reduction targets:

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

This EO directed the secretary of the California EPA 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 two years thereafter. This goal was further reinforced with the passage of AB 32 in 2006 and SB 32 in 2016.

Executive Order S-01-07

This order, signed by Governor Schwarzenegger, sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. CARB re-adopted the LCFS regulation in September 2015, and

the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Assembly Bill 32 – California Global Warming Solutions Act

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlines measures to meet the 2020 GHG reduction goals. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by the end of 2020.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by Executive Order (EO) B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

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, S-21-09, SB 350, and SB 100.

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.

Senate Bill 350

The RPS program was further accelerated in 2015 with SB 350 which mandated a 50 percent RPS by 2030. SB 350 includes interim annual RPS targets with three-year compliance periods and requires 65 percent of RPS procurement to be derived from long-term contracts of 10 or more years.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the RPS goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. California must procure 100 percent of its energy from carbon free energy sources by the end of 2045.

Climate Change Scoping Plan

The Scoping Plan released by CARB in 2008 outlined the state's strategy to achieve the AB 32 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 million MTCO₂e requires the reduction of 169 million MTCO₂e, or approximately 28.3 percent, from the state's projected 2020 BAU emissions level of 596 million MTCO₂e.

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 million MTCO₂e, 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 nine 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 AB 32. In accordance with the United Nations Framework Convention on Climate Change, 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 million MTCO₂e; therefore, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 million MTCO₂e in the initial Scoping Plan.

CARB adopted the latest update to the Climate Change Scoping Plan in December 2017. The 2017 Scoping Plan is guided by the EOB-30-15 GHG reduction target of 40 percent below 1990 levels by 2030. The 2017 Scoping Plan builds upon the framework established by the initial Scoping Plan and the First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources (CARB 2017).

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.

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 (MPO) must adopt a sustainable communities' strategy as part of their RTPs. The strategy must be designed to achieve certain goals for the reduction of GHG emissions. The bill finds that "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."

Regional

Southern California Association of Governments - 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

The SCAG is the designated MPO 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.

In September 2020, SCAG adopted the 2020-2045 RTP/SCS. The RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the NAAQS as set forth by the federal CAA (see Section 3.3, Air Quality, of this EIR). The following SCAG goal is applicable to the project:

• Reduce greenhouse gas emissions and improve air quality

As a solar generation facility, the proposed project would improve air quality by reducing the use of fossil fuels in energy production.

Local

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 climate change 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.

3.8.3 Impacts and Mitigation Measures

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. Quantify greenhouse gas emissions resulting from a project; 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. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

California Air Pollution Control Officers Association Significance Threshold

The ICAPCD has not adopted a GHG significance threshold. As previously described, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). Thus, in the absence of any GHG emissions significance thresholds, project GHG emissions are compared against the GHG threshold recommended by the California Air Pollution Control Officers Association (CAPCOA), which has provided guidance for determining the significance of GHG emissions generated from land use development projects. CAPCOA considers projects that generate more than 900 metric tons of CO₂e per year to be significant. This 900 metric tons per year threshold was developed to ensure at least 90 percent of new GHG emissions would be reviewed and assessed for mitigation, thereby contributing to the statewide GHG emissions reduction goals that had been established for the year

2030 under SB 32. Thus, both cumulatively and individually, projects that generate less than 900 metric tons CO₂e per year have a negligible contribution to overall emissions.

Methodology

The project-related direct and indirect emissions of GHGs were estimated using the similar methods for quantification of criteria air pollutants, as described in Section 3.4 Air Quality. Emissions were estimated using existing conditions, project construction and operations information, as well as a combination of emission factors from various sources. Where GHG emission quantification was required, emissions were modeled using the CalEEMod, version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects.

Impact Analysis

Impact 3.8-1 Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

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 project site.

Construction. During construction, GHG emissions would be generated from the operation of offroad equipment, haul-truck trips, and on-road worker vehicle trips. Table 3.8-2 shows the project's construction-related GHG emissions. Consistent with SCAQMD's recommendations, project construction GHG emissions from all phases of construction activities were amortized over the expected life of the project, which is considered to be 30 years for a solar energy generation facility.

Emissions Source	CO₂e (metric tons/year)
Total Project Construction (amortized over the 30-year life of the Project)	18.88
CAPCOA Significance Threshold	900
Exceed CAPCOA's Significance Threshold?	Νο

Table 3.8-2. Project Construction-Related Greenhouse Gas Emissions

Source: Appendix C of this EIR

As shown in Table 3.8-2, the project would result in the generation of approximately 19 MTCO₂e annualized over the lifetime of the project. Therefore, the construction emissions are less than the CAPCOA's screening threshold of 900 MTCO₂e per year.

Operation. Once the project is constructed and operational, the proposed project would have no major stationary emission sources and would require minimal vehicular trips. The proposed project is anticipated to generate GHG emissions from area sources, energy usage and production, mobile sources, waste disposal, and water usage.

As shown in Table 3.8-3, the proposed project would reduce GHG emissions created in Imperial County by 4,319 MTCO₂e by providing a zero carbon source of electricity generation. The proposed project would not exceed CAPCOA's annual GHG emissions threshold of 900 MTCO₂e per year. Therefore, a less than significant impact would occur.

	Greenhouse Gas Emissions (Metric Tons per Year)			
Category	CO ₂	CH₄	N ₂ O	CO ₂ e
Area Sources ¹	0.01	0.00	0.00	0.01
Energy Usage and Production ²	-4,299.50	-0.75	-0.09	-4,345.14
Mobile Sources ³	5.35	0.00	0.00	5.44
Backup Generator ⁴	0.61	0.00	0.00	0.62
Solid Waste ⁵	0.00	0.00	0.00	0.00
Water and Wastewater ⁶	0.38	0.01	0.00	0.66
Construction ⁷	18.63	0.00	0.00	18.88
Total GHG Emissions	-4,274.52	-0.73	-0.09	-4,319.54
CAPCOA Significance Threshold				900
Exceed CAPCOA Significance Threshold?				No

Table 3.8-3. Project Operation-Related Greenhouse Gas Emissions

Notes:

¹ Area sources consist of GHG emissions from consumer products, architectural coatings, and landscaping equipment.

² Energy usage consists of GHG emissions from electricity used and generated onsite.

³ Mobile sources consist of GHG emissions from vehicles.

⁴ Backup Generator based on a 20 kW (62 Horsepower) diesel generator that has a cycling schedule of 30 minutes per week.

⁵ Solid Waste. Since no employees would be onsite during typical operations, no solid waste is anticipated to be generated from the project.

⁶ Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

⁷ Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009. Source: Appendix C of this EIR

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.8-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

As discussed in Impact 3.8-1, the proposed project would generate a relatively small amount of GHG emissions. The project-generated GHG emissions would not exceed the CAPCOA significance threshold, which was prepared with the purpose of complying with statewide GHG-reduction efforts. While the project would emit some GHG emissions during construction and a very small amount during operations, the contribution of renewable resource energy production to meet the goals of the Renewable Portfolio Standard (Scoping Plan Measure E-3) would result in a net cumulative reduction of GHG emissions, a key environmental benefit. Scoping Plan Measure E-3, Renewable Portfolio Standard, of the Climate Change Scoping Plan requires that all investor-owned utility companies generate 60 percent of their energy demand from renewable sources by the year 2030. Therefore, the short-term minor generation of GHG emissions during construction which is necessary to create this new, low-GHG emitting power-generating facility, as well as the negligible amount generated during ongoing maintenance operations, would be more than offset by GHG emission reductions associated with solar-generated energy during operation.

Increasing sources of solar energy is one of the measures identified under the Scoping Plan to reduce statewide GHG emissions. The proposed project would reduce GHG emissions in a manner consistent with SB 32 and other California GHG-reducing legislation by creating a new source of solar power to replace the current use of fossil-fuel power and reduce GHG emissions power generation and use. 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.

3.8.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. Similar to construction activities, decommissioning and restoration would result in GHG emissions below allowable thresholds.

Residual

The proposed project's GHG emissions would result in a less than significant impact. Project operation, subject to the provision of a CUP, would generally be consistent with statewide GHG emission goals and policies including SB 32. Project consistency with applicable plans, policies, and regulations adopted to reduce GHG emissions would ensure that the project would not result in any residual significant and unavoidable impacts with regards to global climate change.

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3.9 Hazards and Hazardous Materials

Information contained in this section is summarized from review of information from Envirostor, GeoTracker, and relevant County plans to present the existing conditions, in addition to identifying potential environmental impacts. This section addresses potential hazards and hazardous materials for construction and operational impacts.

3.9.1 Existing Conditions

The project site is located in an agriculturally zoned area of Imperial County. The project site consists of agricultural fields that are currently under cultivation. The potential for an accident is increased in regions near major arterial roadways or railways that transport hazardous materials in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous materials.

Records Review

Envirostor

The Envirostor Database from the California DTSC records was reviewed for known contamination or sites for which there may be reason to investigate further. A desktop review was completed on September 14, 2021 for the project site. Two Leaking Underground Storage Tanks (LUST) were identified within 1 mile of the project site; however, both cases have been complete and are closed. No reported cases were found on the project sites and no active sites have been identified within 1-mile of the project site.

GeoTracker

Geotracker GIS data from the SWRCB was used to review regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. Site information from the Spills, Leaks, Investigations, and Cleanups Program is also included in GeoTracker. A desktop review was completed on September 14, 2021 for the project site. No reported cases were found on the project site and no risk sites were located within 1 mile of the project sites.

Airports

The project site is located within 2 miles of a public airport or a public use airport. The nearest airport to the proposed project is the Brawley Municipal Airport located approximately 1.5 miles south of the project site.

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 (County of Imperial 1997a).

Battery Energy Storage System

The on-site battery energy storage system would utilize lithium-ion batteries. The batteries could contain a variety of valuable metals, and recycling of these batteries is expected to become increasingly commonplace with the increased use of batteries in consumer goods and electric

vehicles. Some batteries may have the capacity at the end of the operating life of the project to be reused.

3.9.2 Regulatory Setting

This section identifies and summarizes 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 OHSA 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 IESAs, 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 (OES), 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

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.

Office of Emergency Services

As part of the ICFD, the County OES is mandated by the California Emergency Services Act (Chapter 7, Division 1, Title 2 of Government Code) to serve as the liaison between the State and all the local

government in the County. The OES provides centralized emergency management during major disasters, and coordinates emergency operations between various local jurisdictions within the County. The OES has developed several plans, consistent with federal and state policy guidance, to provide the County and participating local jurisdictions and agencies a framework for conducting emergency planning, response, and recovery operations, and handling of hazardous substances.

3.9.3 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 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 or excessive noise 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, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

Methodology

This analysis evaluates the potential for the project, as described in Chapter 2, 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.

Information from Envirostor and GeoTracker were reviewed 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 for the project was also used to evaluate potential impacts.

Impact Analysis

Impact 3.9-1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Although considered minimal, it is anticipated that the project will generate the following materials during construction, operation, and long-term maintenance: insulating oil (used for electrical equipment), lubricating oil (used for maintenance vehicles), various solvents/detergents (equipment cleaning), and gasoline (used for maintenance vehicles). These materials have the potential to be released into the environment as a result of natural hazard (i.e., earthquake) related events, or because of human error. However, all materials contained on site will be stored in appropriate containers (not to exceed a 55-gallon drum) protected from environmental conditions, including rain, wind, and direct heat and physical hazards such as vehicle traffic and sources of heat and impact. In addition, 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 (HMMP) would be required. The HMMP developed for the project will include, at a minimum, procedures for:

- Hazardous materials handling, use and storage
- Emergency response
- Spill control and prevention
- Employee training
- Record keeping and reporting

Additionally, hazardous material storage and management will be conducted in accordance with requirements set forth by the ICFD, Imperial County OES, 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 the implementation of an HMMP and adherence to requirements set forth by the ICFD, Imperial County OES, DTSC, OSHA regulatory requirements and CUPA would reduce the impact to a level of less than significant.

Battery Energy Storage System

In conjunction with the construction of the solar facility, a battery energy storage system will be constructed to store the energy generated by the solar panels. Transportation of hazardous materials relating to the battery system includes electrolyte and graphite and would occur during construction, operation (if replacement of batteries is needed) and decommissioning (removal of the batteries). All of these various materials would be transported and handled in compliance with DTSC regulations. Therefore, likelihood of an accidental release during transport or residual contamination following accidental release is not anticipated.

Lithium-ion batteries used in the storage system contain cobalt oxide, manganese dioxide, nickel oxide, carbon, electrolyte, and polyvinylidene fluoride. Of these chemicals, only electrolyte should be considered hazardous, inflammable and could react dangerously when mixed with water. The U.S. Department of Transportation (DOT) regulates transport of lithium-ion batteries under the DOT's Hazardous Materials Regulations (HMR; 49 C.F.R., Parts 171-180). The HMR apply to any material DOT determines is capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Lithium-ion batteries must conform to all applicable HMR requirements when offered for transportation or transported by air, highway, rail, or water (DOT 2021). Additionally, carbon (as graphite) is flammable and could pose a fire hazard. As further detailed below, fire protection is achieved through project design features, such as monitoring, diagnostics and a fire suppression system. The project would be required to comply with state laws and county ordinance restrictions, which regulate and control hazardous materials handled on site.

Construction wastes would be disposed of in accordance with local, state, and federal regulations, and recycling will be used to the greatest extent possible. In this context, with adherence to requirements set forth by the ICFD, Imperial County OES, DTSC, OSHA regulatory requirements and CUPA, impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.9-2 Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Hazardous Materials

The project site is currently being used for agricultural production. Typical agricultural practices in the Imperial Valley consist of aerial and ground application of pesticides and the application of chemical fertilizers to both ground and irrigation water. However, the Federal Insecticide, Fungicide, and Rodenticide Act provides federal control of pesticide distribution, sale, and use. Pesticides used in the United States must be registered by the EPA to assure that pesticides are properly labeled and that they will not cause unreasonable harm to the environment. The construction phase, operations and long-term maintenance of the facility would not result in additional application of pesticides or fertilizers.

As stated above, construction of the proposed project will involve the use of limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment, and during operation regular and routine maintenance of the proposed project may result in the potential to handle hazardous materials. However, the hazardous materials handled on-site would be limited to small amounts of everyday use cleaners and common chemicals used for maintenance. The applicant will be required to comply with State laws and County Ordinance restrictions, which regulate and control hazardous materials handled on-site. Therefore, a less than significant impact has been identified for this issue area.

Review of information from Envirostor and GeoTracker, the project site is not listed as a hazardous materials site and there are no active sites that require cleanup, such as LUST Sites, Department of

Defense Sites, and Cleanup Program Sites within 1 mile of the project site. The two LUST cases within 1 mile of the project site are completed and closed.

Battery Energy Storage System

Protection would be provided as part of the project design by housing the battery units in enclosed structures to provide containment should a fire break out or for potential spills. Any potential fire risk that the traditional lithium-ion cells have will most likely be caused by over-charging or through short circuit due to age. This risk will be mitigated through monitoring and a fire suppression system that includes water and or a suppression agent (eg FM-200, Novatech) with smoke detectors, control panel, alarm, piping and nozzles. The fire protection system will be designed by a certified fire protection engineer and installed by a fire protection system contractor licensed in California and in accordance with all relevant building and fire codes in effect in the County at the time of building permit submission. Fire protection systems for battery systems would be designed in accordance with California Fire Code and would take into consideration the recommendations of the National Fire Protection Association (NFPA) 855.

The fire protection plan is anticipated to include a combination of prevention, suppression, and isolation methods and materials. The general approach to fire mitigation at the project site would be prevention of an incident, followed by attempts to isolate and control the incident to the immediately affected equipment, then to suppress any fire with a clean agent so as to reduce damage to uninvolved equipment. Fire suppression agents such as Novec 1230 or FM 2000, or water may be used as a suppressant. In addition, fire prevention methods would be implemented to reduce potential fire risk, including voltage, current, and temperature alarms. Energy storage equipment would comply with Underwriters Laboratory (UL)-95401 and test methods associated with UL-9540A. For lithium-ion batteries storage, a system would be used that would contain the fire event and encourage suppression through cooling, isolation, and containment. Suppressing a lithium-ion (secondary) battery is best accomplished by cooling the burning material. A gaseous fire suppressant agent (e.g., 3MTM NovecTM 1230 Fire Protection Fluid or similar) and an automatic fire extinguishing system with sound and light alarms would be used for lithium-ion batteries.

To mitigate potential hazards, redundant separate methods of failure detection would be implemented. These would include alarms from the Battery Management System (BMS), including voltage, current, and temperature alarms. Detection methods for off gas detection would be implemented, as applicable. These are in addition to other potential protective measures such as ventilation, overcurrent protection, battery controls maintaining batteries within designated parameters, temperature and humidity controls, smoke detection, and maintenance in accordance with manufacturer guidelines. Remote alarms would be installed for operations personnel as well as emergency response teams in addition to exterior hazard lighting. In addition, an Incidence Response Plan would be implemented. In this context, impacts would be considered less than significant for this impact area.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.9-3 Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

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 3.9-4 Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

Based on a review of the Cortese List conducted in September 2021, the project site is not listed as a hazardous materials site. Therefore, implementation of the proposed project would result in no impact related to the project site being located on a listed hazardous materials site pursuant to Government Code Section 65962.5.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.9-5 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 or excessive noise for people residing or working in the project area?

The nearest public airport is the Brawley Municipal Airport located approximately 1.5 miles south of the project site. However, the project site is outside of the airport compatibility zones of the Brawley Municipal Airport (County of Imperial 1996). Additionally, as discussed in Section 3.2, Aesthetics, the project would not expose approach slopes associated with the Brawley Municipal Airport to glare hazards. Therefore, implementation of the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area and no impact would occur. No significant impact is identified for this issue area.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.9-6 Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Imperial County Operational Area Emergency Operations Plan (Imperial County OES 2016) does not identify specific emergency roadway routes as part of their emergency operations plan (EOP). The Circulation & Scenic Highways Element of the General Plan (County of Imperial 2008), identifies SR-

111, located west of the project site, as the "backbone" route of Imperial County since it connects the three largest cities and acts as a major goods movement route.

The applicant for the proposed project will be required, through the Conditions of Approval, to prepare a street improvement plan for the proposed project that will include emergency access points and safe vehicular travel. Additionally, 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 response plans or emergency evacuation plans.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.9-7 Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving 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 (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low.

Proposed project facilities would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements (e.g., CPUC safety standards). Primary access to the project site would be located off N Best Avenue. A secondary emergency access road would be located in the northwest portion of the project site. Access roads would also be constructed with an all-weather surface, to meet the County Fire Department's standards. Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders. Additionally, water for emergency fire suppression would likely be provided by water trucks during construction and the existing ground storage tank on-site which is filled by the Best Canal during operation.

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.

3.9.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. 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, battery storage system, transformers and other structures on each of 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 site would be disposed of, and/or remediated prior to construction of the solar facilities. At the end of a lithium-ion module's useful life (typically estimated to be 10 to 20+ years) and final project decommissioning, the batteries would

be decommissioned and recycled per manufacturer guidelines. Certain manufacturers allow for the batteries to be returned to the manufacturing facility or a third-party recycling facility where the batteries are disassembled, and certain materials are recovered from the battery for reuse.

The operation of the solar facility would not generate hazardous wastes and therefore, implementation of applicable regulations and mitigation measures identified for construction and operations would ensure restoration of the project site to 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 ALUCP consistency (structures would be removed and the site would remain in an undeveloped condition), wildfires (fire protection measures), or impediment to an emergency plan (the undeveloped condition as restored, would not conflict with emergency plans).

Residual

Adherence to federal, state and local regulations will ensure that impacts related to the transportation of hazardous materials and potential fires would be reduced to levels less than significant. Based on these circumstances, the proposed project would not result in residual significant and unmitigable impacts related to hazards and hazardous materials.

3.10 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 2, Project Description.

3.10.1 Existing Conditions

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 (California RWQCB 2019). The project site is contained within the Brawley Hydrologic Area in the Imperial Hydrologic Unit (HU 723.10). The Imperial Valley is characterized as a closed basin and, therefore, all runoff generated within the watershed discharges into the Salton Sea (California RWQCB 2019). The western portion of the project site is located within the New River watershed (Hydrologic Unit Code [HUC-10] 1810020411); the eastern portion of the project site is located within the Alamo River watershed (HUC-10 1810020408) (Appendix D of this EIR).

