

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE VIKINGS SOLAR ENERGY GENERATION & STORAGE PROJECT VOLUME I



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SCH #2021050036 | CUP #20-0025
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Prepared for:
Imperial County
Planning & Development Services
801 Main Street
El Centro, CA 92243



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DRAFT
ENVIRONMENTAL IMPACT REPORT
VOL. 1

**VIKINGS SOLAR ENERGY GENERATION
AND STORAGE PROJECT**

SCH No. 2021050036

CUP #20-0025

Prepared for
IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES
801 MAIN STREET
EL CENTRO, CALIFORNIA 92243



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FEBRUARY 2022

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ACRONYMS AND ABBREVIATIONS

°	degrees
A-2-RE	General Agriculture with Renewable Energy Overlay
AAQS	ambient air quality standards
AB	Assembly Bill
AC	Alternating current
ACM	Asbestos containing material
AF	Acre feet
AFV	Alternative Fuel Vehicle
AFY	Acre feet per year
A-2-RE	General Agriculture with Renewable Energy Overlay
ALUCP	Airport Land Use Compatibility Plan
AMSL	above mean sea level
APE	Area of Potential Effect
APN	Assessor's Parcel Number
APS	alternate planning strategy
AQMP	Air quality management plan
BESS	battery energy storage system
bgs	Below ground surface
BLM	Bureau of Land Management
BMP	Best Management Practice
BAU	business as usual
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALFIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife

ACRONYMS AND ABBREVIATIONS

CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERS	California Environmental Reporting System
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane
CHRIS	California Historical Resources Information System
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalents
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Places
CUP	Conditional Use Permit
CVC	California Vehicle Code
CWA	Clean Water Act
dB	decibels
dBA	A-weighted sound pressure level
DC	Direct Current
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DEIR	Draft Environmental Impact Report
DOC	Department of Conservation
DPH	Imperial County Department of Public Health
DPM	Diesel particular matter
DPW	Imperial County Department Public Works
DWR	Department of Water Resources
eGRID	Emissions Generation Resource Integration Database
EAP	Energy Action Plan
EIR	Environmental Impact Report
EO	Executive Order
EOP	Emergency Operations Plan

ACRONYMS AND ABBREVIATIONS

EPA	Environmental Protection Agency
EPAct	Energy Policy Act of 1992
ESAs	Environmentally Sensitive Areas
ESS	Energy storage system
FAC	Facultative, 34-66%
FACU	Facultative Upland, 1-33%
FACW	Facultative Wetland, 67-99%
FEMA	Federal Emergency Management Agency
FIRM	flood insurance rate maps
FMMP	Farmland Mapping & Monitoring Program
FPPA	Farmland Protection Policy Act
GHG	Greenhouse gases
GS-RE	Government/Special Public Zone with Renewable Energy Overlay
GSU	Generator step-up transformers
GWP	Global Warming Potential
H ₂ S	Hydrogen Sulfide
HCB	hexachlorobenzene
HDM	Highway Design Manual
HFCs	Hydrofluorocarbons
HMMP	Hazardous Material Management Program
HSAT	Horizontal single-axis tracker
HU	Hydrologic Units
HUD	U.S. Department of Housing and Urban Development
HVAC	heating, ventilation and air conditioning
lbs	pounds
ICAPCD	Imperial County Air Pollution Control District
ICFD	Imperial County Fire Department
ICPDSD	Imperial County Planning & Development Services Department
IID	Imperial Irrigation District
IWRMP	Integrated Water Resources Management Plan
IWSP	Interim Water Supply Policy
IS	Initial Study
IWSP	Interim Water Supply Policy
JCP	joint contingency plan

ACRONYMS AND ABBREVIATIONS

KOPs	Key Observation Points
kV	Kilovolt
Ks	Subgrade Reaction Modulus
LACM	Natural History Museum of Los Angeles County
Ldn	Day-Night Average Level
LEA	Local Enforcement Agency
LESA	Land Evaluation and Site Assessment
LEV	Low-Emission Vehicle
Li-ion	Lithium ion
MBTA	Migratory Bird Treaty Act
MHMP	Multi-Jurisdictional Hazard Mitigation Plan
MLD	Most likely descendant
MMRP	Mitigation Monitoring and Reporting Program
MMTE CO ₂ e	million metric tons carbon dioxide equivalent
MOU	memorandum of understanding
mph	Miles per hour
MPO	Metropolitan Planning Organizations
MRDS	Mineral Resources Data System
MT	Metric Tons
MW	Megawatt
MWAC	Megawatt alternating current
NAAQS	National Ambient Air Quality Standards
N ₂ O	Nitrous Oxide
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHTSA	National Highway Traffic Safety Administration
NO ₂	Nitrogen Dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	Nitrogen oxides
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Place

ACRONYMS AND ABBREVIATIONS

NSA	Noise sensitive areas
O&M	operations and maintenance
OA	Operational Area
O ₃	Ozone
OBL	Obligate Wetland, >99% probability
ODCP	Operation Dust Control Plan
OEHHA	Office of Environmental Health Hazard Assessment's
OES	Office of Emergency Services
OPR	Governor's Office of Planning and Research
pCi/L	picocuries per liter of air
Pb	Lead
pcf	Equivalent fluid pressure
pci	Pounds per cubic inch
PFCs	Perfluorocarbons
PM ₁₀	Particulate matter 10 micrometers or less in diameter
PM _{2.5}	Particulate matter 2.5 micrometers or less in diameter
PPA	Power purchase agreement
PPV	peak particle velocity
PRC	Public Resources Code
psf	Pounds per square foot
PV	photovoltaic
Qal	younger alluvial sediments
Ql	lacustrine sediments
Qs	dune deposits
REC	recognized environmental condition
ROW	Right-of-way
RPR	Rare Plant Rank
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
R/W	right of way
RWQCB	Regional Water Quality Control Board
SAF	State Alternatives Fuel
SB	Senate Bill
SCAG	Southern California Association of Governments

ACRONYMS AND ABBREVIATIONS

SCAQMD	South Coast Air Quality Management District
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SCH	California State Clearinghouse
SCIC	suppression through cooling, isolation, and containment
SDNHM	San Diego Natural History Museum
SEMS	Standardized Emergency Management System
SF ₆	Sulfur Hexafluoride
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SR	State Route
SSAB	Salton Sea Air Basin
SWRCB	California State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
TAC	Toxic air containment
TCM	Transportation control measure
THPO	Tribal Historic Preservation Officer
TMDL	total maximum daily load
TUA	Traditional Use Area
UPL	Obligate Upland, <1% probability
UPS	uninterruptable power supply
USC	United States Code
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
VdB	Vibration Velocity
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VRI	Visual Resources Inventory
WoS	waters of the State
WoUS	waters of the U.S.
wWoUS	Wetland waters of the U.S.

ACRONYMS AND ABBREVIATIONS

ZEV	zero-emission vehicles
ZNE	Zero Net Energy
ZOI	Zone of Influence

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1.0 EXECUTIVE SUMMARY

This Draft Environmental Impact Report (EIR) has been prepared for the Vikings Solar and Battery Storage Project (Project); a development project located in Imperial County, California. This document analyzes the potential environmental effects associated with implementation of the Project (including direct and indirect impacts, secondary impacts, and cumulative effects).

1.1 Purpose and Scope of the Environmental Impact Report

This Draft EIR has been prepared for the Imperial County Planning and Development Services Department (ICPDSD), with the County of Imperial (County) acting as the lead agency under California Environmental Quality Act (CEQA) Guidelines Sections 15050 and 15367, to analyze the potential environmental effects associated with implementation of the proposed Vikings Solar Battery Storage Project.