The project area is characterized by a typical desert climate with dry, warm winters, and hot, dry summers. Most of the rainfall occurs in conjunction with monsoonal conditions between May and September, with an average annual rainfall of 3.15 inches for the project area (City of Brawley 2020).

Localized Drainage Conditions

The project site and the surrounding terrain is generally flat. The New River flows through the middle portion of the project site. In addition, several drains, and ditches owned by Imperial Irrigation District (IID) flow along the borders of the project site (Appendix D of this EIR).

Flooding

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) (Map Number 06025C1025C) (FEMA 2008), the proposed project site is located in Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance floodplain. However, the project site is bounded to the west by the New River, which is within the 100-year floodplain, and subject to a 1 percent chance of annual flood risk (FEMA 2008).

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 approximately 700,000 acres of farmland. 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. There are no comprehensive water quality monitoring stations located within in the project site, and water quality data are limited.

Common non-point source contaminants within the project area may include, but are not limited to: sediment, nutrients (phosphorous and nitrogen), trace metals (e.g., lead, zinc, copper, nickel, iron, cadmium, and mercury), oil and grease, bacteria (e.g., coliform), viruses, pesticides and herbicides, organic matter, and solid debris/litter. Vehicles account for most of the heavy metals, fuel and fuel additives (e.g., benzene), motor oil, lubricants, coolants, rubber, battery acid, and other substances. Nutrients result from excessive fertilizing of agricultural areas, while pesticides and herbicides are widely used in agricultural fields and roadway shoulders for keeping right-of-way (ROW) areas clear of vegetation and pests. Surface waters mostly drain towards the Salton Sea. The New and Alamo Rivers convey agricultural irrigation drainage, surface runoff, and some treated municipal waste from the Imperial Valley. The flow in the New River also contains agricultural drainage, treated and untreated sewage, and industrial waste discharges from Mexicali, Mexico (California RWQCB 2019).

Based on the 2018 305(b)/303(d) Integrated Report prepared by the Colorado River Basin RWQCB, the water features within the Brawley Hydrologic Area include the Imperial Valley Drains, New River, and the Salton Sea (California RWQCB 2021). Specific impairments listed for each of these water bodies (or Category 5) are identified below:

- Imperial Valley Drains: Impaired for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, imidacloprid, Polychlorinated biphenyls (PCBs), chlorpyrifos, sedimentation/siltation, toxicity, toxaphene, and selenium;
- New River: Impaired for Hexachlorobenzene, mercury, nutrients, selenium, toxicity, indicator bacteria, organic enrichment/low dissolved oxygen, sediment, trash, toxaphene, chlordane, chlorpyrifos, DDT, diazinon, cyhalothrin, lambda, malathion, dieldrin, PCBs, bifenthrin, chloride, cypermethrin, naphthalene, nitrogen ammonia, disulfoton, imidacloprid, and ichlorodiphenyldichloroethan (DDD);
- Salton Sea: Impaired for arsenic, chlorpyrifos, DDT, enterococcus, low dissolved oxygen, nutrients, salinity, toxicity, chloride, and ammonia (California RWQCB 2021).

Groundwater Hydrology

The project site is located in the Imperial Valley Groundwater Basin (Basin 7-030). The basin covers 957,774 acres. Adjacent basins include East Salton Sea to the north, Amos Valley to the northeast, Ogilby Valley to the southeast, Coyote Wells Valley to the southwest, and Ocotillo-Clark Valley to the northwest (Groundwater Exchange 2021; California Department of Water Resources 2021).

Groundwater quality in the Imperial Valley Basin is generally reported as poor and not suitable for domestic or municipal purposes (United States Geological Survey 2014).

3.10.2 Regulatory Setting

Federal

Clean Water Act

The U.S. 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 U.S. 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 3.5, Biological Resources.

Under federal law, the U.S. 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 U.S.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 U.S. EPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The U.S.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 U.S.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.

National Flood Insurance Program

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 FIRM 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).

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 State Water Resources Control Board (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 the Imperial Valley Drains (includes the Wistaria Drain and Greeson Wash), New River, and the Salton Sea. Table 3.10-1 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.
- 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.

Beneficial Uses	Imperial Valley Drains	New River	Salton Sea
AQUA			Х
FRSH	Х	Х	
IND		Р	Р
REC I	х	Х	Х
REC II	Х	Х	Х
WARM	Х	Х	Х
WILD	х	Х	Х
RARE	Х	Х	Х

Table 3.10-1. Beneficial Uses of Receiving Waters

Source: SWRCB 2021

AQUA=aquaculture; FRSH=freshwater replenishment; IND=industrial service supply; P=Potential Uses; 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 post-construction 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

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 3.10-2 identifies the 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.

General Plan Policies	Consistency with General Plan	Analysis		
Conservation and Open Space Element				
Goal 6: The County will conserve, protect, and enhance water resources in the County.	Consistent	The proposed project would protect water quality during construction through compliance with Imperial County design and detention requirements and the NPDES General Construction Permit, as well as preparation and implementation of project-specific SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework, design features, and BMPs.		

 Table 3.10-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
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 the NPDES General Construction Permit, SWPPP, and BMPs. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The proposed project will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.
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		
Policy: Adoption and implementation of ordinances, policies, and guidelines which assure the safety of County ground and surface waters from toxic or hazardous materials and/or wastes.	Consistent	The project would preserve ground and surface water quality from hazardous materials and wastes during construction, operation and decommissioning activities. The proposed project would protect water quality during construction through compliance with NPDES General Construction Permit, SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework and BMPs. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The proposed project will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution. It is anticipated that project decommissioning activities would be subject to similar, or more stringent ground and surface water regulations than those currently required.
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 above.

Table 3.10-2. Project Consistency with Applicable General Plan Policies

Table 3.10-2. Project Consistency with Applicable General Plan Policies

Consistency with General

Source: County of Imperial 2016; County of Imperial 1997b

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 County Engineering Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage and Grading Plans within Imperial County

Based on the guidance contained in the County's *Engineering Guidelines Design Guidelines Manual* for the Preparation and Checking of Street Improvement, Drainage and Grading Plans within Imperial County (2008), the following drainage requirements would be applicable to the project.

III A. GENERAL REQUIREMENTS

- 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.
- 4. Retention volume on retention or detention basins should have a total volume capacity for a three (3) inch minimum precipitation covering the entire site with no C reduction factors. Volume can be considered by a combination of basin size and volume considered within parking and/or landscaping areas.

There is no guarantee that a detention basin outletting to an IID facility or other storm drain system will not back up should the facility be full and unable to accept the project runoff. This

provides the safety factor from flooding by ensuring each development can handle a minimum 3-inch precipitation over the project site.

- 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.
- 11. The County is implementing a storm water quality program as required by the SWRCB, 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.

Imperial Irrigation District

The 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).

3.10.3 Impacts and Mitigation Measures

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 decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - o Result in substantial erosion or siltation on- or off-site
 - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite
 - 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
 - \circ Impede or redirect flood flows
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

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

ImpactWould the project violate any water quality standards or waste discharge3.10-1requirements or otherwise substantially degrade groundwater water quality?

Construction

Construction of the project includes site preparation, foundation construction, erection of major equipment and structures, installation of 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, or improperly designed stockpiles. The utilization of proper erosion and sediment control BMPs is critical in preventing discharge to surface waters/drains. The project would employ proper SWPPP practices to minimize any discharges in order to meet the Best Available Technology/Best Conventional Technology stand ard set forth in the Construction General Permit.

The project has the potential to affect surface water quality. Many different types of hazardous compounds will be used during the construction phase, with proper application, management, and 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 Imperial Valley Drains and could result in the accumulation of these pollutants in the receiving waters. This is considered a potentially significant impact. With the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the project would be reduced to a less than significant level. 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. With the implementation of Mitigation Measures HYD-1, 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. 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-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The proposed project will be designed to include site design, source control, and treatment control BMPs, as described below. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.

Site Design BMPs. The project will be designed to include site design BMPs, which reduce runoff, prevent storm water pollution associated with the project, and conserve natural areas onsite. Table 3.10-3 lists the various site design BMPs.

Table 3.10-3. Sit	e Design Best	Management	Practices
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	Design Concept	Description
1	Minimize Impervious Footprint	The project site will include a significant amount of undeveloped land and pervious area. The footprint for the solar arrays will be predominately pervious ground. A minimal amount of Class II base paving for access roads and parking will be constructed.
2	Conserve Natural Areas	Only a small amount of existing site area can be classified as natural landscape and will only be disturbed in necessary areas at the project.
3	Protect Slopes and Channels	The project site and surrounding areas is comprised of extremely flat topography. Erosion of slopes due to stabilization problems is not a concern.
4	Minimize Directly Connected Impervious Areas	No storm drain will be constructed onsite. The site layout does not change the existing drainage pattern.

Source Control BMPs. Source control BMPs (both structural and non-structural) means land use or site planning practices, or structures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff. Table 3.10-4 identifies source control BMPs that would be applicable to the proposed project.

Table 3.10-4. Source Control Best Management Practices

	Design Concept	Description
1	Design Trash Storage Areas to Reduce Pollution Introduction	Any outdoor trash storage areas will be designed not to allow run-on from adjoining areas, screened or walled to prevent off-site transport of trash.
2	Activity Restrictions	Restrictions include activities that have the potential to create adverse impacts on water quality.
3	Non-storm Water Discharges	Illegal dumping educational materials as well as spill response materials will be provided to employees.
4	Outdoor Loading and Unloading	Material handling will be conducted in a manner as to prevent any storm water pollution.
5	Spill Prevention, Control, and Cleanup	The project will require a Spill Prevention, Control, and Countermeasure Plan, and a Hazardous Materials Business Plan in accordance with Federal and State requirements.
6	Education	Employees will receive materials for storm water pollution prevention in the form of brochures and other information in a format approved by the County of Imperial.

	Design Concept	Description		
7	Integrated Pest Management	If any pesticide is required onsite, the need for pesticide use in the project design v be reduced by:		
		Keeping pests out of buildings using barriers, screens, and caulking		
		 Physical pest elimination techniques, such as squashing, trapping, washing or pruning out pests 		
		Relying on natural enemies to eat pests		
		Proper use of pesticides as a last line of defense		
8	Vehicle and Equipment Fueling, Cleaning, and Repair	All vehicles will be serviced offsite whenever possible. If servicing is required onsite, it must be conducted in an area isolated from storm drain inlets or drainage ditch inlets. The area must be bermed and precluded from run on. Any spillage must be fully contained and captured and disposed of per County of Imperial Hazardous Waste requirements.		
9	Waste Handling and Disposal	Materials will be disposed of in accordance with Imperial County Hazardous Material Management guidelines and will be sent to appropriate disposal facilities. Under no circumstances shall any waste or hazardous materials be stored outside without secondary containment.		

 Table 3.10-4. Source Control Best Management Practices

Treatment Control BMPs. The proposed project will incorporate post-construction Low Impact Development Treatment Control BMPs, including but not limited to infiltration trenches or bioswales, which shall be investigated and integrated into the project layout to the maximum extent practicable. The drainage plan shall provide both short-term and long-term drainage solutions to ensure the proper sequencing of drainage facilities and treatment of runoff generated from project impervious surfaces prior to off-site discharge.

The proposed project shall develop a long-term maintenance plan and implemented to support the functionality of treatment control BMPs. The facility layout shall also include sufficient container storage and on-site containment and pollution-control devices for drainage facilities to avoid the off-site release of water quality pollutants, including, but not limited to oil and grease, fertilizers, treatment chemicals, and sediment.

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 appropriate agency 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 shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching)
- Sediment control practices (e.g., temporary sediment basins, fiber rolls)
- Temporary and post-construction on- and off-site runoff controls
- Special considerations and BMPs for water crossings 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, potential of hydrogen (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 and/or Qualified SWPPP Developer 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 Incorporate Post-Construction Runoff BMPs into Project Drainage Plan. The project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer 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 shortand 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 Measure HYD-1, 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-2, potential water quality impacts resulting from post-construction discharges during operation for the project would be reduced to a less than significant level. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.

ImpactWould the project substantially decrease groundwater supplies or interfere3.10-2substantially with groundwater recharge such that the project may impede
sustainable groundwater management of the basin?

The proposed project would not require the construction of a groundwater well and/or the direct use of groundwater for construction or operation. As described in Chapter 2 Project Description, approximately 20,000 to 30,000 gallons of water per day would initially be required for grading, dropping to much less for the remainder of the project construction. Construction water needs would be limited to earthwork, soil conditioning, dust suppression, and compaction efforts. Water would be obtained from a ground storage tank existing onsite which fills from the Best Canal along the eastern property boundary. Water may also be obtained from a nearby canal or lateral and delivered to the construction location by a water truck capable of carrying approximately 4,000 gallons per load (Appendix H of this EIR).

According to the Water Supply Assessment prepared for the project (Appendix H of this EIR), the anticipated water demand for construction, operation, and decommissioning of the project is estimated to be 151.8 acre-feet (AF), for an annualized demand of 5.06 acre-feet per year (AFY) for the 30-year project life. Water for the project site will be supplied through an Interim Water Supply Policy (IWSP) Water Supply Agreement with IID to process the untreated Colorado River water for the proposed project. The IWSP sets aside 25,000 AFY of IID's Colorado River water supply to serve new non-agricultural projects. As of October 2021, a balance of 23,800 AFY remain available under the IWSP for new non-agricultural projects ensuring reasonably sufficient supplies for such projects. As discussed in Section 3.15, Utilities and Service Systems, the project is expected to consume 151.8 AF for the 30-year lifespan of the project which would equate to 5.06 AFY amortized representing 0.02% of the annual unallocated supply set aside for new non-agricultural projects (Appendix H of this EIR).

Further, groundwater recharge in the area will not be significantly affected as the majority of the project site will feature a pervious landscape in both the existing and proposed conditions. Any runoff from solar panel washing would evaporate or percolate through the ground, as a majority of the surfaces in the solar field would remain pervious. The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. No significant impacts on groundwater supply or recharge would occur.

Mitigation Measure(s)

No mitigation measures are required.

ImpactWould the project substantially alter the existing drainage pattern of the site3.10-3or area, including through the alteration of the course of a stream or river or
through the addition of impervious surfaces, in a manner which would:

Result in substantial erosion or siltation on- or off-site?

Project implementation would not substantially alter the existing drainage pattern of the site or area. Soil erosion could result during construction of the proposed project in association with grading and earthmoving activities. The project site would be disturbed by construction activities such as grading and clearing as a part of site preparation. To the extent feasible, site preparation would be planned and designed to minimize the amount of earth movement. Compaction of the soil to support building and traffic loads as well as the PV module supports may be required and is dependent on final engineering design. During construction, erosion would be controlled in accordance with County standards which include preparation, review and approval of a grading plan by the County Engineer; implementation of a Dust Control Plan (Rule 801); and compliance with the NPDES General Construction Permit and project-specific SWPPP, as outlined in Mitigation Measure HYD-1.

After construction is complete, all existing roads would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted. As such, daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to alter the existing drainage pattern such that erosion increases when compared to existing conditions. The project site would remain largely impervious over the operational life of the project. Additionally, the project would implement site design BMPs, as outlined in Table 3.10-3, which would reduce soil disturbance during operation. The proposed project would result in less than significant impacts associated with the alteration of drainage patterns resulting in substantial erosion or siltation on- or off-site.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measures HYD-1 are required.

Significance after Mitigation

With the implementation of Mitigation Measure HYD-1, potential impacts associated with the alteration of drainage patterns resulting in substantial erosion or siltation on- or off-site would be reduced to a level less than significant through compliance with County standards, implementation of a Dust Control Plan (Rule 801), and compliance with the NPDES General Construction Permit and project-specific SWPPP.

ImpactWould the project substantially alter the existing drainage pattern of the site3.10-4or area, including through the alteration of the course of a stream or river or
through the addition of impervious surfaces, in a manner which would:

Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Project implementation would not substantially alter the existing drainage pattern of the site or area. The majority of the project site would continue to sheet flow through the pervious native soils. The project will be designed to meet County of Imperial storage requirements (100 percent of the 100-year storm (3 inches of rain)) (refer to the County's *Engineering Guidelines Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage and Grading Plans within Imperial County* (2008) 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. Additionally, implementation of Mitigation Measure HYD-2 requires that the project Drainage Plan adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. As such, 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.

Additionally, after construction is complete, all existing roads would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted. As such, daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to alter the existing drainage pattern such that flooding (on- or off-site) increases when compared to existing conditions. Lastly, the project site would remain largely impervious over the operational life of the project. 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)

Implement Mitigation Measure HYD-2.

Significance after Mitigation

With the implementation of Mitigation Measure HYD-2, impacts on existing drainage patterns as a result of potentially substantial increases to runoff would be reduced to a level less than significant. Implementation of Mitigation Measure HYD-2 would require the project's Drainage Plan to adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems.

ImpactWould the project substantially alter the existing drainage pattern of the site3.10-5or area, including through the alteration of the course of a stream or river or
through the addition of impervious surfaces, in a manner which would:

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?

Project implementation would not substantially alter the existing drainage pattern of the site or area. During construction, erosion and associated pollutants would be controlled in accordance with County standards which include preparation, review and approval of a grading plan by the County Engineer; implementation of a Dust Control Plan (Rule 801); and compliance with the NPDES General Construction Permit and project-specific SWPPP, as outlined in Mitigation Measure HYD-1 (see Impact 3.10-1 for additional details).

After construction is complete, all existing roads would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted. The proposed project is not anticipated to generate a significant increase in the amount of runoff water when compared to existing conditions. As such, daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to alter the existing drainage pattern such that runoff increases would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The project site would remain largely impervious over the operational life of the project. 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 create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems drainage systems or provide substantial additional sources of the project. 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 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.

Mitigation Measure(s)

Implement Mitigation Measure HYD-1.

Significance after Mitigation

With the implementation of Mitigation Measure HYD-1, impacts on the existing drainage pattern by the project that could result in substantial or polluted runoff would be reduced to a level less than significant through compliance with County standards, implementation of a Dust Control Plan (Rule 801), and compliance with the NPDES General Construction Permit and project-specific SWPPP.

ImpactWould the project substantially alter the existing drainage pattern of the site3.10-6or area, including through the alteration of the course of a stream or river or
through the addition of impervious surfaces, in a manner which would:

Impede or redirect flood flows?

Project implementation would not substantially alter the existing drainage pattern of the site or area. 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. Additionally, according to the FEMA's FIRM (Map Number Map Number 06025C1025C) (FEMA 2008), the proposed solar energy facility, gen-tie line, and access roads located on the project site are located in Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance floodplain. Therefore, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows, and impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

ImpactIn flood hazard, tsunami, or seiche zones, would the project risk release of3.10-7pollutants due to project inundation?

The project site is not located near any large bodies of water. The Salton Sea is located approximately 11.2 miles northwest of the project site. Because of the distance, the Salton Sea does not pose a danger of inundation from seiche or tsunami as related to the project site. Furthermore, the project site is over 100 miles inland from the Pacific Ocean. In addition, the project site is relatively flat. Therefore, there is no potential for the project site to be inundated by seiches or tsunamis. No impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

ImpactWould the project conflict with or obstruct implementation of a water quality3.10-8control plan or sustainable groundwater management plan?

As described under Impact 3.10-1 above, with the implementation of Mitigation Measure HYD-1, 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. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution. Additionally, the project would not require the direct use of groundwater. Therefore, the proposed project would not pose a significant threat to local surface water features or shallow groundwater resources, and, as such would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Implementation of Mitigation Measures HYD-1 and HYD-2 would reduce impacts to a level less than significant.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measures HYD-1 and HYD-2 are required.

Significance after Mitigation

With the implementation of Mitigation Measures HYD-1 and HYD-2, the potential water quality impacts resulting during construction and operation of the project would be reduced to a level less than significant.