An EIR is a public informational document used in the planning and decision-making process. The purpose of the EIR is to demonstrate that the County has made a good faith effort at disclosing the potential for the Project to result in significant impacts to the physical environment. As such, the EIR does not consider potential fiscal impacts, cost-benefit assessment, or social impacts. Nor does the EIR present recommendations to the decision-making bodies for approval or denial of the Project based on the environmental findings. Rather, the EIR is intended to provide additional information about the Project when, if, and at which time it is reviewed and considered by the County in its discretionary decision-making.

This Draft EIR provides decision-makers, public agencies, and the public in general with detailed information about the potential significant adverse environmental impacts of the proposed Vikings Solar and Battery Storage Project. By recognizing the environmental impacts of the proposed project, decisionmakers will have a better understanding of the physical and environmental changes that would accompany the Project should it be approved. The Draft EIR includes recommended mitigation measures which, when implemented, would provide the lead agency with ways to substantially lessen or avoid significant effects of the Project on the environment, whenever feasible. Alternatives to the proposed project are presented to evaluate alternative development scenarios that can further reduce or avoid significant impacts associated with the Project.

In accordance with Section 15082 of the CEQA Guidelines, the County prepared and distributed a Notice of Preparation (NOP) for the proposed Project that was circulated for public review in May 2021. The NOP comment period is intended to notify responsible agencies, trustee agencies, and the public that the County, acting as the lead agency, was going to prepare an EIR. The scope of the analysis for this EIR was determined by the County as a result of initial project review and consideration of agency and public comments received in response to the NOP. A copy of the NOP and comments received during the public comment period are included in Appendix A-1 to this Draft EIR.

The County will consider the information in the EIR, public and agency comments on the EIR, and testimony at public hearings in their decision-making process. As a legislative action, the final decision to approve, conditionally approve, or deny the proposed project is made by the Board of Supervisors. Other discretionary actions, approvals and permits are described in Chapter 3.0, Project Description.

1.2. Project Location and Setting

The proposed Project would be located on approximately 604 acres of private and Imperial County-owned land located at the intersection of East Nelson Pit Road and Graeser Road in the western part of unincorporated Imperial County. The Project site is approximately 5.5 miles east of the City of Holtville in Section 36 within Township 15 South, and Range 16 East of the San Bernardino Base and Meridian (SBB&M) of the "Holtville East" 7.5-minute quadrangle. The Holtville Airport is located 1.6 miles north of the Project Site, which is traversed by the existing East Highline Canal and IID's 230 kV "KN & KS" transmission line.

1.3. Project Objectives

The primary objective of the Project is to utilize Imperial County's abundance of available solar energy (sunlight) to generate renewable energy and store that energy on site, consistent with the County General Plan renewable energy objectives. The Vikings Solar Farm, LLC (the Project Applicant) identified the following objectives for the Project:

- Construct and operate a solar energy facility capable of producing up to 150 megawatts (MW) of electricity to help meet the State-mandated renewable portfolio standard (RPS) of providing 50 percent renewable energy by 2030.
- Provide a not to exceed 300 MW battery energy storage system (BESS), that would accommodate and store the power generated by the Project so that the facility can continue to provide renewable energy during non-daylight hours.
- Operate a facility at a location that ranks amongst the highest in solar resource potential in the nation.
- Interconnect directly to the IID electrical transmission system.
- Operate a renewable energy facility that does not produce significant noise nor emit any greenhouse gases.
- Help reduce reliance on foreign sources of fuel.
- Supply on-peak power to the electrical grid in California.
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006).

- Provide an investment in California and Imperial County that will create jobs and other economic benefits.

1.4. Project Synopsis

The major components of the facility are PV modules, fixed-frame or horizontal single-axis tracker (HSAT) support structures, and electronic/electrical equipment to convert the electricity from the PV modules from direct current (DC) electricity to alternating current (AC) electricity and transfer the electricity to the new Project substation and ultimately to IID's 230 kV "KN & KS" line. Ancillary equipment includes switch/fuse panels, control and protection equipment, and communications hardware. Additional auxiliary facilities would include lighting and security systems, fire protection, site access and circulation, and the retention basin.

Electricity generated by the PV modules would be collected by a DC collection system routed underground in trenches. This DC power would be delivered to one of the pad-mounted inverters in weatherproof enclosures located within the arrays. The inverters would convert the DC power to three-phase AC. The inverters could be connected to AC interconnection facilities which, if needed, would raise the voltage to 34.5 kV, or the interconnection voltage selected by the Project. Underground (for private roads) or overhead collection lines (for public roads) (up to 34.5 kV) would transmit the electricity to the new Project substation.

The proposed BESS would consist of either lithium ion (Li-ion) or flow batteries. The batteries would either be housed in storage containers or buildings fitted with HVAC and fire suppression systems as necessary, depending on the final selection of battery technology. Inside the housing the batteries will be placed on racks, the orientation of which depends on the type of housing. Underground trenches with conduits will be used to connect the batteries to the control and monitoring systems, and inverters to convert the PV produced DC power to AC power. The storage capacity of the BESS would not exceed 300 MW. The BESS would be constructed as a multiple structure facility, consisting of up to 20 battery modules at full build out the footprint of which would be up to 450 square feet per module.

A new Project substation would be constructed on the southern boundary of APN 050-070-019 (See Figure 3-3). This substation would take the delivery of the up to 34.5 kV power from the Project and increase the voltage of the electricity to 230 kV, where it would feed into the interconnection switching station for metering and delivery to the IID 230 kV "KN & KS" Line. The substation would include a transformer, circuit breakers, meters, disconnect switches, and microwave or other communication facilities.

A new interconnection switching station would be constructed at the southern boundary of APN 050-070-019, immediately adjacent to the Project substation. The interconnection switching station would include circuit breakers, switches, overhead bus work, protective relay equipment and an electrical control building. This station would operate at 230 kV and be equipped with two circuit

breakers, allowing for looping in of the IID 230 kV "KN & KS" Transmission line as well as connection to the Project substation. The Project substation and interconnection switching station would be connected via a single overhead 230 kV, gen-tie line. The gen-tie line would not exceed 120 feet in height. The interconnection switching station would be enclosed within its own fence.

1.5. Summary of Significant Impacts and Mitigation Measures

Based on the analysis contained in Chapter 4 of this Draft EIR, the proposed Project would result in the potential for significant impacts to agricultural and forestry, air quality, biological resources, cultural resources, geology and soils, paleontological resources, hazards and hazardous materials, hydrology and water quality, public services, and tribal cultural resources. Mitigation measures have been identified which would reduce impacts to all resources to below a level of significance.

On the following page, Table 1-1 summarizes the potential environmental impacts of the Vikings Solar Battery Storage Project by impact area. It also provides a summary of the mitigation measures proposed to avoid or reduce significant adverse impacts and the level of significance after mitigation.

1.6. Environmental Effects Found not to be Significant

Several environmental topics were found to be less than significant without mitigation including population and housing, recreation, and wildfires. These topics are described in Chapter 7.0, Environmental Effects Found not to be Significant.

1.7. Areas Of Controversy

Pursuant to CEQA Section 15123(b)(2), an EIR shall identify areas of controversy known to the lead agency, including issues raised by the agencies, and the public, and issues to be resolved. The NOP for the EIR was distributed on May 4, 2021. The 35-day public review and comment period began on May 6, 2021, and a scoping meeting was held on May 12, 2021. Public comments were received on the NOP that reflect controversy on several environmental issues.

Issues of controversy raised include concerns related to transportation and traffic. The NOP and comment letters received are included in this EIR as Appendix A-1.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.1 AESTHETICS			
Impact 4.1-1: Would the Project have a substantial adverse effect on a scenic vista?	Less than Significant.	None	Less than Significant.
Impact 4.1-2: Would the Project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact.	None	No Impact.
Impact 4.1-3: Would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	Less than Significant.	None	Less than Significant.
Impact 4.1-4: Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	Less than Significant.	<p>MM VIS-1: Install Warning Signs along Evan Hewes Highway and East Nelson Pit Road</p> <p>Warning signs shall be installed along Evan Hewes Highway and East Nelson Pit Road to alert drivers to the potential for glare to occur for approximately 5 minutes per day between the hours 2:30 PM and 3:30 PM from mid-March to mid-April and from mid-August to mid-September. These signs could alert drivers to lower their visors, put on sunglasses, or reduce their speed to avoid an accident.</p>	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.2 AGRICULTURE AND FORESTRY			
<p>Impact 4.2-1: Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	<p>Potentially Significant</p>	<p>MM-AG-1: Payment of Agricultural and Other Benefit Fees.</p> <p>One of the following options included below shall be implemented prior to the issuance of a grading permit or building permit (whichever is issued first) for the Project:</p> <p>Mitigation for Non-Prime Farmland</p> <p>Option 1: Provide Agricultural Conservation Easement(s). The Permittee shall procure Agricultural Conservation Easements on a “1 to 1” basis on land that is in farmable conditions, of equal size, of equal quality farmland, outside the path of development. The conservation easement shall meet DOC regulations (California Civil Code Section 815) and shall be recorded prior to issuance of any grading or building permits. Mitigating farmland must be maintained in farmable condition, including repairs as needed to the infrastructure. Additionally, any plans to mitigate farmland taken out of production through the use of easements must ensure that the mitigating farm ground is in farmable conditions. If the mitigation plan involves a “Parceling Project”, any parcels to remain in farming must align with existing infrastructure such as canals, delivery ditches, and surface and subsurface drainage systems; or</p> <p>Option 2: Pay Agricultural In-Lieu Mitigation Fee. The Permittee shall pay an “Agricultural In-Lieu Mitigation Fee” in the amount of 20 percent of the fair market value per acre for the total acres of the proposed site based on five comparable sales of land used for agricultural purposes as of the effective date of the permit, including 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,</p>	<p>Less than Significant.</p>

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>stewardship, preservation and enhancement of agricultural lands within Imperial County; or,</p> <p>Option 3: Public Benefit Agreement. The Permittee and County voluntarily enter into an enforceable Public Benefit Agreement or Development Agreement that includes an Agricultural Benefit Fee payment that is 1) consistent with Board Resolution 2012-005; 2) the Agricultural Benefit Fee must be held by the County in a restricted account to be used by the County only for such purposes as the stewardship, preservation and enhancement of agricultural lands within Imperial County and to implement the goals and objectives of the Agricultural Benefit program, as specified in the Development Agreement, including addressing the mitigation of agricultural job loss on the local economy.</p> <p>Mitigation for Prime Farmland</p> <p>Option 1: Provide Agricultural Conservation Easement(s). The Permittee shall procure Agricultural Conservation Easements on a “2 to 1” basis on land of equal size, of equal quality farmland, outside the path of development. The conservation easement shall meet DOC regulations and shall be recorded prior to issuance of any grading or building permits; or,</p> <p>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,</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>stewardship, preservation and enhancement of agricultural lands within Imperial County; or,</p> <p>Option 3: Public Benefit Agreement. The Permittee and County voluntarily enter into an enforceable Public Benefit Agreement or Development Agreement that includes an Agricultural Benefit Fee payment that is 1) consistent with Board Resolution 2012-005; 2) the Agricultural Benefit Fee must be held by the County in a restricted account to be used by the County only for such purposes as the stewardship, preservation and enhancement of agricultural lands within Imperial County and to implement the goals and objectives of the Agricultural Benefit program, as specified in the Development Agreement, including addressing the mitigation of agricultural job loss on the local economy; 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.</p>	
		<p>MM-AG-2: Site Reclamation Plan</p> <p>The Applicant shall submit to Imperial County a Reclamation Plan prior to issuance of a grading or building permit (whichever is issued first). The Reclamation Plan shall document the procedures by which the Project site will be returned to its current agricultural condition. The reclamation plan shall include a written description of the crop history of each field, water delivery system, drainage system, physical infrastructure, the parties responsible for conducting reclamation, and a detailed description of the recycling, and/or disposal of all solar arrays, inverters, transformers, and other structures on each of the Project site as well as restoration of the site to its pre-Project condition. The Plan shall be submitted to the Imperial County Agricultural Commission for their review and approval.</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>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 CUPs. 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 event Permittee fails to perform the Reclamation Plan.</p>	
		<p>MM-AG-3: Pest Management Plan</p> <p>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 submitted to/approved by the County of Imperial Agricultural Commissioner. The Project Applicant shall maintain a Pest Management Plan until reclamation is complete. The plan shall provide the following:</p> <ol style="list-style-type: none"> 1. Monitoring, preventative, and management strategies for weed and pest control during construction activities at any portion of the Project (e.g., transmission line). 2. Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows: <p>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.</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>All treatments must be performed by a qualified applicator or a licensed pest control operator.</p> <p>“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.</p> <p>Use of “permanent” soil sterilants to control weeds or other pests is prohibited because this would interfere with reclamation.</p> <p>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 USDA. 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.</p> <p>Obey all pesticide use laws, regulations, and permit conditions.</p> <p>Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties.</p> <p>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.</p> <p>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, U.S. Environmental</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>Protection Agency (USEPA) Registration numbers, application rates, etc. A pesticide use report may be used for this.</p> <p>Submit a report of monitoring, pest finds, and treatments, or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report is required even if no pests were found, or treatment occurred. It may consist of a copy of all records for the previous quarter or may be a summary letter/report as long as the original detailed records are available upon request.</p> <p>A long-term strategy for weed and pest control and management during the operation of the proposed Project. Such strategies may include, but are not limited to:</p> <ul style="list-style-type: none"> • Use of specific types of herbicides and pesticides on a scheduled basis. • 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. 	
Impact 4.2-2: Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact.	None	No Impact.
Impact 4.2-3: Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as	No Impact.	None	No Impact.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
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))?			
Impact 4.2-4: Would the Project result in the loss of forest land or conversion of forest land to non-forest use?	No Impact.	None	No Impact.
Impact 4.2-5: Would the Project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	No Impact.	None	No Impact.
4.3 AIR QUALITY			
Impact 4.3-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Potentially Significant.	<p>MM AQ-1: Fugitive Dust Control</p> <p>In compliance with the ICAPCD requirements, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. Because these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the standard and enhanced mitigation measures, required in the ICAPCD CEQA Handbook are listed below, and shall be implemented prior to and during construction.</p>	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>The County Department of Public Works (DPW) shall verify implementation and compliance with these measures as part of the grading permit review/approval process.</p> <p>Additionally, the Applicant shall notify the ICAPCD 10 days prior to the commencement of all construction and/or decommissioning activities.</p> <p>Standard Mitigation Measures for Construction Fugitive Dust (PM₁₀) Control</p> <p>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.</p> <p>All on-site and off-site unpaved roads shall 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.</p> <p>All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day shall 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.</p> <p>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.</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>All track-out or carry-out shall 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.</p> <p>Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient amounts of water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.</p> <p>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 opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.</p> <p>Discretionary Mitigation Measures for Fugitive Dust (PM₁₀) Control</p> <p>For projects with construction sites of five (5) acres or more for non-residential developments, in order to provide a greater degree of PM₁₀ reductions, above that required by Regulation VIII, the following measures shall be implemented:</p> <ul style="list-style-type: none"> • Water exposed soil with adequate frequency for continued moist soil. • Replace ground cover in disturbed areas as quickly as possible. • Use automatic sprinkler system installed on all soil piles. • Limit vehicle speed for all construction vehicles to 15 miles per hour on any unpaved surface at the construction site. • Develop a trip reduction plan to achieve a 1.5 average vehicle ridership for construction employees. 	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> Implement a shuttle service to and from retail services and food establishments during lunch hours. 	
		<p>MM AQ-2: Construction Equipment Control Measures</p> <p>Standard Mitigation Measures for Exhaust Equipment Emissions Control</p> <p>Standard mitigation measures for exhaust equipment emissions control include:</p> <ul style="list-style-type: none"> Use of equipment with alternative fueled or catalyst-equipped diesel engine, including for all off-road and portable diesel-powered equipment. Minimize idling time either by shutting equipment off when not in use or limit the idling time to a maximum of 5 minutes. Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the number of equipment in use. Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). <p>Enhanced Mitigation Measures for Construction Equipment</p> <p>To provide a greater degree of reduction of PM emissions from construction combustion equipment, the following enhanced measures shall be implemented.</p> <ul style="list-style-type: none"> Curtail construction during periods of high ambient pollutant concentrations; this shall include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways (insert peak hour from traffic report). Implement activity management (e.g., rescheduling activities to reduce short-term impacts). 	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>MM AQ-3: Prepare and Implement an Operational Dust Control Plan</p> <p>Prior to issuance of a Certificate of Occupancy, the Applicant shall submit and obtain ODCP to the ICAPCD and the ICPDSD for review and approval.</p> <p>The ODCP will describe all dust control measures that will be implemented during Project operations to reduce fugitive dust emissions.</p> <p>ICAPCD shall conduct an initial site visit to confirm the elements of the ODCP before it can be finalized. After this, annual site visits shall be conducted by ICAPCD to ensure all elements of the ODCP remain in place.</p>	
<p>Impact 4.3-2: 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?</p>	<p>Less than Significant.</p>	<p>MM AQ-1</p> <p>MM AQ-2</p> <p>MM AQ-3</p>	<p>Less than Significant.</p>
<p>Impact 4.3-3: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?</p>	<p>Less than Significant.</p>	<p>MM AQ-1</p> <p>MM AQ-2</p> <p>MM AQ-3</p>	<p>Less than Significant.</p>
<p>Impact 4.3-4: Would the Project expose sensitive receptors to substantial pollutant concentrations?</p>	<p>No Impact.</p>	<p>None</p>	<p>No Impact.</p>