3.10.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. 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, during decommissioning, soil erosion would be controlled in accordance with NPDES General Construction Permit(s) and project-specific SWPPP. Compliance with requirements and best available control technologies in place at the time of decommissioning are anticipated to be similar to, or more stringent than, those currently required. Compliance with all applicable water quality regulations would reduce the project's impacts during decommissioning to a level less than significant. 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 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.

3.11 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 govern 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.

3.11.1 Existing Conditions

The project site is located on approximately 227 acres of privately-owned land in the unincorporated area of Imperial County, CA (Figure 3-1). The site is approximately one mile north from the City of Brawley's jurisdictional limit. The project site is south of Baughman Road, west of N Best Avenue, and north of Andre Road. The Union Pacific Railway transects the project site. Table 3.11-1 identifies the individual assessor's parcel numbers (APN) associated with the project site with their respective acreage, General Plan land use designation, and zoning.

APN	Acreage	General Plan Land Use	Zoning
037-140-020	61.73	Agriculture	A-2-G
037-140-021	68.71	Agriculture	A-2-G
037-140-022	38.15	Agriculture	A-2-G
037-140-023	24.71	Agriculture	A-2-G
037-140-006	33.68	Agriculture	A-2-G
Total Gross Acres	227		

Table 3.11-1. Project Assessor Parcel Numbers, Acreages, and Zoning

APN = assessor parcel number; A-2-G = General Agricultural with Geothermal Overlay

As shown on Figure 3.11-1, the project site's land use is designated Agriculture under the County's General Plan. As depicted on Figure 3.11-2, the solar energy facility site is located on a total of five privately-owned legal parcels zoned A-2-G (General Agriculture with Geothermal Overlay). The proposed 1.8-mile gen-tie line would originate from the southern edge of the project site and then head west along Andre Road to interconnect to the IID existing North Brawley Geothermal Power Plant substation, located at Hovley Road and Andre Road.











Figure 3.11-2. Zoning Designations

Geothermal Overlay

As discussed in Chapter 2, the County adopted the Renewable Energy 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 renewable energy facilities while minimizing the impact on other established uses. As shown on Figure 3.11-2, the northern portion of the project site (APNs 037-140-020 and 037-140-021) is located within the Geothermal Overlay Zone. However, the entire project site is located outside of the RE Overlay Zone.

The project applicant is seeking a zone change to include/classify all five project parcels into the Renewable Energy/Geothermal (REG) Overlay Zone (A-2-REG). Further, 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 energy facility with an integrated battery storage system.

3.11.2 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.

3.11.2.1 Regional

Southern California Association of Governments – 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal)

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.

On September 3,2020, SCAG adopted the 2020-2045 RTP/SCS (Connect SoCal). The 2020-2045 RTP/SCS (Connect SoCal) includes a strong commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the NAAQS as set forth by

the federal CAA. The following goals from the 2020-2045 RTP/SCS (Connect SoCal) are considered applicable to the proposed project:

- Goal 5: Reduce GHG emissions and improve air quality
- Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats

Local

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 on 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; Renewable Energy 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 CEC's Renewable Energy and Conservation Planning Grant to amend and update the County's General Plan in order to facilitate future development of renewable energy 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. This Element is designed to provide guidance and approaches with respect to the future siting of renewable energy projects and electrical transmission lines in the County. The County adopted this element in 2016.

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 on Figure 3.11-2, the project site is located outside of the RE Overlay Zone.

An analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in Table 3.11-2. 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 final authority for the determination of the project's consistency with the General Plan.

Applicable Policies	Consistency Determination	Analysis		
Land Use Element				
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 consistent with County requirements and mitigation measures prescribed in Section 3.10, Hydrology/Water Quality, of the EIR.		
		Once the project is operational, water would be required for solar panel washing and fire protection. The project would receive water service from the IID. Water would be purchased from the IID and delivered to the project site by water trucks. The proposed project would not require an operations and maintenance building. Therefore, no septic or other wastewater disposal systems 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 Renewable Energy 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. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone.		
		The County's General Plan and Land Use Ordinance allows that for renewable energy projects proposed on land classified in a non-RE Overlay zone, that the land on which the project is located may be included/classified in the RE Overlay Zone if the renewable energy project: 1) would be located adjacent to an existing RE Overlay Zone; 2) is not located in a sensitive area; 3) is located in proximity to renewable energy infrastructure; and, 4) and would not result in any significant environmental impacts.		
		As shown on Figure 3.11-2, the northern portion of the project site is located within the Geothermal Overlay Zone. However, the entire project site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify all five project parcels into the RE Overlay Zone. With the approval of the General Plan Amendment, CUP, and zone change to A-2- REG the proposed solar project can be implemented.		

Table 3.11-2. Project Consistency with Applicable General Plan Policies
Applicable Policies	Consistency Determination	Analysis
<i>Public Facilities, Objective</i> 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 and soil binders during construction. Section 3.3, Air Quality, discusses the project's consistency with the AQAP in more detail.
Circulation and Scenic Highways Elemen	t	
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	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 at affected intersections, roadway segments, and high ways. 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 on 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	As described in Section 3.13, Transportation, a traffic study was prepared for the project and demonstrated that project operations would have a less than significant impact on the circulation network.
Noise Element		
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	The project would be required to comply with the County's noise standards during both construction and operation.

Applicable Policies	Consistency Determination	Analysis
Conservation and Open Space Element		
Conservation of Environmental Resources for Future Generations Goal 1: Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.	Consistent	The project site would be converted from undeveloped land to a solar energy facility. 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.
		The power generated by the proposed project 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 (i.e., air quality and GHG emissions). The proposed project would ensure future generations have access to a broad array of renewable energy sources, providing the public with alternative choices to fossil fuels.
Conservation of Biological Resources. Goal 2: The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability.	Consistent	A biological resources survey was conducted for the project site. As discussed in Section 3.5, Biological Resources, there are potentially sensitive biological resources located within the project site. However, with the implementation of mitigation identified in Section 3.5, Biological Resources, these impacts would be reduced to a level less than significant.
Preservation of Cultural Resources. Objective 3.1: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	A cultural resource inventory was prepared for the project site. As discussed in Section 3.6, Cultural Resources, the proposed project has the potential to encounter undocumented archaeological resources and human remains. Mitigation Measures CUL-1 through CUL-7 have been identified to reduce potential impacts to a level less than significant.
Conservation of Water Resources. Objective 6.1: Ensure the use and protection of all the rivers, waterways, and groundwater sources in the County for use by future generations.	Consistent	As discussed in Section 3.10, Hydrology/Water Quality, the project will prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources; as well as coordinate with the IID for water consumption during construction and operation of the project.
Protection of Air Quality and Addressing Climate Change. Goal 7: The County shall actively seek to improve the quality of air in the region.	Consistent	The proposed project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed project would improve air quality and reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from a fossil fuel burning facility. Therefore, the proposed project is consistent with this goal.

Applicable Policies	Consistency Determination	Analysis
Protection of Air Quality and Addressing Climate Change. Objective 7.1: Ensure that all project and facilities comply with current Federal, State and local requirements for attainment of air quality objectives.	Consistent	The proposed project would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the proposed project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard Air Quality Measures (Applicant Proposed Measure AQ-1). Therefore, the proposed project is consistent with this objective.
Protection of Air Quality and Addressing Climate Change. Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Consistent	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard Air Quality Measures (Applicant Proposed Measure AQ-1). Therefore, the proposed project is consistent with this objective.
Protection of Open Space and Recreational Opportunities. Objective 8.2: Focus all new renewable energy development within adopted Renewable Energy Overlay Zones.	Consistent	As shown on Figure 3.11-2, the northern portion of the project site (APNs 037-140-020 and 037- 140-021) is located within the Geothermal Overlay Zone. However, the entire project site is located outside of the RE Overlay Zone. The project applicant is requesting a General Plan Amendment and Zone Change to include/classify all five project parcels into the RE Overlay Zone. With the approval of the General Plan Amendment, Zone Change, and CUP, the proposed solar project can be implemented.
Renewable Energy and Transmission Ele	ement	
Objective 1.4: Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate.	Consistent	This EIR has been prepared to meet the requirements of CEQA for purposes of evaluating the potential environmental impacts associated with the proposed project, which includes analysis on applicable environmental topics that analyze impacts on agricultural, natural, and cultural resources.
<i>Objective 1.5:</i> Require appropriate mitigation and monitoring for environmental issues associated with developing renewable energy facilities.	Consistent	Please refer to Section 3.3, Agricultural Resources, for a description of existing agricultural resources within the project site and a discussion of potential impacts attributable to the project. Abiological resources report has been prepared for the project, which is summarized in Section 3.5, Biological Resources, along with potential impacts attributable to the project. With incorporation of mitigation identified in Sections 3.3, Agricultural Resources and 3.5, Biological Resources, less than significant impacts would result.

Applicable Policies	Consistency Determination	Analysis		
Objective 1.6: Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.	Consistent	Water use during construction would be used primarily for dust control, and obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. The project applicant will also coordinate with IID to purchase water needed for maintenance activities (i.e. PV module washing) to ensure efficient use of water resources.		
<i>Objective 1.7:</i> Assure that development of renewable energy 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 and soil binders during construction. Section 3.4, Air Quality, discusses the project's consistency with the ICAPCD in more detail.		
<i>Objective 2.1:</i> 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 renewable energy infrastructure that would interconnect with existing and approved IID transmission infrastructure thereby maximizing the use of existing facilities.		
Seismic and Public Safety Element				
Land Use Planning and Public Safety. 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. Pe County regulations, construction of buildings		
Land Use Planning and Public Safety. Objective 1.1: Ensure that data on geological hazards is incorporated into the land use review process, and future development process.		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		
Land Use Planning and Public Safety. Objective 1.3: Regulate development adjacent to or near all mineral deposits and geothermal operations.		and report not to expose a person to undue hazard created by the construction. Since the project site is located in a seismically active area, the project is required to be		
Land Use Planning and Public Safety. 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.		source factors derived from a design basis earthquake based on a peak ground acceleration of 0.48 gravity. 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		
Land Use Planning and Public Safety. Objective 1.7: Require developers to provide information related to geologic and seismic hazards when siting a proposed project.		seismic hazards would be minimized. A preliminary geotechnical report has been prepared for the proposed project. The preliminary geotechnical report has been referenced in this environmental document.		

Applicable Policies	Consistency Determination	Analysis
Emergency Preparedness. 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.		Additionally, a design-level geotechnical investigation would be conducted to evaluate the potential for site specific hazards associated with seismic activity.
Emergency Preparedness. Objective 2.2: Reduce risk and damage due to seismic hazards by appropriate regulation.		
Emergency Preparedness. Objective 2.5: Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		
Emergency Preparedness. 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.		
Water Element		
Protection of Water Resources from Hazardous Materials. Program: The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all ground water and surface water resources in the County.	Consistent	Mitigation measures will require that the applicant of the proposed project prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.
Protection of Water Resources from Hazardous Materials. 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 previous response for Water Element above.
Housing Element		
Not Applicable. The proposed project is a s	solar energy project	and does not include the development of housing.

Source: ICPDS 2008

AQAP = air quality attainment plan; CUP = conditional use permit; EIR = environmental impact report; GV = growth visioning; ICAPCD = Imperial County Air Pollution Control District; IID = Imperial Irrigation District; MW = megawatt; RE = renewable energy' ROW = right-of-way;

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. The Land Use Ordinance identifies the permitted and conditional

uses within a zoning designation. Uses identified as conditionally permitted require a CUP, which is subject to the discretionary approval of the County Board of Supervisors per a recommendation by the County Planning Commission.

A-2 Zoning. As depicted on Figure 3.11-2, the solar energy facility site is located on a total of five privately-owned legal parcels zoned A-2-G (General Agriculture with a Geothermal Overlay). Pursuant to Title 9, Division 5, Chapter 8 (County of Imperial 2019a), the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County: solar energy electrical generator, battery storage facility, electrical substations, communication towers, and facilities for the transmission of electrical energy.

RE Resources. According to Title 9, Division 17 of the Land Use Ordinance, the purpose of the RE Resources regulations are to "facilitate the beneficial use of renewable energy resources for the general welfare of the people of Imperial County and the State of California; to protect renewable energy resources from wasteful or detrimental uses; and to protect people, property, and the environment from detriments that might result from the improper use of renewable energy resources" (County of Imperial 2017).

Title 9, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved CUP. Uses that are conditionally permitted require a CUP subject to the discretionary approval of the County Board of Supervisors (Board) per a recommendation by the County Planning Commission.

Imperial County Airport Land Use Compatibility Plan

The Imperial County Airport Land Use Compatibility Plan (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 project site is located approximately 1.5 miles north of the Brawley Municipal Airport. However, the project site is outside of the airport compatibility zones of the Brawley Municipal Airport (County of Imperial 1996).

3.11.3 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 and planning are considered significant if any of the following occur:

- Physically divide an established community
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Impact Analysis

Impact 3.11-1 Would the project physically divide an established community?

The project site is located in a sparsely populated portion of Imperial County. The following single-family residences are located in the project vicinity:

- Residences located near the northwest corner of the project site
- Two residences at the corner of N Best Road and Ward Road
- One residence across the proposed project's primary access road
- One residence across the northeast corner of the project site
- One residence (with a horse boarding/training facility) on the west side of N Best Avenue, located south of the project site)

However, there are no established residential communities located in the vicinity of the project site. The nearest established residential community is located approximately 1.7 miles southwest of the project site in the City of Brawley. 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 3.11-2 Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

SCAG 2020-2045 RTP/SCS (Connect SoCal)

As noted above, the 2020-2045 RTP/SCS (Connect SoCal) (SCAG 2020) identifies two goals which include reducing GHG emissions to improve air quality (Goal 5), and to promote conservation of natural and agricultural lands (Goal 10).

The 2020-2045 RTP/SCS (Connect SoCal), identifies strategies to support the goal of reducing regional GHG and improve air quality. Strategies include leveraging technological innovations including incorporating solar energy, hydrogen fuel cell power storage, and power generation. Once in operation, the proposed project would contribute to SCAG's goal in reducing GHG emissions and improving air quality.

The 2020-2045 RTP/SCS (Connect SoCal) also discusses the decline of agricultural land as an issue for the economy. As discussed in Section 3.3, Agricultural Resources, the majority of the project site is designated as Farmland of Statewide Importance, with a pocket of Prime Farmland and Farmland of Local Importance located in the southern portion of the project site. Approximately 1 acre of Unique Farmland occurs along the western boundary of the project site.

The project would temporarily convert Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to non-agricultural uses. However, as a condition of project approval (CUP condition), the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers, and other

structures on the project site, as well as restoration of the site to its pre-project condition. Therefore, the proposed project would not permanently convert Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to non-agricultural uses. Therefore, no impacts due to a conflict with the 2020-2045 RTP/SCS (Connect SoCal) would occur.

County of Imperial General

The County's General Plan applies to the solar energy facility, battery storage system, gentie, and supporting infrastructure 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 3.11-2. As shown in Table 3.11-2, the proposed project would generally be consistent with the goals and objectives of the General Plan.

The County Land Use Ordinance, Division 17, includes the Renewable Energy 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. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone, and as stated in the Renewable Energy and Transmission Element:

CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. An amendment to the overlay zone would only be approved by the County Board of Supervisors if a future renewable energy project met one of the following two conditions:

- Adjacent to the Existing RE Overlay Zone: An amendment may be made to allow for development of a future renewable energy project located adjacent to the existing RE Overlay Zone if the project:
 - o Is not located in a sensitive area
 - Would not result in any significant impacts
- 2) <u>"Island Overlay"</u>: An amendment may be made to allow for development of a future renewable energy project that is not located adjacent to the existing RE Overlay Zone if the project:
 - Is located adjacent (sharing a common boundary) to an existing transmission source
 - o Consists of the expansion of an existing renewable energy operation
 - Would not result in any significant environmental impacts.

As shown on Figure 3.11-2, the northern portion of the project site (APNs 037-140-020 and 037-140-021) is located within the Geothermal Overlay Zone. However, the entire project site is located outside of the RE Overlay Zone. Therefore, the project applicant is seeking a zone change to include/classify all five project parcels into the Renewable Energy/Geothermal (REG) Overlay Zone (A-2-REG) and approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility with an integrated battery storage system. The project site is not located adjacent to an existing RE Overlay Zone; therefore, the project will need to meet the criteria identified for the "Island Overlay" to obtain approval of an amendment to the RE Overlay Zone. Table 3.11-3 provides an analysis of the project's consistency with the "Island Overlay" criteria.

With approval of the General Plan Amendment and Zone Change, the project applicant will be able to request for approval of a CUP to allow the construction and operation of the proposed solar facility.

Criteria	Criteria Met?
Is located adjacent (sharing a common boundary) to an existing transmission source?	There are existing IID power poles along N Best Avenue and Andre Road. As described in Chapter 2, the project includes a gen-tie line that would connect to the IID's existing North Brawley Geothermal Power Plant substation, located west of the project site's southern boundary at Hovley Road and Andre Road. The gen-tie route would be approximately 1.8 miles.
Consists of the expansion of an existing renewable energy operation?	As described in Chapter 2, the project includes a gen- tie line that would connect to the IID's existing North Brawley Geothermal Power Plant substation, located west of the project site's southern boundary at Hovley Road and Andre Road. The gen-tie route would be approximately 1.8 miles.
	The proposed project would be capable of generating up to 40 MW of solar energy, thereby expanding renewable energy generation in the area.
Would not result in any significant environmental impacts?	As detailed in Sections 3.2 through 3.15 of this EIR, no unavoidable or unmitigable 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. Therefore, the proposed project would not result in a residual significant impact.

Table 3.11-3. Project Consistency with "Island Overlay" Criteria

EIR = *environmental impact report; MW* = *megawatt; RE* = *renewable energy*

County of Imperial Land Use Ordinance

Development of the solar energy facility and supporting infrastructure is subject to the County's zoning ordinance. The solar energy facility is located on five privately-owned legal parcels zoned A-2-G. Pursuant to Title 9, Division 5, Chapter 8 the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County: solar energy electrical generator, battery storage facility, and facilities for the transmission of electrical energy (County of Imperial 2020). Therefore, with approval of a CUP, the proposed project would not conflict with the County's zoning ordinance.

Imperial County Airport Land Use Compatibility Plan

As previously discussed above, the project site is located approximately 1.5 miles north of the Brawley Municipal Airport. According to Figure 3A (Compatibility Map – Brawley Municipal Airport) of the ALUCP, no portion of the project site is located within the Brawley Municipal Airport 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.

3.11.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. No impacts on 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 plan, policy, or regulation. Through the project's decommissioning and subsequent restoration to pre-project conditions, the uses of the project site (agricultural) 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. Based on these circumstances, the project would not result in any residual significant and unmitigable land use impacts.

3.12 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 3.15, 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 2, 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 and are included in Chapter 6, Effects Found Not Significant, of this EIR. The IS/NOP is included in Appendix A of this EIR.

3.12.1 Existing Conditions

The project site is located in unincorporated County, approximately one mile north from the City of Brawley's jurisdictional limit. The project site is located within the Imperial County Fire Department (ICFD)/Office of Energy Services (OES) and the Imperial County Sheriff Department's areas of service.

Fire Protection Services

The project site is located within the ICFD/OES area of service. ICFD/OES currently has nine fire stations and six contracting agencies serving the entire 4,500 square miles of unincorporated Imperial County. The nine ICFD stations are located in the communities of Heber, Seeley, Ocotillo, Palo Verde, Niland, Winterhaven, Salton City, and the City of Imperial (ICFD 2019). 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 Imperial station located at 2514 La Brucherie Road in Imperial, California. This station is located approximately 13.5 miles southwest 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.

The closest sheriff's station to the project site is located at 220 Main St #207 in Brawley, California. This station is approximately 3 miles southwest of the project site.

3.12.2 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 the State of California. The Fire Code includes regulations regarding fire resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as 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 3.12-1.

Table 3.12-1. Project Consistency with Applicable General Plan Seismic and Public Safety Element

Applicable General Plan Goals/Policies	Consistency Determination	Analysis
<i>Goal 1:</i> Include public health and safety considerations in land use planning.	Consistent	The project's CUP application and site plan will be reviewed by the Imperial County Fire Department to ensure that the facility complies with state and local fire codes and fire safety features are met. Additionally, the project applicant has included site design measures that

Table 3.12-1	. Project Consist	tency with App	licable General	Plan Seismi	c and Public
Safety Eleme	ent				

Applicable General Plan Goals/Policies	Consistency Determination	Analysis
<i>Objective 1.8</i> : Reduce fire hazards by the design of new developments		meet the County Fire Department's standards which would reduce the potential for fire hazards. This includes constructing a secondary emergency access road, providing all-weather surface roads, and locked gates that can be opened by any emergency responders.
<i>Goal 2:</i> 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. With regards
<i>Objective 2.5:</i> Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		to public safety and security, the project would include 6-foot tall perimeter security fencing with barbed wire and a motion detection system and closed- circuit camera system. In addition, the points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders.

Source: ICPDS 1997

CUP = conditional use permit

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-jurisdictional 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 Emergency Operations Plan (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.

3.12.3 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, in order 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/NOP that the project would not result in impacts on schools, parks, or other public facilities. Therefore, those issue areas will not be discussed further and are included in Chapter 6, Effects Found Not Significant, of this EIR.

Methodology

Evaluation of potential fire and police service impacts of the proposed project was based on consultation with the ICFD, Sheriff's Department and review of other development projects in the area.

Impact Analysis

ImpactWould the project result in the provision of new or physically altered3.12-1governmental facilities, need for new or physically altered governmental
facilities, the construction of which could cause significant environmental
impacts, in order to maintain acceptable service ratios, response times or
other performance objectives for fire protection?

The project would result in a minor increase in demand for fire protection services over existing levels. No operation and maintenance (O&M) buildings are being proposed. Additional auxiliary facilities would include lighting, grounding, backup uninterruptable power supply (UPS) systems and diesel power generators, fire and hazardous materials safety systems, security systems, chemical safety systems, and emergency response facilities. The project also includes a battery energy storage system (BESS), located near the proposed substation. The proposed project's BESS component would be placed on a 54,000 square-foot concrete pad. The BESS would consist of 12 banks of batteries totaling up to 432 enclosures. Each of the enclosures would utilize self-contained liquid cooling systems and include built-in fire suppression systems.

The project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low. As discussed in Chapter 2, Project Description, primary access to the project site would be located off N Best Avenue. A secondary emergency access road would be located in the northwest portion of the project site. An all-weather surface access road would surround the perimeter of the project site, as well as around solar blocks no greater than 500 by 500 feet. Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders. Although the proposed project would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements (e.g., CPUC safety standards), the project applicant will be required to consult and coordinate with the Fire Department to address any fire safety and service concerns (i.e, BESS) so that adequate service is maintained. While the proposed project may result in an increase in demand for fire protection service, with installation of internal fire prevention systems and ICFD consultation, the project would not result in an increase in demand that would, in turn, result in a substantial adverse physical impact associated with the provision of new or physically altered fire protection facilities; the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services. Based on these considerations, the project would not result in a need for fire facility expansion and a less than significant impact would occur.

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 will 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.

ImpactWould the project result in the provision of new or physically altered3.12-2governmental facilities, need for new or physically altered governmental
facilities, the construction of which could cause significant environmental
impacts, in order to maintain acceptable service ratios, response times or
other performance objectives for police protection?

The 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. Although the potential is low, the proposed project may attract vandals or other security risks and the increase in construction related traffic could increase demand on law enforcement services. Six-foot high chain link fencing topped with barbed wire would be installed around the perimeter of the project site at the commencement of construction and site access would be limited to authorized site workers. Points of ingress/egress would be accessed via locked gates. In addition, a motion detection system and closed-circuit camera system may also be installed. The site would be remotely monitored 24 hours per day, 7 days per week. In addition, periodic on-site personnel visitations for security would occur during operations and maintenance of the proposed project, thereby minimizing the need for police surveillance.

The proposed project may result in a temporary increase in demand for law enforcement service due to the presence of construction equipment and material being stored on-site. With installation of the proposed security features on the project site, the proposed project would not result in an increase in demand that would, in turn, result in a substantial adverse physical impact associated with the provision of new or physically altered sheriff facilities; the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services. As conditions of approval of the project, the project applicant will be required to participate in the Imperial County Public Benefit Program for the life of this CUP and shall at all times be a party to a public benefit agreement in a form acceptable to County Counsel in order to pay for all costs, benefits, and fees associated with the approved project, and the applicant will be required to reimburse the Sheriff's Department for any investigations regarding theft on the project site and related law enforcement. Approval of this public benefit agreement will be by the Board of Supervisors prior to the issuance of the first building permit. These potential impacts are less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.12.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. Decommissioning and restoration of the project site would occur and would not result in an increased need for fire and police protection services. Decommissioning of the project would occur through implementation of a required Reclamation Plan. These activities would be in the form of disassembling project components, including the BESS, and then restoring the site to 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.

3.13 Transportation

This section addresses the proposed project's impacts on traffic and the surrounding roadway network associated with construction and operation of the proposed project. The following discussion describes the existing conditions in the surrounding area, the existing federal, state, and local regulations regarding transportation, and an analysis of the potential impacts of the proposed project.

Information in this section is summarized from the *Traffic Letter Report – Brawley Solar Project* prepared by Linscott, Law & Greenspan (LLG). This report is included in Appendix G of this EIR.

3.13.1 Existing Conditions

Existing Circulation Network

The following is a description of the nearby roadway network:

North Best Avenue is an unclassified roadway in the Imperial County Circulation Element Plan. It is currently constructed as a two-lane north-south roadway in the study area. There is no posted speed limit. There are no bike lanes provided.

Ward Road is an unclassified roadway in the Imperial County Circulation Element Plan. It is currently constructed as a two-lane east-west roadway in the study area. There is no posted speed limit. There are no bike lanes provided.

State Route 111 (SR-111) begins at the International Border between Mexico and the United States traveling north with two travel lanes in each direction. SR 111 (Imperial Avenue) is classified as a 4-Lane primary north/south arterial in the City of Calexico Circulation Element. Class II bicycle lanes are provided north of SR 98. Bus stops are not provided. Curb, gutter, and sidewalks are provided south of SR 98. Curbside parking is permitted intermittently south of SR 98, on both sides of the roadway. The speed limit is posted at 55 mph.

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. IVT Routes are defined categorized in the following manner:

- **Fixed Routes.** Fixed routes operate over a set pattern of travel and with a published schedule. The fixed route provides a low cost, reliable, accessible and comfortable way to travel.
- **Deviated Fixed Route.** In several service areas, IVT operates on a deviated fixed route basis so that persons with disabilities and limited mobility are able to travel on the bus. Passengers must call and request this service the day before service is desired in the communities of Seeley, Ocotillo and the east side of the Salton Sea.
- **Remote Zone Routes.** Remote zone route operate once a week. These routes are "lifeline" in nature in that they provide connections from some of the more distant communities in the Imperial County area (IVT 2021).

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. The IVT Gold Line serves the Brawley area with 31 bus stops. The nearest IVT bus stop is located at Flammang Avenue and Gutierrez Court, which is approximately two miles southwest of the project site.

Bicycle Facilities

The project site is located within a rural portion of Imperial County. There are no bicycle facilities in the immediate proximity of the project site.

Project Site Access

Regional access to the site would be provided by SR-78 and SR-111. As shown in Figure 2-3, primary access to the project site would be located off N Best Avenue. A secondary emergency access road would be located in the northwest portion of the project site.

3.13.2 Regulatory Setting

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

State

Senate Bill 743

In September 2013, the Governor's Office signed Senate Bill 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. Within the State's CEQA Guidelines, these changes include the elimination of Auto Delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. The guidance identifies vehicle miles traveled (VMT) as the most appropriate CEQA transportation metric, along with the elimination of Auto Delay/LOS for CEQA purposes statewide. The justification for this paradigm shift is that Auto Delay/LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

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 within the County, Caltrans District 11 is responsible for maintaining and managing I-8, SR-78 and SR-111.

Regional

Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Connect SoCal)

On September 3,2020, SCAG adopted the 2020-2045 RTP/SCS (SCAG 2020). 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 2020-2045 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 Clean Air Act.

The updated RTP/SCS contains thousands of individual transportation projects that aim to improve the region's mobility and air quality and revitalize the 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 a LOS "C" or better (County of Imperial 2008).

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 and Scenic Highways Element, and Conservation 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.

3.13.3 Impacts and Mitigation Measures

Thresholds of Significance

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

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities
- Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access

Methodology

The assessment evaluates the proposed project's trip generated during and after construction, and roadway conditions for roads that would be utilized to access the project site for construction.

Project Trip Generation

Construction of the proposed project would occur in phases beginning with site preparation and grading and ending with equipment setup and commencement of commercial operations. During peak construction activities, 120 workers and a maximum of 60 trucks at a time would be required.

Daily and peak hour trip generation rates and in/out splits were calculated for the peak construction period using detailed data developed for analysis of the project's impacts. Construction activities would generally occur during a 12-hour-shift day. A worst-case scenario in which all employees would arrive prior to the morning peak commuter period (7:00 - 9:00 a.m.) and depart within the evening peak period (4:00 - 6:00 p.m.) was assumed. Truck trips are anticipated to be distributed generally evenly throughout the 12-hour-shift day. In order to provide a conservative analysis, all employees were assumed to arrive and depart during peak commute periods. In addition, no carpooling for construction employees was assumed.

A passenger-car-equivalent (PCE) factor of 2.5 was applied to heavy vehicles (per the Highway Capacity Manual or HCM) to account for their reduced performance characteristics in the traffic stream (e.g. starting, stopping, and maneuvering). This information was used in calculating the project-generated average daily traffic (ADT).

Table 3.13-1 tabulates the total daily and peak hour project traffic volumes. The project's construction trip generation is calculated to be 540 ADT with 127 inbound/19 outbound trips during the AM peak hour and 19 inbound/ 127 outbound trips during the PM peak hour. These values include the heavy-vehicle PCE-adjustment.

Once fully constructed, the project would be operated on an unstaffed basis and be monitored remotely from the existing Brawley Geothermal Power Plant control room, with periodic on-site personnel visitations for security, maintenance and system monitoring. Therefore, no full-time site personnel would be required on-site during operations and approximately two employees would only be onsite up to four times per year to wash the solar panels.

Use	Size	Size	Size P	PCE ^b	Daily Trips		Daily Trips		AM Peak Hour		PM Peak Hour	
					Volume		Volume					
			Rate (In + Out)	Volume (ADT) ^a	In	Out	In	Out				
Personnel	120	1	2.0/personnel	240	114	6	6	114				
Trucks	60	2.5	2.0/truck	300	13	13	13	13				
Subtotal				540	127	19	19	127				

Table 3.13-1. Construction Project Trip Generation

Notes: a – ADT = Average daily traffic; b – PCE = Passenger car equivalent

1. To estimate the employee traffic, it is conservatively assumed that 100% of the employee traffic would access the work area during the same commuter peak hours between 7:00 - 9:00a.m. & 4:00 - 6:00 p.m.

2. The In/Out splits assumed are 95:5 during AM peak hour and 5:95 during the PM peak hour.

3. Truck trips are estimated to occur relatively evenly throughout a 12-hour construction hours proposed for the project. For 30 trucks, this calculates to approximately 2.3 trucks/hour without PCE.

4. A passenger-car-equivalent (PCE) factor of 2.5 was applied to heavy vehicles (per the Highway Capacity Manual or HCM) Source: Appendix G of this EIR

Impact Analysis

Impact 3.13-1 Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

During the construction phase of the proposed project, the maximum number of trip ends generated on a daily basis would be approximately 540 trips. Based on the low amount of construction trips generated and low existing traffic volumes on area roadways, no substantial transportation impacts are anticipated. Implementation of the proposed project would not require any public road widening to accommodate vehicular trips associated with the proposed project (construction phase and operational phase), while maintaining adequate LOS. Additionally, future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. Approximately two employees would be onsite up to four times per year to wash the solar panels, which equates to 8 trips per employee or 16 trips annually. There is no regular bus service to the general area and project-related construction and operations and maintenance phases would not impact mass transit. The proposed project would not interfere with bicycle facilities because the proposed project is located in a rural portion of the County with no existing or potential future designated bike routes in the immediate vicinity. Therefore, the proposed project would not result in any significant impacts to any roadway segments or transportation related facilities/infrastructure within the project area during construction and operation; and would not conflict with a program plan, ordinance, or policy as it relates to traffic and transportation. Impacts are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.13-2 Would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Section 15064.3(b) of the CEQA Guidelines provides guidance on determining the significance of transportation impacts and focuses on the use of vehicle miles traveled (VMT), which is defined as the amount and distance of automobile travel associated with a project.

Although the proposed project would increase VMT during the construction phase as a result of trips made by construction workers and transportation of construction material and equipment, these increases are temporary in nature. Further, as discussed above, operation of the proposed project would only require intermittent maintenance (including inspection, panel washing, and vegetation removal), which would be a nominal amount of vehicle trips generated (16 trips annually). Therefore, the proposed project would not conflict or be inconsistent with Section 15064.3(b) of the CEQA Guidelines and this impact is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.13-3 Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Project construction would include the renovation of existing dirt roads to all-weather surfaces (to meet the County standards) from N Best Avenue to the City of Brawley wastewater treatment plant. Construction of the proposed project would begin with clearing of existing brush and installation of fencing around the project boundary. A 20-foot road of engineering-approved aggregate would surround the site within the fencing.

As shown in Figure 2-3, primary access to the project site would be located off N Best Avenue. A secondary emergency access road would be located in the northwest portion of the project site. Access roads would be constructed with an all-weather surface, to meet the County Fire Department's standards. An all-weather surface access road would surround the perimeter of the project site, as well as around solar blocks no greater than 500 by 500 feet.

At the time of final design for the proposed project, and as a Condition of Approval of the proposed project, the applicant will submit a final Haul Route Study that identifies what road improvements, if any, are requested by Department of Public Works and a cost estimate. The applicant would work with the 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 the roads and access points listed above, and provide recommendations on improvements, as well as quantity and cost estimates for such improvements

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 3.13-4 Would the project result in inadequate emergency access?

PV panels would be spaced to maintain proper clearance for emergency access. Internal access roads would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. Access roads would be constructed with an all-weather surface, to meet the County Fire Department's standards. The access roads would also have turnaround areas at any dead-end to allow clearance for fire trucks per fire department standards. Based on this context, impacts on this issue area are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.13.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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 presented above, construction traffic would not result in a significant impact on any of the project area roadway segments, intersections, and freeway segments because of the low volume of traffic. A similar scenario would occur during the decommissioning and site restoration stage for the proposed project. ADT would be similar to or less than the ADT required for construction. Similarly, the decommissioning activities would not result in a significant impact related to possible safety hazards, or possible conflicts with adopted policies, plans, or programs as the decommissioning and subsequent restoration would revert the project site to pre-project conditions. Therefore, decommissioning and restoration of the project site would not generate traffic resulting in a significant impact on the circulation network. A less than significant 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 proposed project.

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3.14 Tribal Cultural Resources

This section discusses tribal cultural resources that may be potentially 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 *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* prepared by Chambers Group, Inc. This report is included in Appendix E of this EIR.

3.14.1 Existing Conditions

Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR); or included in a local register of historical resources; or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant. Historical resources, unique archaeological resources, or non-unique archaeological resources may also be tribal cultural resources if they meet these criteria (PRC Section 21074).

Tribal Cultural Setting

See Section 3.6, Cultural Resources of this EIR and the *Archaeological and Paleontological Assessment Report for the Brawley Solar Project* (Appendix E of this EIR) for a description of the regional ethnohistory.

Sacred Lands File Results

The California Native American Heritage Commission (NAHC) identifies, catalogs, and protects Native American cultural resources on private and public lands in California. Cultural resources include graves, cemeteries, and places of special religious or social significance to Native Americans. The NAHC also records the historical territories of state recognized tribes into a database called the Sacred Lands File (SLF). A records search of the SLF is conducted to ensure that the tribes potentially affected by a project are properly notified and consulted.

A SLF search request was submitted on October 2, 2020 to the California NAHC. The search results were received on October 28, 2020, and were positive. The NAHC response provided contact information for Native American tribes that may have information on cultural resources on the project site.

Tribal Notification

Pursuant to Assembly Bill (AB) 52, California Native American tribes traditionally and cultural affiliated with the project area can request notification of projects in their traditional cultural territory. The NAHC enclosed a list of Native American groups and individuals who may be able to provide information about Native American cultural resources in the vicinity of the project site.

Pursuant to Senate Bill (SB) 18, prior to the approval or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts on, cultural places on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment.

In accordance with AB 52 and SB18, the County provided notification of the proposed project to the following Native American tribes via certified mail on August 4, 2021:

- Barona Group of the Capitan Grande
- Campo Band of Diegueno Mission Indians
- Ewiiaapaayp Band of Kumeyaay Indians
- lipay Nation of Santa Ysabel
- Inja-Cosmit Band of Indians
- Jamul Indian Village
- Kwaaymii Laguna Band of Mission Indians
- La Posta Band of Diegueno Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Diegueno Mission Indians
- Quechan Tribe of the Fort Yuma Reservation
- San Pasqual Band of Diegueno Mission Indians
- Sycuan Band of Kumeyaay Nation
- Viejas Band of Kumeyaay Indians

The County 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. No tribes have responded that indicate the potential for traditional cultural properties or sacred sites.

3.14.2 Regulatory Setting

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

Federal

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

The Native American Graves Protection and Repatriation Act 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

Assembly Bill 52

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 impacts 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 potential impacts to tribal 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.

Senate Bill 18

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to approvals and amendments of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

Prior to the approval or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts on, cultural places on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code §65352.3).

Public Resources Code Section 21074

PRC Section 21074 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 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, passed in 1976, established the 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 Section 21074

PRC Section 21074 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 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.

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

California HSC 7050.5 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.

3.14.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to tribal 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 tribal cultural resources are considered significant if the project causes a substantial adverse change in the significance of a tribal cultural resource defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC section 5020.1(k)
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

Impact Analysis

ImpactWould the project cause a substantial adverse change in the significance of a3.14-1tribal cultural resource defined in Public Resources Code section 21074 as
either a site, feature, place, cultural landscape that is geographically defined
in terms of the size and scope of the landscape, sacred place, or object with
cultural value to a California Native American tribe, and that is:

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

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

The NAHC maintains the confidential SLF which contains sites of traditional, cultural, or religious value to the Native American community. A SLF search request was submitted on October 2, 2020 to the California NAHC. The search results were received on October 28, 2020 and were positive.

In accordance with AB 52 and SB18, the County provided notification of the proposed project to 14 Native American tribes (see complete list in Section 3.14.1) via certified mail on August 4, 2021. The County 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. No tribes have responded that indicate the potential for traditional cultural properties or sacred sites. Therefore, the project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1, and, per the criteria set forth in Section 5024.1, considering the significance of the resource to a California Native American tribe. As stated in Section 3.6 Cultural Resources, potential impacts to archaeological resources would be less than significant with implementation of Mitigation Measures CUL-1 through CUL-6. Impacts specifically related to tribal cultural resources would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.14.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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. No grading or significant landform modifications would be required during decommissioning activities upon site restoration in the future. No impact on tribal cultural resources would occur.

Residual

As described above, impacts specifically related to tribal cultural resources would be less than significant. No mitigation is required and no residual unmitigated impacts would occur with implementation of the proposed project.

3.15 Utilities and 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, stormwater drainage facilities, water supply and treatment, and solid waste disposal. 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 2, Project Description. DuBose Design Group prepared the *Water Supply Assessment* (WSA) for the Brawley Solar Energy Facility. This report is included in Appendix H 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. Therefore, these impacts are not addressed in detail in this EIR; however, the rationale for eliminating these issues is discussed in Chapter 6.0, Effects Found Not Significant.

3.15.1 Existing Conditions

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. Imperial Valley depends on the Colorado River for its water, which the Imperial Irrigation District (IID) transports, untreated, to delivery gates for agricultural, municipal, industrial (including geothermal and solar energy), environmental (managed marsh), recreational (lakes), and other non-agricultural uses. IID supplies the cities, communities, institutions and Golden State Water (which includes all or portions Calipatria, Niland, and some adjacent Imperial County territory) with untreated water that they treat to meet state and federal drinking water guidelines before distribution to their customers (Appendix H of this EIR).