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOLOGICAL RESOURCES			
<p>Impact 4.4-1: Would the Project have a substantial effect on candidate, sensitive, or special status species identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</p>	<p>Potentially Significant</p>	<p>MM BR-1: Burrowing Owl Survey Pre-Construction Surveys</p> <p>No more than 14 days prior to the commencement of initial ground-disturbing activities (vegetation clearance, grading), pre-construction surveys for burrowing owls shall be conducted. Surveys shall be conducted by a qualified biologist(s) (i.e., a wildlife biologist with previous burrowing owl survey experience), approved by Imperial County.</p> <p>Surveys for burrowing owls shall be conducted in conformance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation. Surveys shall be completed within all areas proposed for ground disturbance and vegetation clearing/trimming and within 200 meters (656 feet) of the construction zone to identify occupied breeding or wintering burrowing owl burrows. Surveys shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any burrows with fresh burrowing owl sign or presence of burrowing owls.</p> <p>If no burrowing owls are detected, no further mitigation is necessary.</p> <p>Non-breeding Season (September 1 – January 31):</p> <p>Occupied Burrows: If burrowing owls are detected on site during the non-breeding season (generally September 1 through January 31), a 50-foot buffer zone shall be maintained around the occupied burrow(s).</p> <p>Unoccupied Burrows: Once a burrow has been determined by a qualified wildlife biologist to be unoccupied by burrowing owls, the biologist shall excavate the burrow using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the</p>	<p>Less than Significant.</p>