The project site is located within IID's Imperial Unit and district boundary and as such is eligible to receive water service. IID has adopted an Interim Water Supply Policy (IWSP) for Non-Agricultural Projects, from which water supplies can be contracted to serve new developments within IID's water service area. The IWSP sets aside 25,000 acre-feet annually (AFY) of IID's Colorado River water supply to serve new non-agricultural projects. As of October 2021, a balance of 23,800 acre-feet per year (AFY) remain available under the IWSP for new non-agricultural projects ensuring reasonably sufficient supplies for such projects. Water for the project site will continue to be supplied by the adjacent Best Canal Lateral X through an IWSP Water Supply Agreement with IID to process the untreated Colorado River water for the proposed project. IID delivers untreated Colorado River water to the project site for agricultural uses through the following gates and laterals. The 10-year record for 2011-2020 of water delivery accounting is shown in Table 3.15-1.

1 4516 5.15	1.111310		carmst			1). 201	T tillou	911 2020		
Canal/Gate	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Best 115	0	0	226.9	412.3	435.8	425.0	307.9	513.8	417.3	317.2
Best 114	0	0	136.9	230.9	259.2	257.0	262.0	340.9	381.1	247.2
Best 113	0	0	111.4	286.1	212.8	223.4	350.5	282.8	197.2	247.5
Best 110	0	0	127.4	161.4	172.6	142.4	121.9	171.0	204.5	163.0
Total	0	0	602.6	1090.7	1080.4	1047.8	1042.3	1308.5	1200.1	974.9

Table 3.15-1.	Historic 10-Y	ear Historic	Deliverv	(AFY): 2011	through	2020

Source: Appendix H of this EIR

AF = acre-feet per year

3.15.2 Regulatory Setting

This section identifies and summarizes laws, policies, and regulations that are applicable to the proposed 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, the solar facility is deemed a "project" because it 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.

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.

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 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 project, 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.

Temporary Land Conversion Fallowing Policy

The Temporary Land Conversion Fallowing Policy was adopted by the Board on October 28, 2013, to provide a mechanism for IID to administer apportionment of the district's quantified annual supply of Colorado River water; IID board approved a resolution repealing the Equitable Distribution Plan (EDP) on February 6, 2018.

In order to facilitate new development and economic diversity in Imperial County; as well as ensure that the long-term, temporary, land use designations are conducive to a coordinated land use/water supply policy as envisioned in the Imperial IRWMP the IID Temporary Land Conversion Fallowing Policy was developed. This policy provides a framework for a temporary, long-term fallowing program to work in concert with the IWSP and provides direction for certain private projects that, if implemented, will temporarily remove land from agricultural production within the district's water service area include renewable solar energy and other non-agricultural projects. Such projects may need a short-term water supply for construction and decommissioning activities and longer-term water service for facility operation and maintenance or for treating to potable water standards.

County of Imperial General Plan

The Imperial County General Plan provides goals, objectives, policies, and programs regarding the preservation and use of water. Table 3.15-2 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.

Applicable General Plan Goals and Policies	Consistency Determination	Analysis		
Conservation and Open Space Element				
Preservation of Water Resources, Goal 6: The County will conserve, protect, and enhance water resources in the County.	Consistent	Since the project would temporarily convert farmland into a non-agricultural use, the project would reduce the need for IID to fallow irrigation; thereby, reducing agricultural water demand.		
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, since the project would temporarily convert farmland into a non-agricultural use, the project would reduce the amount of water used on site; thereby, reducing potential surface and groundwater pollution from agricultural uses. Additionally, the project would be required to comply with NPDES permits and regulations to address pollutants from run-off that may result during construction and operation of the project.		
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 non-drinking non-potable water needs. Additionally, as further detailed in Section 3.15.3, the project would result in a decrease in water use compared to the current active agricultural uses on the project site.		

Table 3.15-2. County of Imperial General Plan Consistency Analysis – Water Service

Source: ICPDS 1993 IID = Imperial Irrigation District

3.15.3 Impacts and Mitigation Measures

Thresholds of Significance

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

Water Supply

• Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years

Methodology

The WSA (Appendix H of this EIR) was prepared using project-specific data to calculate the project's water consumption during construction and at build-out collectively ("operational").

Impact Analysis

Impact 3.15-1 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

CONSTRUCTION

The proposed project is anticipated to take approximately 6-9 months from the commencement of the construction process to complete. Construction water needs would be limited to earthwork, soil conditioning, dust suppression, and compaction efforts. As shown in Table 3.15-3, the proposed project would require approximately 32.5 AFY of water during construction. This includes the 20,000 gallons of water that will need to be stored on the project site during construction per Imperial County Fire Standards.

OPERATIONS AND MAINTENANCE

As shown in Table 3.15-3, estimated annual water consumption for operation and maintenance of the proposed project, including periodic PV module washing, would be approximately 86.8 acre feet or 3.1 AFY, which would be trucked to the project site as needed. This includes the 180,000 gallons of water that will need to be stored on the project site during operations per Imperial County Fire Standards. No full-time site personnel would be required on-site during operations and approximately two employees would only be onsite up to four times per year to wash the solar panels to ensure optimum solar absorption by removing dust particles and other buildup.

DECOMMISSIONING

If at the end of the Power Purchase Agreement (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 3.15-3, total water demand during decommissioning is estimated to be 32.5 AFY.

TOTAL AND ANNUAL WATER DEMAND

According to the WSA (Appendix H of this EIR), the anticipated water demand for construction, operation, and decommissioning of the project is estimated to be 151.8 AF, for an annualized demand of 5.06 AFY for the 30-year project life (Table 3.15-3).

Water Use	Expected Years	Total
Construction Water ¹	1	32.5 AF
Total for Water Construction		32.5 AF
Processing, Daily Plant Operations & Mitigation ²	28	3.1 AFY

Table 3.15-3. Project Water Use
Water Use	Expected Years	Total
Total Water Usage for Processing Daily Plant Operations & Mitigation		86.8 AF
Project Decommissioning	1	32.5 AF
Total for Project Decommissioning		32.5 AF
Total Water Usage for Project	30	151.8 AF
Amortized	30	5.06 AFY

Table 3.15-3. Project Water Use

Source: Appendix H of this EIR

1 – 20,000 gallons of water will need to be stored on site during construction per Imperial County Fire Standards.

2-180,000 gallons of water will need to be stored on site per Imperial County Fire Standards for operations.

AF = acre-feet; AFY = acre-feet per year

WATER SUPPLY

Water for the project site will be supplied by the adjacent Best Canal Lateral X through an IWSP Water Supply Agreement with IID to process the untreated Colorado River water for the proposed project. The IWSP sets aside 25,000 acre-feet annually (AFY) of IID's Colorado River water supply to serve new non-agricultural projects. As of October 2021, a balance of 23,800 AFY remain available under the IWSP for new non-agricultural projects ensuring reasonably sufficient supplies for such projects. As shown in Table 3.15-4, the proposed project's water demand during construction for a period of 1 year using approximately 32.5 AFY, represents approximately 0.03% of the annual unallocated supply set aside for new non-agricultural projects. The proposed project's total water demand for operations is approximately 3.1 AFY for 28 years and represents approximately 0.01% of the annual unallocated supply set aside for new non-agricultural projects. Decommissioning is expected to take 1 year and use approximately 32.5 AFY, representing approximately 0.03% of the annual unallocated supply set aside for new non-agricultural projects. As shown in Table 3.15-4, the project is expected to consume 151.8 AF for the 30-year lifespan of the project which would equate to 5.06 AFY amortized representing 0.02% of the annual unallocated supply set aside for new non-agricultural projects. Thus, the proposed project's estimated water demand would not affect IID's ability to provide water to other users in IID's water service area. Therefore, the proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources, and impacts would be less than significant.

Project Phase	Project Water Use	Years	Total Combined (AF)	IWSP (AFY)	% of Remaining Unallocated IWSP per Year
Construction	32.5 AFY	1	32.5 AF	23,800 AFY	0.03%
Operations	3.1 AFY	28	86.8 AF	23,800 AFY	0.01%
Decommissioning	32.5 AFY	1	32.5 AF	23,800 AFY	0.03%

Total	5.06 AFY	30	151.8 AF	23,800 AFY	0.02%
				1	

Source: Appendix H of this EIR

Mitigation Measure(s)

No mitigation measures are required.

3.15.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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 3.15-3, total water demand during decommissioning is estimated to be 32.5 AFY. As described above, the proposed project's estimated water demand, which includes decommissioning, would not affect IID's ability to provide water to other users in IID's water service area. The proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources, and impacts would be less than significant.

Residual

The proposed project would not result in significant impacts on the water supply of Imperial County; therefore, no mitigation is required. The proposed project will not result in residual impacts.

4 Analysis of Long-Term Effects

4.1 Growth-Inducing Impacts

In accordance with Section 15126.2(e) 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 expansions, 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 August 2021 was 19.4 percent (State of California Employment Development Department 2021b), which represents an approximately 1.3 percent decrease in unemployment from September 2019 (20.7 percent) (State of California Employment Department 2021b). 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 Section 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 local or regional 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.

4.2 Significant Irreversible Environmental Changes

In accordance with CEQA Guidelines Section 15126.2(d), 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 30-year life of the project.

At the end of the project's operation term, the applicant may determine that the project should be decommissioned and deconstructed. Should the project be decommissioned, 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. Concrete footings, foundations, and pads would be removed and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. The applicant anticipates using the best available recycling measures at the time of decommissioning.

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 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.

4.3 Significant and Unmitigable Impacts

In accordance with CEQA Guidelines Section 15126(c), 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 3 of this EIR, concludes that no significant and unmitigable 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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5 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 3, 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.

5.1 Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effects varies by each resource area considered in Chapter 3. 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 site 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. Evaluating the proposed project's cumulative impacts when future facility decommissioning occurs is highly speculative because decommissioning is expected to occur in 20 to 25 years' time. Therefore, cumulative impacts during decommissioning are speculative for detailed consideration in this analysis.

5.2 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 5-1 provides the general location for each of these projects in relation to the project site.

5.3 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 5-1 in conjunction with the impacts identified for the project in Chapter 3 of this EIR. Table 5-1 includes solar 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 5-1 provides the general location for each of these projects in relation to the project site.



Figure 5-1. Cumulative Projects

Legend

Project Location Solar Projects



Operational Approved - Under Construction Approved - Not Built

Pending Entitlement

Renewable Energy Overlay Geothermal Renewable Energy/Geothermal



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Map Label ¹	Project Name	Project Type	Distance from Brawley Project Site	Size (acres)	Capacity (MW)	Status ²
1	Imperial Valley Solar II	PV Solar Facility	Approximately 16.30 miles north	146	20	Operational
2	IV Solar Company	PV Solar Facility	Approximately 15.80 miles north	123	23	Operational
3	Midway Solar Farm I	PV Solar Facility	Approximately 10.30 miles northwest	480	50	Operational
4	Midway Solar Farm II	PV Solar Facility	Approximately 10.30 miles northwest	803	155	Operational
5	Midway Solar Farm III	PV Solar Facility	Approximately 10.20 miles northwest	160	20	Operational
6	Midway Solar Farm IV	PV Solar Facility	Approximately 9.29 miles northwest	160	15	Approved – Not Built
7	Calipatria Solar Farm I (Lindsey Solar)	PV Solar Facility	Approximately 8.60 miles north	148	20	Operational
8	Calipatria Solar Farm (Wilkinson Solar)	PV Solar Facility	Approximately 8.60 miles north	302	30	Approved – Not Built
9	Calipatria Solar Farm I	PV Solar Facility	Approximately 8.10 miles north	159	20	Operational
10	Arkansas Solar	PV Solar Facility	Approximately 8.50 miles northeast	481	50	Operational
11	Nider Solar Project	PV Solar Facility	Approximately 10.50 miles northeast	320	100	Pending Entitlement
12	Sonora Solar	PV Solar Facility	Approximately10.90 miles northeast	488	50	Operational
13	Citizens Solar	PV Solar Facility	Approximately 13.00 miles northeast	159	30	Operational
14	Ormat Wister Solar	PV Solar Facility	Approximately 17.30 miles north	160	20	Approved – Not Built
15	VEGA SES 5	PV Solar Facility	Approximately 13.30 miles northeast			Pending Entitlement

Table 5-1. Projects Considered in the Cumulative Impact Analysis

Map Label ¹	Project Name	Project Type	Distance from Brawley Project Site	Size (acres)	Capacity (MW)	Status ²
16	VEGA SES 2	PV Solar Facility	Approximately 15.20 miles northeast	1,963350(combined total for(combined total forVEGA 2, 3, and 5)VEGA 2, 3, and 5)		Pending Entitlement
17	VEGA SES 3	PV Solar Facility	Approximately 14.90 miles northeast			Pending Entitlement
18	Alhambra Solar	PV Solar Facility	Approximately 5.00 miles northeast	482	50	Operational
19	Valencia Solar Project 1	PV Solar Facility	Approximately 7.00 miles west	17	3	Operational
20	Valencia Solar Project 2	PV Solar Facility	Approximately 7.30 miles south	17	3	Operational
21	Valencia Solar Project 3	PV Solar Facility	Approximately 9.20 miles southwest	19	3	Operational
22	Vikings Solar	PV Solar Facility	Approximately 20.00 miles southeast	604	150	Pending Entitlement
23	Campo Verde	PV Solar Facility	Approximately 20.10 miles southwest	1,400	139	Operational
24	Laurel 1	PV Solar Facility	Approximately 21.60 miles southwest	1,396 (combined total for	325 (combined total for	Approved – Not Built
25	Laurel 2	PV Solar Facility	Approximately 22 miles south west	Laurel 1, 2, and 3)	Laurel 1, 2, and 3)	Approved – Not Built
26	Laurel 3	PV Solar Facility	Approximately 22 miles south west			Approved – Not Built
27	Imperial Solar West	PV Solar Facility	Approximately 22 miles south west	1,145 150		Operational
28	Dixieland West	PV Solar Facility	Approximately 22 miles south west	32	3	Operational
29	Dixieland East	PV Solar Facility	Approximately 22 miles south west	31	2	Operational

Table 5-1. Projects Considered in the Cumulative Impact Analysis

1 – See Figure 5-1 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 (<u>http://icpds.maps.arcqis.com/apps/Viewer/index.html?appid=c6fd31272e3d42e1b736ce8542b994ae</u>). Accessed on October 5, 2021.

IID – Imperial Irrigation District; MW – megawatts; PV – photovoltaic

5.3.1 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, but would only be available to a very limited amount of people and would have to be in relatively close proximity to the project site. Longer-term visual impacts of the project would be in the form of the transmission and transmission system, and substation.

As provided in Section 3.2, Aesthetics, the existing visual character of the project site and the quality of views in terms of visibility beyond the site would not be substantially altered. The visual changes associated with the project would not be located in proximity to any designated scenic vistas or scenic highways. The proposed project would be absorbed into the broader landscape that already includes agricultural development, electricity transmission, geothermal power plants, and the City of Brawley Wastewater Treatment Plant. 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 undeveloped 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 5-1 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 5-1 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, as would all other related projects. Based on these considerations, there would be no significant cumulatively considerable aesthetic impact, and cumulative aesthetic impacts would be less than significant.

5.3.2 Agricultural 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. To determine cumulative impacts on agricultural resources, an assessment is made of the temporal nature of the impacts on individual resources (e.g., temporary such as in solar projects versus permanent as in industrial or residential developments) as well as the inventory of agricultural resources within the cumulative setting.

As discussed in Section 3.3, Agricultural Resources, the majority of the project site is designated as Farmland of Statewide Importance, with a pocket of Prime Farmland and Farmland of Local Importance1 located in the southern portion of the project site. Approximately 1 acre of Unique Farmland occurs along the western boundary of the project site. Therefore, the proposed project would

¹ It should be noted that analysis of Other Land and Farmland of Local Importance is not required under CEQA significance criteria, as these designations are not considered an "agricultural land" per CEQA Statute Section 21060.1(a).

convert land designated as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to non-agricultural uses, and, as such, incrementally add to the conversion of agricultural land in Imperial County. However, the project site is located on land designated for agricultural uses. The project would be constructed on land currently zoned A-2-G (General Agricultural with a Geothermal Overlay). Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County: solar energy electrical generator, battery storage facility, electrical substations, communication towers, and facilities for the transmission of electrical energy. Upon approval of a CUP and Zone Change into the RE Overlay Zone designation, the project's uses 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, as a condition of project approval, the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan.

As discussed in Section 3.3, Agricultural Resources, Mitigation Measure AG-1a (Payment of Agricultural and Other Benefit Fees), AG-1b (Site Reclamation Plan), and AG-2 (Pest Management Plan) would be implemented to reduce potential impacts on agricultural resources to a level less than significant. Each individual cumulative project would be or would have been required to provide mitigation for any impacts on agricultural resources in accordance with the County's policies directed at mitigating the impact associated with the conversion of important farmlands. Therefore, the project's contribution to this impact would be less than cumulatively considerable.

5.3.3 Air Quality

Imperial County is used as the geographic scope for analysis of cumulative air quality impacts. As shown in Table 5-1, many of the cumulative 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 5-1 are already constructed and operational. 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.

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 approved, but not yet built (Midway Solar Farm I, Orni Wister Solar, Calipatria Solar Farm [Wilkinson Solar], Laurel I, Laurel II, and Laurel III), or pending entitlement (Nider Solar Project, Vega SES 2, 3, and 5, and Viking Solar) identified in Table 5-1 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. However, as discussed in Section 3.4, 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 could 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 5-1 (Midway Solar Farm I, Orni Wister Solar, Calipatria Solar Farm [Wilkinson Solar], Laurel I, Laurel II, Laurel III, Nider Solar Project, Vega SES 2, 3, and 5, and Viking Solar), 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 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 and is therefore, less than significant.

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 5-1 would also be similar. Although these cumulative projects generally 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 consideration 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 and PM_{2.5} for the NAAQS. However, 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, in addition be required to prepare and implement operational dust control plans 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, and cumulative impacts would be less than significant.

5.3.4 Biological Resources

The geographic scope for considering cumulative impacts on biological resources includes the Imperial Valley and related biological habitats. Table 5-1 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 3.5, Biological Resources, one plant species, Abram's spurge, has a low potential to occur due to the limited suitable habitat within the project site. Three wildlife species have a low potential to occur (flat-tailed horned lizard, short-eared owl, and western yellow bat) on the project site, two wildlife species (loggerhead shrikes) was observed onsite during site reconnaissance. As such, the project has the potential to result in direct impacts on biological resources. Additionally, project construction has the potential to result in direct and indirect impacts on nesting birds.

Mitigation measures identified in Section 3.5, Biological Resources, would ensure that all regulations required to protect these species are implemented, thereby minimizing potential impacts on these species to a less than significant level. 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. Several jurisdictional features were observed within the project site. The New River, a NWI mapped blueline, flows approximately .2 miles to the west of the project site. In addition, several NWI mapped blueline canals, drains, and ditches owned by IID flow along the borders of the project site. However, the project has been located, and consequently designed, to avoid impacts to waters of the State and waters of the U.S.

Given the above, the project would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative projects within the geographic scope of the proposed project will be required to comply with the legal frameworks set forth above, as well as others, and will be required to mitigate their impacts to a less than significant level. Therefore, the project would not contribute to a cumulatively considerable impact to biological resources, and cumulative impacts would be less than significant.

5.3.5 Cultural Resources

As discussed in Section 3.6, Cultural Resources, 6 newly recorded cultural resources were identified within the project site during field surveys. Newly identified cultural resources comprise both historicperiod and two multi-component sites. Resource 21267-001 is recommended not eligible for listing and the other five resources have not been formally evaluated for potential eligibility for listing in the CRHR. The project applicant will avoid ground-disturbing activities within and in close proximity to these resources. However, if-ground disturbing activities must occur within and in close proximity to these resources, a significant impact may potentially occur. Implementation of Mitigation Measures CUL-1 through CUL-6 would reduce potential impacts associated to cultural historic resources to a level less than significant. Therefore, the proposed project would not cause a substantial adverse change in the significant 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 CUL-1 through CUL-6 would reduce potential impacts associated with the unanticipated discovery of unknown buried archaeological resources. Implementation of Mitigation Measure CUL-7 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 CUL-1 through CUL-7 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 archaeological resources would be anticipated because the soil disturbance would have already occurred and been mitigated during construction.