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>active burrow and other potentially active burrows within 100 feet of the active burrow and monitored for at least 48 hours after installation.</p> <p>Breeding Season (February 1 – August 31):</p> <p>The following avoidance measures shall be implemented for all burrows identified during surveys:</p> <p>Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls present on-site after February 1 shall be assumed to be nesting unless evidence indicates otherwise.</p> <p>A 100-foot buffer shall be maintained between Project activities and nesting burrowing owls. No activity or entry by personnel or equipment will be allowed within the buffer area.</p> <p>Physical (temporary fencing) and visual (hay bales or similar) barriers shall be installed to delineate the buffer zone. Installation of the exclusionary material will be completed by construction personnel under the supervision of a qualified biologist prior to initiation of construction activities.</p> <p>The buffer shall be maintained until August 31 or until the young owls are foraging independently or the nest is no longer active, based upon monitoring evidence.</p> <p>If there is danger that owls will be injured or killed as a result of construction activity, the birds may be passively relocated but only during the non-breeding season; relocation shall require coordination with and approval from the CDFW prior to relocation activities.</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>Relocation of owls during the non-breeding season will be performed by a qualified biologist in coordination with the CDFW.</p> <p>Any damaged or collapsed active burrowing owl burrows will be replaced with artificial burrows in adjacent habitat at a 2:1 ratio.</p> <p>Copies of the burrowing owl survey results shall be submitted to the County of Imperial Planning and Development Services Department (ICPDSD) and the CDFW.</p>	
		<p>MM BR-2: Nesting Bird Surveys</p> <p>If activities associated with vegetation removal, construction, or grading are planned during the bird nesting/breeding season (generally February 1 through August 31; January 1 for raptors), a qualified biologist shall conduct pre-construction surveys for active nests. Preconstruction nesting bird surveys should be conducted weekly beginning 14 days prior to initiation of ground-disturbing activities, with the last survey conducted no more than three (3) days prior to the start of clearance/construction work. If ground-disturbing activities are delayed, additional preconstruction surveys should be conducted so that no more than 3 days have elapsed between the survey and ground-disturbing activities.</p> <p>Active nests found within 100 feet of the construction zone shall be delineated with highly visible construction fencing or other exclusionary material that would inhibit entry by personnel or equipment into the buffer zone. Installation of the exclusionary material will be completed by construction personnel under the supervision of a qualified biologist prior to initiation of construction activities. The buffer zone shall remain intact and maintained while the nest is active (i.e., occupied or being constructed by at least one adult bird) and until young birds have fledged and no continued use of the nest is observed, as determined by a qualified biologist. The</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		barrier shall be removed by construction personnel at the direction of the biologist.	
Impact 4.4-2: Would the Project have a substantial adverse effect on riparian habitat or other sensitive natural community.	Less than Significant.	None	Less than Significant.
Impact 4.4-3: Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less than Significant.	None	Less than Significant.
Impact 4.4 -4: Would the Project substantially interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less than Significant.	None	Less than Significant.
Impact 4.4-5: Would the Project conflict with local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance?	Less than Significant.	None	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 4.4-6: 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?	No Impact.	None	No Impact.
4.5 CULTURAL RESOURCES			
Impact 4.5-1: Would the Project result in a change in the significance of an historical resource?	Potentially Significant	<p>MM CR-1: Cultural Resources Construction Monitor</p> <p>Prior to the issuance of a Grading Permit, the Applicant shall provide evidence to the Imperial County Department of Planning and Development Services Department (ICPDSD) stating that a County-approved Qualified Archaeologist and a Native American Monitor from the Kumeyaay Tribe have been retained at the Applicant’s expense to implement a construction monitoring program. Both the Qualified Archaeologist and the Native American Monitor shall be present during all excavation or other earth-moving activities within the Project site. The Applicant shall immediately notify the ICPDSD and the Kumeyaay Tribal representative, if any undocumented and/or buried prehistoric or historic resource is uncovered. All construction must stop in the vicinity of the find until the find can be evaluated for its eligibility for listing in the CRHR.</p> <p>The cultural resources monitor shall have the authority to halt construction activity in the immediate vicinity of the encountered historic resource (designated as any area within 50 feet of the newly uncovered cultural resource) for a sufficient interval of time to allow avoidance or recovery of the encountered historic resources and shall also have the authority to redirect construction equipment in the event that any cultural resource is inadvertently encountered. All cultural resources are assumed to be eligible for the CRHR until determined</p>	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>otherwise by the monitor. Work will not resume in the area of the discovery until authorized by the monitor. Should any prehistoric or historic-era Native American artifacts be encountered, additional consultation with NAHC-listed Native American tribal groups shall be conducted.</p> <p>The recommendations of the archaeologist related to the discovery shall be complied with prior to resuming construction.</p> <p>Prior to the release of the Certificate of Occupancy, a Monitoring Report and/or Evaluation Report, which describes the results, analysis and conclusions of the cultural resource mitigation monitoring efforts (such as, but not limited to, the Research Design and Data Recovery Program) shall be submitted by the Qualified Archaeologist, along with the County-approved Native American Monitor’s notes and comments, to the County Planning and Development Services Department for approval.</p>	
		<p>MM CR-2: Establishment of Environmentally Sensitive Areas</p> <p>A qualified archaeologist, as approved by the County, will prepare an archaeological testing and evaluation plan prior to conducting any field work. If an archaeological site is determined significant under CEQA, avoidance is recommended by establishing Environmentally Sensitive Areas (ESAs). ESAs shall encompass the site boundary plus a 200-foot buffer around the site. ESAs should be staked and/or flagged in a conspicuous manner. Spot checking by a qualified archaeologist and a Native American Monitor from the Kumeyaay Tribe shall be completed throughout construction to ensure ESAs are not entered. If it is necessary for the Project to encroach on any ESA, full time monitoring by a qualified archaeologist, who is approved by the County, will be required to ensure there are no impacts to the</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		archaeological site. If avoidance is not an option, then a data recovery program should be undertaken.	
		<p>MM CR-3: Data Recovery Program</p> <p>The Project was designed to avoid and preserve archaeological resources in place where possible. Where avoidance and preservation are not possible, data recovery through excavation is the most feasible mitigation. Prior to excavation, a data recovery plan must be prepared that makes provision for adequately recovering the scientifically consequential information from and about the historical resource. Data recovery includes the documentation, recordation, and removal of the archeological deposit from a project site in a manner consistent with professional (and regulatory) standards; and the subsequent inventorying, cataloguing, analysis, identification, dating, interpretation of the artifacts and “ecofacts” & the production of a report of findings.</p>	
Impact 4.5-2: Would the Project Disturb archaeological resources and remains?	Potentially Significant	<p>MM CR-1 MM CR-2 MM CR-3</p>	Less than Significant.
Impact 4.3-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Potentially Significant	<p>MM CR-4: Unanticipated Discovery – Human Remains</p> <p>In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery will be halted or diverted and the Imperial County Coroner will be notified (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the NAHC within 24-hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American (Section 5097.98 of the PRC). The designated MLD then has 48 hours from the time access to the property is granted to</p>	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		make recommendations concerning treatment of the remains (AB-2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB-2641)	
4.6 ENERGY			
Impact 4.6-1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant	MM AQ-2	Less than Significant
Impact 4.6-2: Would the Project Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant.	None	Less than Significant.
4.7 GEOLOGY AND SOILS			
Impact 4.7-1: Would the Project result in substantial adverse effects from the rupture of a known earthquake fault?	Potentially Significant.	MM GEO-1: Implement Required Measures as described in the Geotechnical Report. Prior to approval of final engineering and grading plans for the Project, the County shall verify that all recommendations contained in the Geotechnical Report for the Viking Solar Facility prepared by	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Landmark Consultants, Inc. (January 2021) have been incorporated into all final engineering and grading plans. The County’s soil engineer and engineering geologist shall review grading plans prior to finalization to verify compliance with the recommendations of the report. All future grading and construction of the Project site shall comply with the geotechnical recommendations contained in the geotechnical report.	
Impact 4.7-2: Would the Project result in substantial adverse effects from strong seismic ground shaking?	Potentially Significant	MM GEO-1	Less than Significant.
Impact 4.7-3: Would the project result in substantial adverse effects from seismic-related ground shaking including liquefaction?	Potentially Significant.	<p>MM GEO-2: Foundations and Settlements</p> <p>Shallow spread footings and continuous wall footings are suitable to support the battery storage containers provided they are founded on a layer of properly prepared and compacted soil as described in Section 4.7-1. The foundations may be designed using an allowable soil bearing pressure of 2,000 pounds per square foot (psf). The allowable soil pressure may be increased by 20% for each foot of embedment depth in excess of 18 inches and by one-third for short term loads induced by winds or seismic events. The maximum allowable soil pressure at increased embedment depths shall not exceed 3,000 psf.</p> <p>Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure (pcf) of 300 pcf to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral loading.</p>	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>All exterior footings should be embedded a minimum of 18 inches below the building support pad or lowest adjacent final grade, whichever is deeper. Minimum embedment depth of interior footings should be at least 12 inches into the building support pad to account for variable environmental conditions.</p> <p>Interior and exterior embedment depths listed herein are minimum depths and greater depths/widths may be required by the structural engineer/designer and should be sufficient to limit differential movement to L/480 for center lift and L/720 for edge lift to comply with the current standards. Continuous wall footings should have a minimum width of 12 inches. Spread footings should have a minimum dimension of 24 inches and should be structurally tied to perimeter footings or grade beams. Concrete reinforcement and sizing for all footings should be provided by the structural engineer.</p> <p>As an alternative to shallow spread foundations, flat plate structural mats may be used.</p> <p>Flat Plate Structural Mats: Structural mats may be designed for a modulus of subgrade reaction of 175 pounds per cubic inch (pci) when placed on compacted native soil and 200 pci when placed on 6 inches of Class 2 aggregate base. The structure support pad shall be moisture conditioned and re-compacted as specified in geotechnical report. Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 300 pcf to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral loading.</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Settlements: Foundation movement under the estimated loadings and site conditions are estimated to not exceed 1 inch with differential movement of about two-thirds of total movement for the loading assumptions stated above when the subgrade preparation guidelines given above are followed.	
Impact 4.7-4: Would the Project result in substantial adverse effects from landslides?	No Impact.	None	No Impact.
Impact 4.7-5: Would the Project result in substantial soil erosion or the loss of topsoil?	Less than Significant.	None	Less than Significant.
Impact 4.7-6: 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?	Less than Significant.	None	Less than Significant.
Impact 4.7-7: Would the Project result in the potential for substantial risks to life or property due to expansive soils?	No Impact.	None	No Impact.
Impact 4.7-8: Would the Project directly or indirectly destroy a unique paleontological resource, site or unique geologic feature?	Less than Significant.	MM PAL-1: Worker's Environmental Awareness Program (WEAP). The Project Paleontologist will develop a Worker's Environmental Awareness Program (WEAP) to train the construction crew on the legal requirements for preserving fossil resources as well as procedures to follow in the event of a fossil discovery. This training program will be given to the crew before ground-disturbing work	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		commences and will include handouts to be given to new workers as needed.	
		<p>MM PAL-2 Unanticipated Fossil Discovery.</p> <p>In the event of a fossil discovery by a member of the construction crew, all work will cease in a 15-meter (50-foot) radius of the find while the Project Paleontologist assesses the significance of the fossil and documents its discovery. Should the fossil be determined significant, it will be salvaged following the procedures and guidelines of the SVP Society of Vertebrate Paleontology (2010). Recovered fossils will be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility. The most likely repository is the LACM. A repository will be identified, and a curatorial arrangement will be signed prior to collection of the fossils.</p>	
4.8 GHG EMISSIONS			
Impact 4.8-1: Would development of the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	No Impact.	None	No Impact.
Impact 4.8-2: Would the Project conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than Significant.	None	Less than Significant.
4.9 HAZARDS AND HAZARDOUS MATERIALS			
Impact 4.9-1: Would the Project result in the creation of a significant	Less than Significant.	None	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
public hazard from the routine transport, use, or disposal of hazardous materials?			
Impact 4.9-2: 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?	Potentially Significant Impacts.	<p>MM HAZ-1: Recognized Environmental Concerns</p> <p>The recognized environmental concerns shall be cleaned up and properly disposed of in accordance with all federal, state and local regulations.</p>	Less than Significant.
		<p>MM HAZ-2: Hazardous Materials Management Plan</p> <p>Any hazardous materials storage areas shall be designed with curbs or other containment measures, e.g., double-walled storage tanks, to contain spills and leaks. If on-site hazardous materials exceed fifty-five (55) gallons, a “Hazardous Material Management Plan” shall be prepared and approved by the County LEA and the Imperial County CUPA. A copy of the approved plan shall be submitted to ICPDS prior to the issuance of the grading/building permit (Source: Imperial County Renewable Energy Ordinance, Title 9, Division 17, § 91702.00).</p>	
		<p>MM HAZ-3: Prepare Emergency Response Plan</p> <p>The Permittee shall present to the Department an Emergency Response/Action Plan that has been approved by the ICFD/OES Department, and the LEA and any other agencies with jurisdiction (Source: Imperial County Renewable Energy Ordinance, Title 9, Division 17, § 91702.00). The Emergency Response/Action Plan shall cover all possible emergencies, e.g., major fluid spills, earthquakes, fires, floods or other emergencies. At all times, there shall be at least one employee either on the facility premises or on-call (i.e., available to respond to an emergency by reaching the</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>facility within a short period of time) with the responsibility of coordinating all emergency response measures. This Emergency Coordinator shall be thoroughly familiar with all aspects of the solar facility’s Emergency Response/Action Plan, all operations and activities at the facility, location of all records within the facility and the facilities layout. This person shall have the authority to commit the resources needed to carry out the contingency plan. Adequate personnel and equipment shall be available to respond to emergencies and to ensure compliance with the conditions of the permit.</p> <p>The Emergency Response/Action Plan shall be prepared in consultation with, but not be limited to, the ICFD/OES, County Environmental Health Services/Health Department, County Sheriff/Coroner’s office, County DPW, ICPDSD, and other appropriate state and county agencies. The plan shall include a notification list of response agencies which shall be notified immediately upon the discovery of a reportable unauthorized discharge and the list shall include:</p> <ul style="list-style-type: none"> • ICFD/OES; • ICPDSD; • County Environmental Health Services/Health Department; • County DPW; and • CHP, as applicable. <p>All employees shall be trained by classroom and hands-on training on safety procedures, maintenance programs and emergency response protocols to ensure safety and reliability in the event of an unforeseen emergency situation.</p> <p>The Permittee shall provide adequate safety devices to protect against the hazard of fire and explosion for activities that involve the use and storage of flammable, explosive or highly corrosive or reactive</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>materials as well as provide adequate fire-fighting and fire suppression equipment and using devices standard within the industry in compliance with all applicable state and local laws as determined by the ICFD/OES.</p> <p>The Permittee shall implement all State and County-approved worker safety and fire protection plans and programs.</p> <p>Any gates on-site shall have a “Knox” lock rapidly accessible by the ICFD/OES.</p> <p>Appropriate first aid provisions for facility operations shall be made for emergency response during Project construction, operation, and maintenance activities with appropriate first aid training for Project employees.</p> <p>During construction, a member of each working crew shall be trained in basic first aid and supplied with necessary medical equipment to respond to emergencies as provided for in the Emergency Response/Action Plan required above.</p> <p>Permittee shall identify a responsible agent for emergency purposes, whose name, title, e-mail address and telephone number, which shall be provided to the County DPW, ICFD/OES, County Environmental Health Services/Health Department, County Sheriff/Coroner’s office, IID, and ICPDSD.</p>	
<p>Impact 4.9-3: 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</p>	<p>Less than Significant.</p>	<p>None</p>	<p>Less than Significant.</p>