5.3.6 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 cumulatively considerable effects are identified for geology/soils, and cumulative impacts would be less than significant.

Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant paleontological resources impact due to the potential loss of paleontological resources unique to the region. However, mitigation is included in this EIR to reduce potentially significant project impacts to paleontological resources during construction of the proposed project. Implementation of Mitigation Measures GEO-2 through GEO-7 would ensure that the potential impacts on paleontological resources would be required to comply with federal, state, and local regulations and ordinances protecting paleontological resources through implementation of similar project-specific mitigation measures during construction. Therefore, through GEO-2 through GEO-7, the proposed project would have a less than cumulatively considerable contribution to impacts on paleontological resources.

5.3.7 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.

CAPCOA considers projects that generate more than 900 metric tons of CO₂e per year to be significant. This 900 metric tons per year threshold was developed to ensure at least 90 percent of new GHG emissions would be reviewed and assessed for mitigation, thereby contributing to the statewide GHG emissions reduction goals that had been established for the year 2030 under SB 32. Thus, both cumulatively and individually, projects that generate less than 900 metric tons CO₂e per year have a negligible contribution to overall emissions. As discussed in Section 3.8, Greenhouse Gas Emissions, the project would result in the generation of approximately 46 MTCO₂e annualized over the lifetime of the project. Therefore, the construction emissions are less than the CAPCOA's screening threshold of 900 MTCO₂e per year. As the project's emissions do not exceed the CAPCOA's

threshold, the proposed project would not result in a cumulatively considerable impact to GHG emissions and would not conflict with the State GHG reduction targets. Other cumulative projects identified in Table 5-1 are utility-scale solar facilities. The nature of these projects is such that, like the project, they would be consistent with the strategies of the Climate Change Scoping Plan. In order to meet the AB 32 GHG emissions reduction mandate, the Scoping Plan relies on achievement of the RPS target of 33 percent of California's energy coming from renewable sources by 2020 and 50 percent by 2030. The RPS target was updated in September 2018 under SB 100 to 60 percent by 2030. The project and other similar projects are essential to achieving the RPS.

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.

5.3.8 Hazards and 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 standard American Society of Testing and Materials (ASTM) standard search distance for hazardous materials.

Under cumulative conditions, implementation of the project in conjunction with the projects listed in Table 5-1 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, operation, and decommissioning. 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.

5.3.9 Hydrology and Water Quality

Table 5-1 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. Compliance with the SWRCB's NPDES general permit for activities associated with construction (2009-0009-DWQ) would reduce water quality impacts. As with the proposed 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 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, as outlined in Mitigation Measures HYD-1 and HYD-2. 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 proposed project site is located in Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance 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.

Based on these considerations, the project would not contribute to or result in a significant cumulatively considerable impact to hydrology or water quality, and cumulative impacts would be less than significant.

5.3.10 Land Use 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 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 site plus a one-mile buffer to ensure a consideration for reasonably anticipated potential direct and indirect effects.

As provided in Section 3.11, Land Use/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 3.11, Land Use/Planning, the project would not conflict with the goals and objectives of the County of Imperial General Plan if all entitlements (General Plan amendment, Conditional Use Permit, and Zone Change) are approved by the County Board of Supervisors. In addition, a majority of the cumulative projects identified in Table 5-1 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 5-1, similar to the projects, the County would require mitigation to avoid or minimize potential land use impacts. Where General Plan Amendments and/or Zone Changes are required to extend the RE Overlay Zone, that project would also be required to demonstrate consistency with the overall goals and policies of the General Plan, and would be required to demonstrate meeting the criteria for extending the RE Overlay onto the project site. Based on these circumstances, no significant cumulatively considerable impact would occur, and cumulative impacts would be less than significant.

5.3.11 Public Services

The project would result in increased demand for public services (fire protection service and law enforcement services) (Section 3.12, Public Services). Future development in the Imperial Valley, including projects identified in Table 5-1, 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), 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.

5.3.12 Transportation

As stated in Section 3.13, Transportation, during the construction phase of the project, the maximum number of trips generated on a daily basis would be approximately 540 trips. Based on the low amount of construction trips generated and low existing traffic volumes on area roadways, no substantial transportation impacts are anticipated. A majority of the projects listed in Table 5-1 are already constructed. As shown on Table 5-1, there are cumulative projects that are approved, but not yet built (Midway Solar Farm I, Ormat Wister Solar, Calipatria Solar Farm [Wilkinson Solar], Laurel I, Laurel II, and Laurel III), or pending entitlement (Nider Solar Project, Vega SES 2, 3, and 5, and Viking Solar). The construction phasing of these projects is not anticipated to overlap with the proposed project. Furthermore, with exception of SR-111, 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, and this impact would be less than significant.

5.3.13 Tribal Cultural Resources

As discussed in Section 3.14, Tribal Cultural Resources, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites. Therefore, the proposed project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, and impacts on tribal cultural resources would be less than significant. Future cumulative projects would also be required to comply with the requirements of AB 52 to determine the presence/absence of tribal cultural resources and engage in consultation to determine appropriate mitigation measures to minimize or avoid impacts on tribal cultural resources. Based on these considerations, the project would not contribute to or result in a significant cumulatively considerable impact tribal cultural resources.

5.3.14 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. The proposed project would not require or result in the relocation or construction of new or expanded wastewater facilities, storm water facilities, or water facilities. 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.

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6 Effects Found Not 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.

6.1 Agriculture and Forestry Resources

6.1.1 Forestry Resources

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 the need for a zone change specifically related to forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). Therefore, implementation of the proposed project would not impact forestry resources.

6.2 Energy

Information for this section is summarized from the *Air Quality, Energy, and Greenhouse Gas Emissions Impact Analysis* prepared for the project by Vista Environmental. This report is included in Appendix C of this EIR.

The proposed project would impact energy resources during construction and operation. Energy resources that would be potentially impacted include electricity, and petroleum-based fuel supplies and distribution systems. The proposed project would not utilize any natural gas during either construction or operation of the proposed project, and no further analysis of natural gas is provided in this analysis.

The following discussion calculates the potential energy consumption associated with the construction and operation of the proposed project and analyzes if any energy utilized by the proposed project is wasteful, inefficient, or unnecessary consumption of energy resources.

6.2.1 Construction Energy

The construction activities for the proposed project are anticipated to include: 1) Site Preparation; 2) PV System Installation and Testing, and 3) Site Clean-up and Restoration. The proposed project would consume energy resources during construction in three (3) general forms:

- 1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, as well as delivery and haul truck trips (e.g., hauling of construction waste material to off-site reuse and disposal facilities);
- 2. Electricity associated with the conveyance of water that would be used during project construction for dust control (supply and conveyance) and electricity to power any necessary

lighting during construction, electronic equipment, or other construction activities necessitating electrical power; and,

3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Construction-Related Electricity

During construction of the proposed project, electricity would be consumed to construct the new structures and infrastructure. Electricity would be supplied to the project site by IID and would be obtained from the existing electrical lines in the vicinity of the project site. The use of electricity from existing power lines rather than temporary diesel or gasoline powered generators would minimize impacts on energy use. Electricity consumed during project construction would vary throughout the construction period based on the construction activities being performed. Various construction activities include electricity associated with the conveyance of water that would be used during project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power. Such electricity demand would be temporary, nominal, and would cease upon the completion of construction. Overall, construction activities associated with the proposed project would require limited electricity consumption that would not be expected to have an adverse impact on available electricity supplies and infrastructure. Therefore, the use of electricity during project construction would not be wasteful, inefficient, or unnecessary.

The proposed project would include installation of an approximately 1.8-mile-long overhead power line from the southern edge of the project site to the North Brawley Geothermal Power Plant substation, which would provide adequate capacity to handle the power generated and utilized by the proposed project. Where feasible, the new service installations and connections would be scheduled and implemented in a manner that would not result in electrical service interruptions to other properties. Compliance with County and IID guidelines and requirements would ensure that the proposed project fulfills its responsibilities relative to infrastructure installation, coordinates any electrical infrastructure removals or relocations, and limits any impacts associated with construction of the project. Construction of the project's electrical infrastructure is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity.

Construction-Related Petroleum Fuel Use

Petroleum-based fuel usage represents the highest amount of transportation energy potentially consumed during construction, which would be utilized by both off-road equipment operating on the project site and on-road automobiles transporting workers to and from the project site and on-road trucks transporting equipment and supplies to the project site.

The off-road equipment utilized during construction of the proposed project would consume 84,890 gallons of fuel. The on-road trips generated from construction of the proposed project would consume 77,046 gallons of fuel. As such, the combined fuel used from off-road construction equipment and on-road construction trips for the proposed project would result in the consumption of 161,935 gallons of petroleum fuel. This equates to 0.17 percent of the gasoline and diesel consumed annually in Imperial County. As such, the construction-related petroleum use would be nominal, when compared to current county-wide petroleum usage rates.

Construction activities associated with the proposed project would be required to adhere to all State and ICAPCD regulations for off-road equipment and on-road trucks, which provide minimum fuel

efficiency standards. As such, construction activities for the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. Impacts regarding transportation energy would be less than significant.

6.2.2 Operations Energy

The on-going operation of the proposed project would require the use of energy resources for multiple purposes including, but not limited to, heating/ventilating/air conditioning (HVAC), lighting, and electronics. Energy would also be consumed during operations related to water usage and vehicle trips.

Operations-Related Electricity

Operation of the proposed project would result in consumption and production of electricity at the project site. The proposed PV solar panels will generate 97,333,333 kWh per year of electricity and operation of the project will use 1,946,667 kWh per year of electricity, which would result in the net generation of 95,386,667 kWh per year of electricity. This equates to 2.8 percent of the electricity consumed annually by IID. As such, the operations-related electricity use would provide a significant renewable resource for the IID and would help IID achieve the State' Renewable Portfolio Standards requirement for non-carbon sources of electricity. No impact would occur from electricity-related energy consumption from the proposed project.

Operations-Related Vehicular Petroleum Fuel Usage

Operation of the proposed project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the project site. The proposed project would consume 1,036 gallons of petroleum fuel per year from vehicle travel. This equates to 0.001 percent of the gasoline and diesel consumed in Imperial County annually. As such, the operations-related petroleum use would be nominal, when compared to current petroleum usage rates

It should be noted that, the proposed project would comply with all Federal, State, and County requirements related to the consumption of transportation energy and would provide a non-carbon source of electricity to power electric vehicles in Imperial County. Thus, impacts with regard transportation energy supply and infrastructure capacity would be less than significant and no mitigation measures would be required.

6.2.3 Compliance with State or Local Plans for Renewable Energy or Energy Efficiency

The purpose of the proposed project is the construction of a renewable energy and storage facility in Imperial County. Once in operation, it will decrease the need for energy from fossil fuel-based power plants in the state. The result would be a net increase in electricity resources available to the regional grid, generated from a renewable source. The proposed project would help California meet its Renewable Portfolio Standard of 60 percent of retail electricity sales from renewable sources by the end of 2030 and 100 percent by 2045. Additionally, the project would also be consistent with the County's General Plan Conservation and Open Space Element, Objective 9.2 which encourages renewable energy developments. Therefore, the project would directly support state and local plans for renewable energy development. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, no impact would occur.

6.3 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 Figure 8: Imperial County Existing Mineral Resources of the Conservation and Open Space Element of the General Plan (County of Imperial 2016), no known mineral resources occur within the project site nor does the project site contain mapped mineral resources. Therefore, the proposed project would not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of California nor would the proposed project result in the loss of availability of a locally important mineral resource.

Based on a review of the California Department Division of Oil, Gas, and Geothermal Resources Well Finder, there are two plugged and abandoned geothermal wells (Well No. 02590966 and 02590983) located in the central portion of the project site (APN 037-140-022) (California Department of Oil, Gas, and Geothermal Resources 2021). There is also one idle water well (Well No. 02591498) on the southwestern portion of the project site (APN 037-140-022). The proposed project would be designed to avoid the geothermal wells and water well and would result in no impact.

6.4 Noise

Information contained in this section is summarized from the *Noise Impact Analysis for the Brawley Solar Energy Facility Project* prepared by Vista Environmental. This report is included in Appendix I of this EIR. The following analyzes the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the County standards. Potential noise impacts from vibration and nearby airports is also analyzed below.

6.4.1 Construction-Related Noise

The construction activities for the proposed project are anticipated to include: 1) Site Preparation; 2) PV System Installation and Testing, and 3) Site Clean-up and Restoration. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the project site are single-family homes located as near as 40 feet to the north side of the project site (near the northwest corner of the project site). There are also homes located on the east side of N Best Avenue that are as near as 120 feet east of the project site.

The General Plan Noise Element includes Construction Noise Standards that limits the noise created from construction equipment to 75 dB Leq, averaged over an eight (8) hour period at the nearest sensitive receptor. In addition, the Construction Noise Standards limit construction equipment operation to between the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays.

For each phase of construction, all construction equipment was analyzed based on being placed in the middle of the project site, which is based on the analysis methodology detailed in FTA Manual for a General Assessment. Since the County's construction noise standard is based on the noise level over an 8-hour period and in a typical day the proposed construction equipment would operate over the entire project site, the use of the methodology detailed in the FTA Manual for a General Assessment would provide a reasonable estimate of the construction-related noise levels created by the proposed project.

Table 6-1 shows that greatest construction noise impacts would be as high as 53 dBA Leg during the PV system installation and testing phase at the nearest homes to the northwest, northeast, and southeast of the project site. All calculated construction noise levels shown in Table 6-1 are within the County's construction noise standard of 75 dBA and would also be below the existing ambient daytime noise levels in the vicinity of the nearby homes. Therefore, through adherence to the limitation of allowable construction times provided in the General Plan Noise Element, construction-related noise levels would not exceed any standards established in the General Plan or Noise Ordinance nor would construction activities create a substantial temporary increase in ambient noise levels from construction of the proposed project. Impacts would be less than significant.

Construction Bhoos	Construction Noise Lovel (dBA Log) at:					
Construction Phase						
	Home to Northwest ¹	Home to Northeast ²	Home to Southeast ³			
Site Preparation	52	52	52			
PV System Installation and Testing	53	53	53			
Site Clean-Up and Restoration	52	52	52			
Construction Noise Threshold ⁴	75	75	75			
Ambient Daytime Noise Level	66.5	60.2	62.0			
Exceed Thresholds?	No	No	No			
¹ The distance from the center of the proje ² The distance from the center of the proje	ct site to the home to the northwest was	s measured at 2,900 as measured at 2,900	feet. Difeet			

Table 6-1.Construction Noise Levels at the Nearby Homes

³ The distance from the center of the project site to the home to the southeast was measured at 2,850 feet.

⁴ Construction Noise Threshold obtained from the General Plan Noise Element (County of Imperial, 2015).

Source: Appendix I of this EIR

6.4.2 **Operational-Related Noise**

The proposed project would consist of the development of a solar facility with a BESS and a substation. Since the proposed project would be operated on an unstaffed basis and monitored remotely from the Brawley Geothermal Power Plant control room, operation of the proposed project would not typically generate any additional vehicle traffic on the nearby roadways. As such, potential noise impacts associated with the operations of the proposed project would be limited to onsite noise sources. The proposed PV solar panels do not create any operational noise, however the proposed BESS Enclosures (AC Unit noise), Power Conversion System, Power Distribution Center that would be located at the BESS, and auxiliary transformers, and Battery Step Up Transformer that would be located at the proposed substation are known sources of noise that have been analyzed below.

Both the General Plan Noise Element and Section 90702.00 provide the same noise level limits at the property line of the nearby homes of 50 dBA Leq-1hour between 7 a.m. and 10 p.m. and 45 dBA Leq-1hour between 10 p.m. and 7 a.m. When the ambient noise level is equal to or exceeds the above noise standards, the proposed noise source shall not exceed the ambient plus 3 dB Leq.

In order to determine the noise impacts from the operation of onsite noise making equipment, noise specifications from previously prepared noise reports were obtained and are shown in Table 6-2. The noise levels from each source were calculated through use of standard geometric spreading of noise from a point source with a drop-off rate of 6 dB for each doubling of the distance between the source and receiver (Appendix I of this EIR).

Table 6-2 shows that the proposed project's onsite operational noise from the anticipated onsite noise sources would not exceed the applicable noise standards at the nearby homes. Therefore, operational onsite noise impacts would be less than significant.

Noise Source	Home to Northwest		Home to Northeast		Home to Southeast	
	Distance - Source to Home (feet)	Noise Level ¹ (dBA Leq)	Distance - Source to Home (feet)	Noise Level ¹ (dBA Leq)	Distance - Source to Home (feet)	Noise Level ¹ (dBA Leq)
BESS Enclosures ²	5,050	25	5,100	25	850	40
Power Conversion System ³	5,050	22	5,100	22	850	38
Power Distribution Center ⁴	5,050	22	5,100	22	850	38
Auxiliary Transformers ⁵	5,030	31	5,280	31	1,150	44
Battery Step up Transformer ⁶	5,030	31	5,280	31	850	47
Combined Noise Levels		35		35		50
County Noise Standard ⁷ (day/night)		69.5/67.9		63.2/58.6		65.0/59.2
Exceed County Noise Standards?		No/No		No/No		No/No

Table 6-2. O	perational	Noise	Levels	at the	Nearby	Homes
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Notes:

¹ The noise levels were calculated through use of standard geometric spreading of noise from a point source with a drop-off rate of 6 dB for each doubling of the distance between the source and receiver.

² BESS Enclosures is based on a reference noise measurement of 88.6 dBA at 1 meter.

 $^{3}\,$ Power Conversion System is based on a reference noise measurement of 86.1 dBA at 1 meter.

⁴ Power Distribution Center is based on a reference noise measurement of 86.1 dBA at 1 meter.

⁵ Auxiliary Transformers are based on a reference noise measurement of 95.1 dBA at 1 meter.

⁶ Battery Step up Transformer is based on a reference noise measurement of 95.1 dBA at 1 meter.

⁷ County Noise Standard based on ambient noise level shown in Table D plus 3 dB at the nearby homes.

Source: Appendix I of this EIR

6.4.3 Construction-Related Vibration Impacts

Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptor to the project site is a single-family home located as near as 40 feet to the north side of the project site (near the northwest corner of the project site).

Since neither the Municipal Code nor the General Plan provides any thresholds related to vibration, Caltrans guidance has been utilized, which defines the threshold of perception from transient sources at 0.25 inch per second PPV.

The primary source of vibration during construction would be from the operation of a bulldozer. A large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet. Based on typical propagation rates, the vibration level at the nearest home (40 feet away) would be 0.06 inch per second PPV (Appendix I of this EIR). The vibration level at the nearest home, would be below the 0.25 inch per second PPV threshold detailed above. Impacts would be less than significant.

6.4.4 Operations-Related Vibration Impacts

The proposed project would consist of the operation of a solar energy facility. The on-going operation of the proposed project would not include the operation of any known vibration sources. Therefore, a less than significant vibration impact is anticipated from the operation of the proposed project.

6.4.5 Airport Noise

The project site is located within 2 miles of a public airport. The nearest airport is the Brawley Municipal Airport located approximately 1.5 miles south of the project site. However, the project site is outside of the airport compatibility zones of the Brawley Municipal Airport (County of Imperial 1996). Therefore, the proposed project would not expose people residing or working in the project area to excess noise levels and no impact is identified for this issue area.

6.5 Population and Housing

Development of housing is not proposed as part of the project. The unemployment rate in Imperial County, as of August 2021 was 19.4 percent (State of California Employment Development Department 2021b). 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 in Imperial County (19.4 percent) (State of California Employment Development Development Department 2021b), and the availability of the local workforce, construction of the proposed project would not have a growth-inducing effect.