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
hazard to the public or the environment?			
Impact 4.9-4: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	Less than Significant.	None	Less than Significant.
Impact 4.9-5: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than Significant.	None	Less than Significant.
Impact 4.9-6: Would the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires?	Less than Significant.	None	Less than Significant.
4.10 HYDROLOGY AND WATER QUALITY			
Impact 4.10-1: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	Potentially Significant.	MM HWQ-1: Obtain coverage under Construction General Permit (SWRCB Order No. 2009-0009-DWQ and Associated Amendments) The Project applicant or its contractor would obtain coverage under Construction General Permit (SWRCB Order No. 2009-0009-DWQ and Associated Amendments). Under this permit they would be required to 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-	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the Project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP(s) shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> • Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching). • Dewatering and/or flow diversion practices, if required (MM HWQ-2). • Sediment control practices (temporary sediment basins, fiber rolls). • Temporary and post-construction on- and off-site runoff controls. • Special considerations and BMPs for water crossings, wetlands, and drainages. • Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity. • Waste management, handling, and disposal control practices. • Corrective action and spill contingency measures. • Agency and responsible party contact information. 	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP. <p>The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.</p>	
		<p>MM HWQ-2: Incorporate Post-Construction Runoff BMPs into Project Drainage Plan</p> <p>The Project Drainage Plan shall adhere to County guidelines to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project impervious surfaces as necessary.</p>	
Impact 4.10-2: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable	Less than Significant.	None	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
groundwater management of the basin?			
Impact 4.10-3: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site?	Less than Significant.	None	Less than Significant.
Impact 4.10-4: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Less than Significant.	None	Less than Significant.
Impact 4.10-5: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would create or contribute runoff water which would exceed the capacity of existing or	Less than Significant.	None	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
planned stormwater drainage systems or provide substantial additional resources of polluted runoff?			
Impact 4.10-6: Would a Project located in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact.	None	No Impact.
Impact 4.10-7: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than Significant.	None	Less than Significant.
4.11 LAND USE AND PLANNING			
Impact 4.11-1: 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?	No Impact.	None	No Impact.
4.12 MINERALS			
Impact 4.12-1: Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Less than Significant.	None	Less than Significant.
Impact 4.12-2: Would the Project result in the loss of availability of a	No Impact.	None	No Impact.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			
4.13 NOISE			
Impact 4.13-1: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels?	Less than Significant.	None	Less than Significant.
Impact 4.13-2: Generation of excessive groundbourne vibration or groundbourne noise levels?	Less than Significant.	None	Less than Significant.
4.14 PUBLIC SERVICES			
Impact 4.14-1: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire or police protection services?	Potentially Significant	<p>MM FIRE-1: Purchase Type 1 Fire Engine</p> <p>The Applicant shall be required to purchase a Type 1 fire engine, which meets the NFPA standard for structural firefighting. The fire engine cost estimate will be at current market value for the approved Fire Engine. Final cost, conditions and equipment of the fire engine shall be determined prior to the issuance of the initial grading permit. with All Terrain Capabilities as specified and approved by the Fire Department. The Fire Engine cost estimate will be at Current Market Value for approved Fire Engine. Final Cost, conditions and equipment of the Fire Engine shall be determined prior to the issuance of the initial grading permit. The County agrees to require, as a condition of approval, other developers in the area to reimburse the Applicant for the expenses associated with the purchase of the Fire Engine. The Permittee shall be reimbursed only for those expenses more than their proportionate share for the purchase of the Fire Engine that the Permittee would have been required to pay.</p>	Less than Significant.