Once fully constructed, the project would be operated on an unstaffed basis and be monitored remotely, with periodic on-site personnel visitations for security, maintenance and system monitoring. Therefore, no full-time site personnel would be required on-site during operations and approximately two employees would only be onsite up to four times per year to wash the solar panels. As the project's PV arrays produce electricity passively, maintenance requirements are anticipated to be very minimal. Therefore, the proposed project would not result in a substantial growth in the area, as the number of employees required to operate and maintain the facility is minimal.

No housing exists within the project site and no people reside within the project site. Therefore, the proposed project would not displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. The proposed project would result in no impact to population and housing.

6.6 Public Services

Schools. 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 Imperial County's School District since it is anticipated that construction workers would commute in during construction operations. The proposed project would have no impact on Imperial County schools.

Parks and Other Public Facilities. No full-time employees are required to operate the project. The project facility will be monitored remotely. It is anticipated that maintenance of the facility will require minimal site presence to perform periodic visual inspections and minor repairs. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public

facilities are not expected. The project is not expected to have an impact on parks, libraries, and other public facilities.

6.7 Recreation

The project site is not used for formal recreational purposes. Also, 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. Up to 120 construction workers are expected to be on-site per day. 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.

6.8 Utilities and Service Systems

Wastewater Facilities. 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 require or result in the relocation or construction of new or expanded wastewater facilities.

Storm Water Facilities. The proposed project will involve the construction of drainage control facilities within the project site, and included in the project impact footprint, of which environmental impacts have been evaluated. Otherwise, the project does not require expanded or new storm drainage facilities off-site (i.e., outside of the project footprint) because the proposed solar facility would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events, and therefore, would not require the construction of off-site storm water management facilities. 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. The proposed project would not require or result in the relocation or construction of new or expanded storm water facilities beyond those proposed as part of the project and evaluated in the EIR.

Water Facilities. The proposed project is not anticipated to result in a significant increase in water demand/use during operation; however, water will be needed for solar panel washing and dust suppression. During operation, water would be trucked to the project site from a local water source. Therefore, the proposed project would not require or result in the relocation or construction of new or expanded water facilities.

Power, Natural Gas, and Telecommunication Facilities. The proposed project would involve construction of powerfacilities. However, these are components of the project as evaluated in the EIR. The proposed project would not otherwise generate the demand for or require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities that would in turn, result in a significant impact to the environment.

Solid Waste Facilities. 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 Imperial Landfill (13-AA-0019) located approximately 11 miles south of the proposed project in Imperial. The Imperial Landfill has approximately 12,384,000 cubic yards of remaining capacity and is estimated to remain in operation

through 2040 (CalRecycle 2021). Therefore, there is ample landfill capacity in the County to receive the minor amount of solid waste generated by construction and operation of the proposed 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.

6.9 Wildfire

According to the Draft Fire Hazard Severity Zone Map for Imperial County prepared by the California Department of Forestry and Fire Protection, the project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). Therefore, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan; expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; exacerbate fire risk; or, expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact is identified for wildfire.

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7 Alternatives

7.1 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 most of 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)).

Criteria for Alternatives Analysis 7.2

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:

- Construct, operate and maintain an efficient, economic, reliable, safe and environmentally sound solar-powered electricity generating facility.
- Help meet California's Renewable Portfolio Standard (RPS) requirements, which require that by 2030, California's electric utilities are to obtain 50 percent of the electricity they supply from renewable sources.

- Generate renewable solar-generated electricity from proven technology, at a competitive cost, with low environmental impact, and deliver it to the local markets as soon as possible.
- Develop, construct, own and operate the Brawley Solar Energy Facility, and ultimately sell its electricity and all renewable and environmental attributes to an electric utility purchaser under a long-term contract to meet California's RPS goals.
- Utilize a location that is in close proximity to an existing switching station and powerlines.
- Minimize and mitigate any potential impact to sensitive environmental resources within the project area.

7.3 Alternatives Considered but Rejected

7.3.1 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 potentially significant environmental impacts will be mitigated to a level less than significant.

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 and is depicted on Figure 7-1. As shown, this site is located south of the project site on privately-owned agricultural lands, similar to the project site. The site, located on APNs 037-160-017, 037-160-018, and 037-160-019 totals approximately 282 acres of land.

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

• The alternative location site, as compared to the proposed project site, is located immediately north of State Route 78, a major US State Highway traversed by large numbers of transient public viewers. When compared to the proposed project, the alternative site would result in potentially significant impacts associated with aesthetics and visual quality. While the proposed project identified no significant impacts for aesthetics and visual quality, implementation of the project at the alternative location site has the potential to permanently alter the existing visual character and visual quality of the alternative site, which is characterized by agricultural lands and minor agricultural development under existing viewer locations from SR 78, looking north. As such, aesthetic impacts at the alternative location site, adjacent to SR 78, would be greater than those at the proposed project site, which is located adjacent to small, less-traveled, agricultural roads (N Best Road and Baughman Road), approximately 0.7 mile east of the major thoroughfare, SR 111.

Similarly, a glare hazard analysis prepared for the project (Appendix B of this EIR) concluded that sensitive viewers near the proposed project, including residences, a nearby golf course,

major roadways, and approach slopes associated with the Brawley Municipal Airport, would not experience glare effects from the project. Comparatively, due to the alternative site location's close proximity immediately north of SR 78, potential glare impacts resulting from the solar array would be potentially significant to viewers traveling on SR 78.

- The alternative location site, as compared to the proposed project site, is bisected by the Shellenberger Drain. With the implementation of mitigation, impacts on surface water quality as attributable to the proposed project, which has been designed to avoid bisecting any waterways, would be reduced to a less than significant level. However, construction activities at the alternative site location have the potential to impact hydrology and water quality (due to the presence of the Shellenberger Drain) when compared to the proposed project site.
- 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 (to hydrology and water quality) that are currently not identified for the project at the currently proposed location.

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

Figure 7-1. Alternative Site





- Project Location
 Alternative Site
- --- Gen-Tie Line
- Point of Interconnection


7.4 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)(1), "the specific alternative of 'no project' shall also be evaluated along with its impact." Also, pursuant to Section 15126.6(e)(2); "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 a majority of the project objectives.

7.4.1 Environmental Impact of Alternative 1: No Project/No Development Alternative

Aesthetics

Under the No Project/No Development Alternative, the project site would not be developed and would continue to be agricultural land. The No Project/No Development Alternative would not modify the existing project site or add construction to the project site; therefore, 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. As discussed in greater detail in Section 3.2, Aesthetics, the proposed project would result in a less than significant impact associated with introduction of new sources of light and glare. Under the No Project Alternative, no new sources of light, glare, or other aesthetic impacts would occur. Under this alternative, light, glare, and aesthetic impacts would be less compared to the project as the existing visual conditions would not change.

Agricultural Resources

Under the No Project/No Development Alternative, the project site would not be developed and would continue to be agricultural land. Compared to the proposed project, implementation of this alternative would avoid the conversion of land designated as Prime Farmland (4.44 acres) and Farmland of Statewide Importance (204.95 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 site 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 associated with 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.

As discussed in Section 3.4, Air Quality, the proposed project would not exceed the ICAPCD's significance thresholds for emissions of ROG, CO, NOx, and PM₁₀ during both the construction and

operational phases of the project. Although no significant air quality impacts would occur, 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.

This alternative would result in less air quality emissions compared to the proposed project, the majority of which would occur during construction.

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, this alternative would not result in construction of a solar facility that could otherwise result in significant impacts to these biological resources. Compared to the proposed project, this alternative would avoid impacts to biological resources.

Cultural Resources

The proposed project would involve 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.

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 hazards (strong ground shaking), soil erosion, and paleontological resources. In contrast, the proposed project would require the incorporation of mitigation measures related to potential seismic hazards, soil erosion, and paleontological resources to minimize impacts to a less than significant level. Compared to the proposed project, this alternative would avoid significant impacts related to local geology and soil conditions and paleontological resources.

Greenhouse Gas Emissions

Under the No Project/No Development Alternative, there would be no GHG emissions resulting from project construction or operation or corresponding impact to global climate change. 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 SB 32. 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 by providing renewable clean energy. 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 clean renewable energy, that does not generate GHG emissions. 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. Further, the construction emissions (amortized over 30 years) associated with the project would be off-set by the beneficial renewable energy provided by the project, negating any potential that the No Project/No Development alternative would reduce construction-related GHG emissions.

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. Compared to the proposed project, this alternative would have less of an impact related to hazards and 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 the 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. Compared to the proposed project, from a drainage perspective, this alternative would avoid changes to existing hydrology. Like the proposed project, this alternative would not result in the placement of structures within a 100-year flood zone. Under this alternative, there would be no water demand. This alternative would have less of an impact associated with hydrology/water quality as compared to the proposed project.

Land Use/Planning

As discussed in Section 3.11, Land Use/Planning, the proposed project would not physically divide an established community or conflict with applicable plans, policies, or regulations.

Under the No Project/No Development Alternative, the project site would not be developed and continue to be agricultural land. Current land uses would remain the same. No General Plan Amendment, Zone Change, or CUP would be required under this alternative. No existing community would be divided, and no inconsistencies with planning policies would occur. Because no significant Land Use and Planning impact has been identified associated with the proposed project, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed project.

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

There would be no new development under the No Project/No Development Alternative. Therefore, this alternative would not generate vehicular trips during construction or operation. 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, 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, 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, primarily associated with the construction phase of the project.

Tribal Cultural Resources

As discussed in Section 3.6, Cultural Resources, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites on the project site. Therefore, the project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource. Impacts to tribal cultural resources under the No Project/No Development Alternative are similar to the proposed project.

Utilities and Service Systems

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. No solid waste would be generated under this alternative. The proposed project would not result in any significant impacts to existing utilities or solid waste facilities. Compared to the proposed project, this alternative would have less of an impact related to utilities and solid waste facilities.

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 3, 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 a majority 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 SB 32.

7.5 Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands

In certain cases, an evaluation of an alternative location in an EIR is necessary. Section 15126.6(f)(2)(A) of the CEQA Guidelines states, "Key question. The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially

lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR."

Given that the proposed project is not located within the County's RE Overlay Zone, the purpose of this alternative is to develop a project alternative within the existing boundary of County's RE Overlay Zone. 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 areas.

As shown on Figure 7-2, the Alternative 2 project site is located entirely within the RE Overlay Zone. Alternative 2 would involve the construction and operation of a 40 MW solar energy facility and associated infrastructure on an approximately 231-acre parcel (APN 026-030-008) located approximately 11 miles northeast of Brawley in unincorporated Imperial County. The Alternative 2 project site is designated as Agriculture under the County's General Plan and zoned S-2-RE and A-3-RE (Open Space/Preservation and Heavy Agriculture, both within the RE Overlay Zone).

Similar to the proposed project, Alternative 2 would require approval of a CUP to allow for the construction and operation of a solar project. However, compared to the proposed project, the Alternative 2 project site is located within the RE Overlay Zone and, as such, would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. Additionally, while the proposed project (A-2-G Zone) would not require a Variance, the S-2-RE Zone associated with the Alternative 2 site allows a maximum height limit of 40 feet for non-residential structures and 100 feet for communication towers. As such, a Variance would be required under this alternative because the proposed height of the transmission towers (66 feet) and microwave tower (maximum of 100 feet) would exceed 40 feet. This alternative's gen-tie line could potentially interconnect to IID's existing Midway Substation located approximately 4.75 miles northwest of the solar facility. Consultation and coordination with IID would be required to determine if the Midway Substation has existing capacity or would require upgrades for this alternative's interconnection.







Alternative 2 Site

Point of Interconnection

Gen-Tie Line

Geothermal

Renewable Energy/Geothermal

2

0

Miles

7.5.1 Environmental Impact of Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands

Aesthetics

Compared to the proposed project site, the Alternative 2 project site is comprised of both agricultural and open space lands. Similar to the proposed project, Alternative 2 would alter the existing visual character of the project site by changing the existing land use at the project site from undeveloped open space and/or agricultural to a solar facility. However, the Alternative 2 project site is located approximately 11 miles northeast of Brawley in a relatively remote location. As such, potential impacts to aesthetics would be reduced under Alternative 2 when compared to the proposed project due to the lack of public viewer locations.

Agricultural Resources

The Alternative 2 site is designated Farmland of Statewide Importance by the FMMP. Compared to the proposed project, Alternative 2 does not contain Prime Farmland and would avoid the impact to approximately 4.44 acres of Prime Farmland. However, this alternative would still result in the temporary conversion of Farmland of Statewide Importance (approximately 231 acres). Therefore, mitigation would still be required for this alternative to reduce significant farmland impacts to a less than significant level. Compared to the proposed project, development of the Alternative 2 site would have less impacts on agricultural resources because it would avoid the temporary conversion of Prime Farmland to non-agricultural uses.

Air Quality

Similar to the proposed project, a 40 MW solar energy facility would be constructed on approximately 231 acres of land. Based on this consideration, this alternative would generate air emissions similar to the proposed project. As discussed in Section 3.4, Air Quality, the proposed project would not exceed the ICAPCD's significance thresholds for ROG, CO, NOx, and PM₁₀ during construction and operation. Although no significant air quality impacts would occur, 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. This alternative would result in similar air quality emissions as the proposed project. Similar to the proposed project, this alternative would result in temporary odor emissions from construction equipment.

Biological Resources

Similar to the proposed project, the Alternative 2 site is located on agricultural fields, which provide habitat for burrowing owl. Irrigation canals and drains are commonly used as burrowing nesting sites in the Imperial Valley. This alternative would also require the construction of supporting infrastructure that has the potential to result in biological impacts. Compared to the proposed project, this alternative would result in similar biology impacts.

Cultural Resources

This alternative would require the construction of supporting infrastructure (i.e., transmission towers, substation) that would require ground disturbance and therefore, has the potential to result in cultural resources impacts. Compared to the proposed project, which is located on active agricultural land that

has been previously disturbed, the Alternative 2 site is predominantly located on open space land. As such, although this alternative would attempt to avoid cultural resources to the extent feasible, depending on the route of the proposed gen-tie line, Alternative 2 could result in greater impacts to previously undiscovered cultural resources.

Geology and Soils

Grading and construction of new facilities, such as the solar facility and gen-tie line, would still occur under this alternative. Similar to the proposed project, Alternative 2 would result in potentially significant impacts related to strong ground shaking, soil erosion, and paleontological resources and would require the incorporation of mitigation measures to minimize these impacts to a less than significant level. This alternative would result in similar geology and soil and paleontological resources impacts as the proposed project.

Greenhouse Gas Emissions

This alternative would result in the same power production capacity as the proposed project; hence, the overall benefits of the project to global climate change through the creation of renewable energy would be the same. Alternative 2 would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This alternative would contribute similar and desirable benefits to reductions in global climate change through the production of renewable energy.

Hazards and Hazardous Materials

Depending on the specific locations and conditions of the Alternative 2 project site that would need to be developed, certain hazards and hazardous materials may be encountered. The Alternative 2 project site may need to be remediated before implementation of the alternative. Overall, the degree of impact associated with hazards and hazardous materials would likely be similar to the proposed project.

Hydrology/Water Quality

With implementation of the proposed mitigation measures, potential hydrology/water quality impacts under the proposed project would be less than significant. Comparatively, the Alternative 2 site is bisected by the Mammoth Wash and the gen-tie alignment is longer, and, as such, construction activities have the potential to impact hydrology and water quality to a greater extent than would occur under the proposed project. Similar to the proposed project, no impacts would result from flooding and facilities will not be placed within floodplains.

Land Use/Planning

The Alternative 2 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. Similar to the proposed project, Alternative 2 will require approval of a CUP to allow for the construction and operation of a solar project. Additionally, while the proposed project (A-2-G Zone) would not require a Variance, the S-2-RE Zone associated with the Alternative 2 site allows a maximum height limit of 40 feet for non-residential structures and 100 feet for communication towers. As such, a Variance would be required under this alternative because the proposed height of the transmission towers (70 feet) and microwave tower (maximum of 100 feet) would exceed 40 feet. With approval of the CUP and

Variance, the alternative would not conflict with the County's zoning ordinance. Therefore, land use and planning impacts are anticipated to be similar to the proposed project.

Public Services

Alternative 2 would require increased public services, specifically law enforcement and fire protection services. While the solar facility footprint would be slightly smaller (reduced by approximately 4 acres), the impacts of this alternative to public services and associated service ratios would be similar. Like the proposed project, this alternative would be conditioned to provide law enforcement and fire service development impact fees. Therefore, this alternative would result in a similar impact related to public services as the proposed project.

Transportation

This alternative would result in a similar level of construction and operation-related vehicle and truck trips as compared to the proposed project. However, the increase in vehicular traffic was identified as a less than significant impact for the proposed project. In this context, Alternative 2 would not reduce or avoid an impact related to transportation/traffic, and would result in less than significant impacts similar to the proposed project. As with the proposed project, Alternative 2 would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. This alternative would result in a similar impact related to transportation as the proposed project.

Tribal Cultural Resources

This alternative would require the construction of supporting infrastructure (i.e., transmission towers, substation) that would require ground disturbance and therefore, has the potential to result in tribal cultural resources impacts. Although this alternative would attempt to avoid impacts on tribal cultural resources to the extent feasible, depending on the route of the proposed gen-tie line, Alternative 2 could result in greater impacts to tribal cultural resources.

Utilities and Service Systems

During construction of this alternative, impacts would be similar to the proposed project in terms of water demand (for dust control) and solid waste generation. Similar to the proposed project, Alternative 2 would require similar levels of water demand and energy for the operation of the solar facility. As with the proposed project, panel washing and other maintenance would be required. This alternative would have similar water demands and associated impacts related to utilities and service systems.

Conclusion

As shown on Table 7-1, this alternative would result in reduced aesthetics and agricultural resources impacts compared to the proposed project. This alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: cultural resources, hydrology and water quality, and tribal cultural resources.

Comparison of Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands to Project Objectives

Alternative 2 would meet most of the basic objectives of the proposed project and should remain under consideration. However, this alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: cultural resources, hydrology and water quality, and tribal cultural resources. Further, the project applicant does not own, or otherwise control this property.

7.6 Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands

The purpose of this alternative is to develop the proposed project within the existing boundary of the County's RE Overlay Zone. As shown on Figure 7-3, the Alternative 3 project site is located entirely within the RE Overlay Zone. Alternative 3 would involve the construction and operation of a solar energy facility and associated infrastructure on five parcels totaling approximately 288 acres (APN 021-190-003; 021-380-004; 021-380-005; 021-380-012; and 021-380-013) located approximately 0.5 mile south of Slab City. This alternative is 61 acres larger than the proposed project site. Therefore, more solar panels could be installed on this site compared to the proposed project. The Alternative 3 project site is located on undeveloped desert land. Existing transmission lines traverse the southwest corner of the project site.

The Alternative 3 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. The Alternative 3 project site is designated as Recreation under the County's General Plan and zoned General Agricultural with a renewable energy overlay (A-2-RE).

Similar to the proposed project, Alternative 3 will require approval of a CUP to allow for the construction and operation of a solar project. Compared to the proposed project, the Alternative 3 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. Similar to the proposed project site, the A-2-RE zone allows a maximum height limit of 120 feet for non-residential structures. No Variance would be required under this alternative because the proposed height of the transmission towers (66 feet) would not exceed 120 feet. This alternative's gen-tie line could potentially interconnect to IID's existing Midway Substation located approximately 4 miles southeast of the solar facility. Consultation and coordination with IID would be required to determine if the Midway Substation has existing capacity or would require upgrades for this alternative's interconnection.

APN 021-190-003 APN 021-380-004 APN 021-380-005 Davis Rd APN 021-380-012 Niland-Pegleg Well Rd Noffsinger Rd APN 021-380-013 111 Cenel Rd Midway Substation Simpson Rd Estelle Rd CoxRd Montgomery Rd Wilkinson Rd Eddins Rd law Rd Mac Fadden Rd 115 Rg Pickett Rd 111 **Biles** Rd Park Av W Rutherford Rd Herd Rd PN 037-140-021 APN 037-140-020 APN 037-140-023 APN 037-140-022 APN 037-140-006 Shank Rd

Figure 7-3. Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands



7.6.1 Environmental Impact of Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands

Aesthetics

While the proposed project site is located on active agricultural land, the Alternative 3 project site is located on undeveloped desert land. However, the Alternative 3 project site is located in closer proximity (approximately 0.5 mile) to Slab City and Salvation Mountain. Slab City is a former military facility that now serves as the site of an informal community for artists, travelers, and winter-time RV campers. Salvation Mountain is an outdoor art project at the western entrance to Slab City. Both attract tourists and sight-seers. Therefore, the project components would be readily visible to more people under Alternative 3 when compared to the proposed project. Compared to the proposed project, this alternative could result in greater aesthetics impacts.