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Furthermore, if a Fire Engine was already purchased by another developer in the area, then the Permittee shall only be required to pay a fire mitigation in the amount of up to \$100 per acre that would represent their proportionate share to reimburse the purchaser of the Fire Engine. The County shall be responsible for the managing the reimbursement component of this condition of approval.	
		<p>MM FIRE-2: Purchase Hazardous Material Emergency Response Equipment</p> <p>The Applicant shall be required to purchase Fire and Hazardous Material response equipment (i.e., Thermite) which will be determined by Fire Department and Hazmat Operations annually, or as needed, for the project as new technology, tactics, and/or equipment are developed to protect the project. This item will be a cost shared with other solar projects.</p>	
		<p>MM FIRE-3: Yearly Training</p> <p>The Applicant shall fund and provide Training yearly. This item will be a cost shared item with other solar projects.</p>	
		<p>MM FIRE-4: Emergency Operations Plan</p> <p>The Applicant shall develop an Emergency Operation Plan in conjunction with local fire service personnel and the AHJ and hold a comprehensive understanding of the hazards associated with lithium-ion battery technology. Will included Lithium-ion battery ESSs must incorporate adequate explosion prevention protection as required in NFPA 855 or International Fire Code Chapter 12, where applicable and Research focused on emergency decommissioning best practices and the role of the fire service in an emergency should be conducted.</p>	
		MM FIRE-5: Signage	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>The Applicant shall provide signage that identifies the contents of an ESS is required on all ESS installations to alert first responders to the potential hazards associated with the installation.</p>	
		<p>MM FIRE-6: Operation and maintenance fees associated with ICFD /Office of Emergency Services (OES)</p> <p>For operation and maintenance, fees associated with ICFD/OBES, the Applicant shall pay a fee of \$50 per acre per year prior to commencement of the construction period to address the ICFD/OES expenses for service calls within the Project site. Said amount shall be prorated monthly for periods of time less than a full year. Permittee shall provide advance, written notice to County Executive Office of the construction schedule and all revisions thereto.</p> <p>(a) Applicant shall pay an annual fee of \$20 per acre per year during the post-construction, operational phase of the Project to address the S ICFD/OES expenses for service calls within the Project site. Said fee will be paid to the ICFD/OES to cover on-going maintenance and operations cost created by the Project.</p> <p>(b) Costs associated with items two above items shall annually adjusted on January 1st to add a consumer price index (Los Angeles) increase. Such costs associated with these items can be readjusted in the County's sole discretion if a new service analysis is prepared and that service analysis is approved by both the County and the Permittee.</p> <p>(c) In lieu of providing all-weather access roads for fire protection vehicles, the Applicant shall be permitted to provide compacted dirt roads (in compliance with ICAPCD's rules and regulations) for fire protection vehicles .</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>The Project shall also be required to demonstrate the following as Conditions of Approval:</p> <p>An approved water supply capable of supplying the required fire flow determined by Appendix B of the California Fire Code shall be installed and maintained. Private fire service mains and appurtenance shall be installed in accordance with NFPA 24.</p> <p>An approved automatic fire suppression system shall be installed on all required structures as per the California Fire Code. All fire suppression systems shall be installed and maintained to the current adopted fire code and regulations.</p> <p>An approved automatic fire detection system shall be installed on all required structures as per the California Fire Code. All fire detection systems will be installed and maintained to the current adapted fire code and regulations.</p> <p>Fire department access roads and gates will be in accordance with the current adapted fire code and the facility will maintain a Knox Box for access on site.</p> <p>Compliance with all required sections of the fire code.</p> <p>Applicant shall provide product containment areas(s) for both product and water run-off in case of fire applications and retained for removal.</p> <p>A Hazardous Waste Material Plan shall be submitted to Certified Unified Program Agency (CUPA) for their review and approval.</p> <p>All hazardous material and wastes shall be handled, store, and disposed as per the approved Hazardous Waste Materials Plan. All spills shall be documented and reported to ICFD and CUPA as required by the Hazardous Waste Material Plan.</p>	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>MM FIRE-7: Fire Safety Plan</p> <p>Prior to the issuance of grading or building permits the Applicant shall develop and implement a fire safety plan for use during construction, operation and decommissioning.</p> <p>The Project Applicant shall submit the plan, along with maps of the Project site and access roads, to the ICFD for review and approval. A copy of the approved Fire Safety Plan shall be submitted to the ICPDSD. The Fire Safety Plan shall contain notification procedures and emergency fire precautions including, but not limited to, the following:</p> <ul style="list-style-type: none"> (a) All internal combustion engines, both stationary and mobile, shall be equipped with spark arresters. Spark arresters shall be in good working order. (b) Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. These vehicle types will maintain their factory-installed (type) muffler in good condition. (c) Fire rules shall be posted on the Project bulletin board at the contractor’s field office and areas visible to employees. (d) Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials. 	
4.15 TRANSPORTATION AND TRAFFIC			
Impact 4.15-1: Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Less than Significant	<p>MM-TR-1: Permits, Agreements and Traffic Control Plan</p> <p>Prior to the issuance of construction, grading or building permits, the Applicant shall:</p> <ul style="list-style-type: none"> (a) Obtain all necessary encroachment permits for work within Imperial County roads or highway R/W. Obtain all necessary Oversize/Overweight permits to operate or move a vehicle of a size or weight exceeding the 	Less than Significant