Agricultural Resources

The Alternative 3 site is designated Other Land by the FMMP. Compared to the proposed project, implementation of this alternative would avoid the conversion of land designated as Prime Farmland (4.44 acres) and Farmland of Statewide Importance (204.95 acres). Therefore, this alternative would not contribute to the conversion of agricultural lands or otherwise adversely affect agricultural operations. This alternative would avoid any agricultural impacts associated with the proposed project.

Air Quality

This alternative is 61 acres larger than the proposed project site. Therefore, more solar panels could be installed on this site compared to the proposed project. Based on this consideration, this alternative would generate slightly increased air emissions compared to the proposed project. This alternative would result in greater air quality emissions compared to the proposed project.

Biological Resources

As discussed in Section 3.5, project implementation has the potential to impact special-status species, including burrowing owl. Compared to the proposed project, which is located within an active agricultural area, the Alternative 3 site is located on relatively undisturbed desert lands. The overall number of burrowing owl locations potentially impacted would be less because their potential to occur on the Alternative 3 site is lower than the proposed project site. Compared to the proposed project, development of this site would have less impacts on burrowing owl. However, this alternative has the potential to impact other sensitive plant and animal species associated with a relatively undisturbed desert setting.

The Alternative 3 site also contains desert washes and multiple braided channels. These features could be considered potentially jurisdictional waters. While the proposed project has been designed to avoid jurisdictional waters, Alternative 3 would require consultation with USACE and CDFW to avoid or minimize impacts upon federally and state jurisdictional drainage features. This alternative would result in greater impacts related to potential jurisdictional waters when compared to the proposed project.

Cultural Resources

This alternative would require the construction of supporting infrastructure (i.e., transmission towers, substation) that would require ground disturbance and therefore, has the potential to result in cultural

resources impacts. While Alternative 3 may avoid the specific impacts on the proposed project site, this alternative would also require the construction of supporting infrastructure that has the potential to result in cultural resources impacts. Compared to the proposed project, although Alternative 3 would attempt to avoid cultural resources to the extent feasible, depending on the route of the proposed gen-tie line, this alternative could result in greater impacts on cultural resources because, while the proposed project site is located on active agricultural land, Alternative 3 is located on relatively undisturbed desert lands.

Geology and Soils

Grading and construction of new facilities, such as the solar facility and gen-tie line, would still occur under this alternative. Similar to the proposed project, this alternative would result in potentially significant impacts related to strong ground shaking, soil erosion, and paleontological resources and would require the incorporation of mitigation measures to minimize these impacts to a less than significant level. This alternative would result in similar geology and soil and paleontological resources impacts as the proposed project.

Greenhouse Gas Emissions

This alternative is 61 acres larger than the proposed project site. Therefore, more solar panels could be installed on this site compared to the proposed project. This alternative would result in a slightly higher power production capacity compared to the proposed project; hence, the overall benefits of the project to global climate change through the creation of renewable energy would be slightly greater. This alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Similar to the proposed project, this alternative would contribute desirable benefits to reductions in global climate change through the production of renewable energy.

Hazards and Hazardous Materials

Depending on the specific locations and conditions of the Alternative 3 project site that would need to be developed, certain hazards and hazardous materials may be encountered. The Alternative 3 project site may need to be remediated before implementation of the alternative. Overall, the degree of impact associated with hazards and hazardous materials would likely be similar to the proposed project.

Hydrology/Water Quality

A portion of the Alternative 3 site (Map Number 06025C0450C) contains an area mapped as Zone A. Alternative 3 could place structures (i.e., PV arrays, substation, or transmission towers) within a 100-year flood zone and result in the redirection of flood flows on the project site. The Alternative 3 site also contains desert washes and multiple braided channels. Implementation of this alternative could potentially result in the modification of the existing drainage patterns and the volume of storm water runoff on the project site. Compared to the proposed project, this alternative would result in greater impacts related to hydrology/water quality.

Land Use/Planning

The Alternative 3 project site is located within the RE Overlay Zone and would not require a General Plan Amendment or Zone Change to include/classify the project site into the RE Overlay Zone. Similar to the proposed project, Alternative 3 will require approval of a CUP to allow for the construction and

operation of a solar project. Similar to the proposed project, no Variance would be required under this alternative because the proposed height of the transmission towers (66 feet) would not exceed the 120 feet height limit of non-residential structures in the A-2-RE Zone. With approval of the CUP, the alternative would not conflict with the County's zoning ordinance. Therefore, land use and planning impacts are anticipated to be similar to the proposed project.

Public Services

Alternative 3 would require increased public services, specifically law enforcement and fire protection services. While the overall project footprint would be bigger (increased by approximately 61 acres), the impacts of this alternative to public services and associated service ratios would be similar. Like the proposed project, this alternative would be conditioned to provide law enforcement and fire service development impact fees. Therefore, this alternative would result in a similar impact related to public services as the proposed project.

Transportation

This alternative is 61 acres larger than the proposed project site. Therefore, more solar panels could be installed on this site compared to the proposed project. This alternative would result in a slightly increased level of construction and operation-related vehicle and truck trips as compared to the proposed project. However, the increase in vehicular traffic was identified as a less than significant impact for the proposed project. In this context, Alternative 3 would not reduce or avoid an impact related to transportation/traffic, and would result in less than significant impacts similar to the proposed project. As with the proposed project, this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. This alternative would result in a similar impact related to transportation/traffic as the proposed project.

Tribal Cultural Resources

This alternative would require the construction of supporting infrastructure (i.e., transmission towers, substation) that would require ground disturbance and therefore, has the potential to result in tribal cultural resources impacts. Although this alternative would attempt to avoid impacts on tribal cultural resources to the extent feasible, depending on the route of the proposed gen-tie line, Alternative 3 could result in greater impacts to tribal cultural resources.

Utilities and Service Systems

This alternative is 61 acres larger than the proposed project site. Therefore, more solar panels could be installed on this site compared to the proposed project. Construction and operation of this alternative would result in slightly increased water demand (for dust control) and solid waste generation. Compared to the proposed project, this alternative would have greater water demands and associated impacts related to utilities and service systems.

Conclusion

As shown on Table 7-1, this alternative would avoid impacts on agricultural resources compared to the proposed project. This alternative would result in greater impacts for the following environmental

issue areas as compared to the proposed project: aesthetics, air quality, biological resources, cultural resources, hydrology/water quality, tribal cultural resources, and utilities and service systems.

Comparison of Alternative 3: Development within Renewable Energy Overlay Zone – Desert Land to Project Objectives

Alternative 3 would meet most of the basic objectives of the proposed project and should remain under consideration. However, this alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: aesthetics, air quality, biological resources, cultural resources, hydrology/water quality, tribal cultural resources, and utilities and service systems. Further, the project applicant does not own, or otherwise control this property.

7.7 Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative

This alternative would involve the development of a number of geographically distributed small to medium solar PV systems (100 kilowatts to 1 MW) within existing developed areas, typically on the rooftops of commercial and industrial facilities throughout Imperial County. Under this alternative, no new land would be developed or altered. Depending on the type of solar modules installed and the type of tracking equipment used, a similar or greater amount of acreage (i.e., greater than 200 acres of total rooftop area) may be required to attain the proposed project's capacity of 40 MW of solar PV generating capacity. This alternative would involve placement of PV structures, transmission lines, and development of additional supporting facilities, such as switching stations and substations at various locations throughout the County. This alternative assumes that rooftop development would occur primarily on commercial and industrial structures due to the greater availability of large, relatively flat roof areas necessary for efficient solar installations.

This alternative would require hundreds of installation locations across Imperial County, many of which would require approval of discretionary actions, such as design review, CUPs, or zone variances depending on local jurisdictional requirements. Similar to the proposed project, this alternative would be designed to operate year-round using PV panels to convert solar energy directly to electrical power. This alternative would involve the construction of transmission lines and development of additional supporting facilities, such as switching stations and substations at various locations throughout the County to distribute the energy.

Rooftop PV systems exist in small areas throughout California. Larger distributed solar PV installations are becoming more common. An example of a distributed PV system is 1 MW of distributed solar energy installed by Southern California Edison on a 458,000 square-foot industrial building in Chino, California.¹

Similar to utility-scale PV systems, the acreage of rooftops or other infrastructure required per MW of electricity produced is wide ranging, which is largely due to site-specific conditions (e.g., solar insolation levels, intervening landscape or topography, PV panel technology, etc.). Based on SCE's use of 458,000-square feet for 1 MW of energy, approximately 18,320,000 square feet (approximately 420 acres) would be required to produce 40 MW.

¹

http://newsroom.edison.com/releases/califomia-regulators-approve-southern-california-edison-proposal-to-create-n ations-largest-solar-panel-installation-program

7.7.1 Environmental Impact of Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative

Aesthetics

This alternative would reduce the overall size of the solar energy field located in one place. However, this alternative would involve placement of PV structures, transmission lines, and development of additional supporting facilities, such as switching stations and substations at various locations throughout the County. There could be significant aesthetic impacts in certain areas depending on the locations of these facilities. Transmission lines would need to be constructed to serve the PV generation sites, all of which would be placed in closer proximity to urban areas, and all of which would be more readily visible to more people as compared to the proposed project. Compared to the proposed project, this alternative could result in greater aesthetics impacts.

Agricultural Resources

Compared to the proposed project, this alternative would not include the conversion of Prime Farmland or Farmland of Statewide Importance for the solar generation facility. Therefore, this alternative would avoid the proposed project's impact to agricultural lands. Compared to the proposed project, this alternative would avoid the significant impacts associated with the agricultural issues.

Air Quality

Under this alternative, air emissions due to project construction could be less than the proposed project on a localized level; however, PV facilities and supporting infrastructure would still need to be constructed to support this alternative, which, like the proposed project, would involve short-term construction emissions. These emissions would likely be spread-out geographically throughout the basin, and would occur over a longer period of time, as this alternative would involve a longer overall timeframe for implementation. Furthermore, the construction efficiencies that can be obtained by mobilizing equipment and crews in one general location over a shorter timeframe would not be realized. By the nature of the alternative, in that solar panels would be constructed on habitable structures throughout the County, this alternative has the potential to expose more people to more localized construction-related emissions. Compared to the proposed project, this alternative would develop less renewable energy megawatt generation in the near-future, thereby reducing its ability to provide a long-term source of renewable energy and meeting renewable energy goals, and air quality impacts could be greater than those of the project under this alternative.

Biological Resources

Under this alternative, potential direct and indirect impacts to burrowing owl would be avoided as compared to the proposed project. However, this alternative would also require the construction of supporting infrastructure that has the potential to result in biological impacts. While this alternative may avoid the specific impacts associated with the proposed project, it could also result in greater biological impacts in other areas of the County where supporting infrastructure is required to support Distributed Energy facilities.

Cultural Resources

This alternative would require the construction of infrastructure that has the potential to result in cultural resources impacts. If rooftop solar panels were proposed on historic buildings, this alternative could

affect the historic character and integrity of the buildings. Implementation of this alternative would require historic surveys and investigations to evaluate the eligibility of potentially historic structures that are over 50 years old, and either avoidance of such buildings, or incorporation of design measures to minimize impacts on historic integrity of historically-significant structures. Compared to the proposed project, this alternative could result in greater impacts related to cultural resources.

Geology and Soils

This alternative would involve placement of PV structures, transmission lines, and development of additional supporting facilities, such as switching stations and substations at various locations throughout the County. This alternative assumes that rooftop development would occur primarily on commercial and industrial structures due to the greater availability of large, relatively flat roof areas necessary for efficient solar installations. However, this alternative would still require grading and construction of new facilities such as transmission lines, PV structures, and supporting facilities (i.e., switching stations and substations) at various locations throughout the County. This alternative would likely result in similar impacts related to strong ground shaking, soil erosion, and paleontological resources as the proposed project. This alternative would also be subject to similar mitigation measures as the proposed project to minimize impacts to a less than significant level. This alternative would result in similar geological and soil impacts.

Greenhouse Gas Emissions

Under this alternative, the project footprint would be reduced; however, in order to achieve the same megawatt capacity as the proposed project, this alternative would also involve a surface area similar in size to the project site. Therefore, while this alternative could reduce or eliminate GHG emissions during project construction at the project site, an equivalent level of GHG emissions is likely to occur, as a result of constructing solar panels and supporting infrastructure throughout the County. Furthermore, as a consequence of the reduced PV footprint associated with the utility-scale solar farm, this alternative would result in a reduced power production capacity as compared to the proposed project; hence, the overall benefits of the project to global climate change through the creation of renewable energy would also be reduced. As with the proposed project, this alternative would result in reduced project, although this alternative would result in reduced construction for the purpose of reducing the emissions of greenhouse gases. Compared to the proposed project, although this alternative would result in reduced construction emissions at the project site, overall, a similar level of emissions would be expected.

Hazards and Hazardous Materials

Hazards and hazardous materials-related impacts, including the potential for accidental discovery of undocumented hazardous materials during construction would be avoided. However, there are other hazards that could result from implementation of this alternative, depending on the specific locations and conditions of the various sites that would need to be developed. For example, electrical infrastructure would be placed on top of, or in closer proximity to habitable structures, such as office buildings. Electrical transmission systems would still be required in order to connect the various distributed energy systems to the electrical grid; therefore, there would be additional poles and other structures that could interfere with aviation, depending on their locations. Certain sites needed in order to implement this alternative may also contain hazardous materials that would need to be remediated before implementation of the alternative. Overall, the degree of impact associated with hazards and hazardous materials would likely be similar to the proposed project.

Hydrology/Water Quality

This alternative would likely avoid any impacts associated with modifications to the existing drainage patterns and the volume of storm water runoff, as this alternative would introduce less impervious surface areas (this alternative would involve construction of PV facilities on existing structures and within existing developed areas). Compared to the proposed project, this alternative would result in fewer impacts related to hydrology/water quality.

Land Use/Planning

Similar to the proposed project, this alternative would not divide an established community and would involve multiple planning approvals (e.g., variances, CUPs, rezones) in order to accommodate the solar generating uses within other zones of the County that currently do not allow such uses. With approval of planning approvals, land use and planning impacts resulting from this alternative would be similar to the proposed project.

Public Services

This alternative would require increased public services, specifically law enforcement and fire protection services. It is anticipated that public services and associated service ratios would, at a minimum, be similar to the proposed project as the facilities would require fire and law enforcement protection, and this alternative could result in a greater impact as the facilities would be distributed over a much larger geographical area. Similar to the proposed project, this alternative would be conditioned to provide law enforcement and fire service fees. This alternative would result in a similar impact related to public services.

Transportation

This alternative would not reduce or avoid an impact to transportation/traffic and would result in less than significant impacts similar to the proposed project. As with the proposed project, this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, substantially increase hazards due to a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. This alternative would result in a similar impact related to transportation/traffic as the proposed project.

Tribal Cultural Resources

This alternative would require the construction of supporting infrastructure that would require ground disturbance and therefore, has the potential to result in tribal cultural resources impacts. Although this alternative would attempt to avoid impacts on tribal cultural resources to the extent feasible, depending on the location of supporting infrastructure, Alternative 4 could result in greater impacts to tribal cultural resources.

Utilities and Service Systems

As with the proposed project, this alternative would require water service and energy for the operation of the project. This alternative would involve the construction of transmission lines and development of additional supporting facilities, such as switching stations and substations at various locations throughout the County to distribute the energy. Compared to the proposed project, this alternative could require the relocation or construction of new or expanded supporting energy infrastructure throughout the County. Compared to the proposed project, impacts associated with utilities and service

systems resulting from this alternative could be potentially greater than those identified for the proposed project.

Conclusion

As shown on Table 7-1, implementation of Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative would avoid impacts on agricultural resources compared to the proposed project. It would result in reduced impacts for the following environmental issue areas as compared to the proposed project: hydrology/water quality. Overall, this alternative would result in greater impacts related to aesthetics, air quality, biological resources, cultural resources, tribal cultural resources, and utilities and service systems.

Comparison of Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative

Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative would meet most of the basic objectives of the proposed project. However, this alternative would result in greater impacts for the following environmental issue areas as compared to the proposed project: aesthetics, air quality, biological resources, cultural resources, and utilities and service systems. Furthermore, this alternative would have a number of drawbacks, including, but not limited to the following:

- Difficulties with respect to buildout of the system within a timeframe that would be similar to that of the proposed project;
- Given the distributed nature of such a network of facilities, management and maintenance would not be as efficient, and total capital costs would likely be higher;
- The requirement to negotiate with a large number of individual property owners to permit placement of solar panels on rooftops;
- The difficulty of ensuring proper maintenance of a large number of smaller solar installations; and
- The lack of an effective electricity distribution system for large numbers of small electricity producers.

7.8 Environmentally Superior Alternative

Table 7-1 provides a qualitative comparison of the impacts for each alternative compared to the proposed project. As noted on Table 7-1, 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 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 on Table 7-1, Alternative 2 would be the environmental superior alternative because it would reduce impacts for the following environmental issue areas as compared to the proposed project: aesthetics and agricultural resources. Alternative 2 would meet most of the basic objectives of the proposed project. However, the project applicant does not own, or otherwise control this property.

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Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative
Aesthetics	Less than Significant	CEQA Significance: No Impact Comparison to Proposed Project: Less Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Less Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact
Agricultural Resources	Less than Significant with Mitigation	CEQA Significance: No Impact Comparison to Proposed Project: Avoid	CEQA Significance: Less than Significant with Mitigation Comparison to Proposed Project: Less Impact	CEQA Significance: No Impact Comparison to Proposed Project: Avoid	CEQA Significance: No Impact Comparison to Proposed Project: Avoid
Air Quality	Less than Significant	CEQA Significance: No Impact Comparison to Proposed Project: Less Impact	CEQA Significance: Less than Significant Comparison to Proposed Project: Similar	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact
Biological Resources	Less than Significant with Mitigation	CEQA Significance: No Impact Comparison to Proposed Project: Less Impact (Avoid)	CEQA Significance: Less than Significant with Mitigation Comparison to Proposed Project: Similar Impact	CEQA Significance: Less than Significant with Mitigation Comparison to Proposed Project: Greater Impact	CEQA Significance: Potentially Significant Comparison to Proposed Project: Greater Impact

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative
Cultural Resources	Less than Significant with Mitigation	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Potentially Significant	Potentially Significant	Potentially Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact (Avoid)	Greater Impact	Greater Impact	Greater Impact
Geology and Soils	Less than Significant with Mitigation	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact (Avoid)	Similar Impact	Similar Impact	Similar Impact
GHG Emissions	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Similar Impact	Similar Impact
Hazards and Hazardous Materials	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Similar Impact	Similar Impact

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative
Hydrology/Water Quality	Less than Significant with Mitigation	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant with Mitigation	Potentially Significant	Less than Significant with Mitigation
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact (Avoid)	Greater Impact	Greater Impact	Less Impact
Land Use/Planning	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Similar Impact	Similar Impact	Similar Impact	Similar Impact
Public Services	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Similar Impact	Similar Impact
Transportation	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Similar Impact	Similar Impact

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative
Tribal Cultural Resources	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Potentially Significant	Potentially Significant	Potentially Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Similar Impact	Greater Impact	Greater Impact	Greater Impact
Utilities/Service Systems	Less than Significant	CEQA Significance:	CEQA Significance:	CEQA Significance:	CEQA Significance:
		No Impact	Less than Significant	Less than Significant	Less than Significant
		Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:	Comparison to Proposed Project:
		Less Impact	Similar Impact	Greater Impact	Greater Impact

Notes:

CEQA=California Environmental Quality Act; GHG=greenhouse gas

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9.2 Persons and Organizations Contacted

The following persons and organizations were contacted in preparation of this document:

• Imperial Irrigation District