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>maximum limitations specified in the California Vehicle Code. Copies of the approved Construction Traffic Control Plan and issued permits shall be submitted to the ICPDSD and the Imperial County DPW, prior to the commencement of construction or decommissioning activities.</p> <p>(b) Prepare a Haul Route Study for the proposed construction haul route to evaluate any impacts to County roads. Said study shall be submitted to the ICPDSD and the Imperial County DPW for review and approval. The haul route study shall include pictures and/or other documents to verify the existing conditions of the impacted County roads along the proposed haul route before construction begins. The haul route study shall also include recommended mitigation improvements to impacted County roads along with any fair share costs for such improvements.</p> <p>(c) Enter into a secured Road Maintenance Agreement with the County of Imperial, prior to the issuance of a grading permit, to ensure that any County roads that are demonstrably damaged by construction traffic are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the State and/or Imperial County.</p> <p>(d) Prepare and submit a Construction Traffic Control Plan to Imperial County DPW-Development Review and Caltrans District 11, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following issues:</p> <ol style="list-style-type: none"> 1. Timing of deliveries of heavy equipment and building materials; 2. Directing construction traffic with a flag person; 	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> 3. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic; 4. Ensuring access for emergency vehicles to the Project site; 5. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections; 6. Maintaining access to adjacent property; and, 7. Specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during the AM and PM peak hours, distributing construction traffic flow across alternative routes to access the Project site, and avoiding residential neighborhoods to the maximum extent feasible. <ul style="list-style-type: none"> (a) Institute construction work hours as necessary, such that the arrival and/or departure times of workers would be staggered as necessary. (b) Identifying vehicle safety procedures for entering and exiting site access roads. (c) Submit documentation that identifies the roads to be used during construction. The Applicant shall be responsible for repairing any damage to non-County maintained roads that may result from construction activities. The Applicant shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Imperial County PWD and the ICPDSD. (d) Within 30 days of completion of construction, the Project proponent/operator shall submit a post-construction video log and inspection report to the County. This information shall be 	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		submitted in electronic format. The County, in consultation with the Applicant’s engineer, shall determine the extent of remediation required, if any.	
Impact 4.15-2: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) relative to Vehicle Miles Traveled?	Less than Significant	None	Less than Significant
Impact 4.15-3: 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)?	Less than Significant	None	Less than Significant
Impact 4.15-4: Would the Project result in an inadequate emergency access?	Less than Significant	None	Less than Significant
4.16 TRIBAL CULTURAL RESOURCES			
Impact 4.16-1: Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource?	Less than Significant	None	Less than Significant
Impact 4.16-2: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe determined to be significant the County of Imperial?	Potentially Significant	MM CR-1 MM CR-2 MM CR-3 MM CR-4	

TABLE 1-1: SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.17 UTILITIES AND SERVICE SYSTEMS			
Impact 4.17-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant	None	Less than Significant
Impact 4.17-2: Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Less than Significant	None	Less than Significant

1.8. Issues to Be Resolved by the Decision-Making Body

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved:

- Determine whether the EIR adequately describes the environmental impacts of the proposed Project;
- Choose among the Project alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether additional mitigation measures need to be applied to the proposed Project.

1.9 Project Alternatives

The Alternatives section (Chapter 8.0) of this Draft EIR focuses on alternatives capable of avoiding or substantially lessening any of the significant effects of the Project, even if the alternatives would impede, to some degree, the attainment of project objectives. The Alternatives section discusses the Project alternatives that were determined to represent the range of reasonable alternatives to the Project that have the potential to feasibly attain most of the basic Project objectives, but which may avoid or substantially lessen one or more the Project's significant effects. A brief summary is provided below.

1.9.1. No Project/No Expansion Alternative (Alternative 1)

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

1.9.2 Reduced Site Acreage Alternative (Avoid Prime Farmland) (Alternative 2)

The purpose of this alternative is to avoid Prime Farmland which is located within the Project site. Under Alternative 2, the overall size of the solar energy facility would be reduced by approximately 18.1 acres by avoiding development on the Prime Farmland within Assessor's Parcel Number (APN) 018.

1.9.4 Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines states that if the No Project Alternative is the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. The context of an environmentally superior alternative is based on consideration of several factors, including the Project's objectives and the ability to fulfill the goals while reducing potential impacts to the environment.

Table 1-2 summarizes the potential impacts of the alternatives evaluated as compared to the potential impacts of the Project.

TABLE 1-2. SUMMARY OF ALTERNATIVES COMPARED TO THE PROPOSED PROJECT

Environmental Resource	Proposed Project	No Project/ No Expansion (Alternative 1)	Modified Project Footprint (Alternative A)
1. Aesthetics	LTS-MM	NI / +	LTS-MM / =
2. Agriculture and Forestry Resources	LTS-MM	NI / +	LTS / +
3. Air Quality	LTS-MM	NI / +	LTS-MM / =
4. Biological Resources	LTS-MM	NI / +	LTS-MM / =
5. Cultural Resources	LTS-MM	NI / +	LTS-MM / =
6. Energy	LTS	NI / +	LTS
7. Geology and Soils	LTS-MM	NI / +	LTS-MM / =
8. Greenhouse Gas Emissions	LTS	NI / -	LTS / =
9. Hazards and Hazardous Materials	LTS-MM	NI / +	LTS-MM / =
10. Hydrology and Water Quality	LTS-MM	NI / +	LTS-MM / =
11. Land Use and Planning	LTS	NI / +	LTS / =
12. Minerals	LTS	NI / +	LTS / =
13. Noise	LTS	NI / +	LTS / =
14. Public Services	LTS-MM	NI / +	LTS-MM / =
15. Transportation and Traffic	LTS-MM	NI / +	LTS-MM / =
16. Tribal Cultural Resources	LTS-MM	NI / +	LTS-MM / =
		+ 15 - 1 = 0	+ 1 - 0 = 15
Meets Most of the Basic Project Objectives?	Yes	No	Yes

Notes:

NI: Finding of no environmental impact

LTS: Finding of less than significant environmental impact

LTS-MM: Finding of less than significant environmental impact with mitigation measure

SU: Finding of significant and unmitigable impact

+Alternative is superior (reduced impacts compared) to the proposed Project

-Alternative is inferior (greater impacts compared) to the proposed Project

=Alternative is environmentally similar to the proposed Project or there is not enough information to make a superior or inferior determination.

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2.0 INTRODUCTION

2.1. Purpose of the Environmental Impact Report

This Draft Environmental Impact Report (Draft 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 Vikings Solar Energy Generation and Storage Project. This Draft EIR describes the existing environment that would be affected by, and the environmental consequences which could result from the construction and operation of the proposed project as described in detail in Chapter 3 of this EIR. This DEIR was prepared in accordance with CEQA (Public Resources Code [PRC]) Section 21000 et seq); the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3, Section 15000 et. Seq); and the County of Imperial CEQA Regulations (Imperial County, 2017).

2.1.1. Type of EIR

An Initial Study (IS) was prepared (Appendix A-2) which determined that the proposed Project may have a significant effect on the environment, and that an EIR would be appropriate for providing the necessary environmental documentation. According to CEQA Section 15065, an EIR is deemed appropriate for a particular proposal where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:

- The proposal has the potential to substantially degrade the quality of the environment.
- The proposal has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- The proposal has possible environmental effects that are individually limited but cumulatively considerable.
- The proposal could cause direct or indirect adverse effects on human beings.

This EIR can be characterized as a Project EIR prepared pursuant to §15168 of the state CEQA Guidelines. The EIR will examine the environmental impacts of a specific development project, focus on the changes in the environment that would result from the development of the project, and will examine all phases of the project including planning, construction, operation, and closure and post-closure activities.

2.1.2. Purpose of the EIR

This EIR is an informational document intended for use by the County decision-makers and members of the general public in evaluating the potential environmental effects of the proposed Project. This EIR includes discussion on the potential environmental impacts of the proposed Project; mitigation measures to reduce any significant impacts; the level of significance of impacts

with and without mitigation; any unavoidable adverse impacts that cannot be mitigated; significant cumulative impacts when taken into consideration with past, present, and reasonably foreseeable future projects; and reasonable and feasible project alternatives that would avoid or reduce significant environmental impacts.

CEQA requires an EIR to reflect the independent judgment of the lead agency. A DEIR is circulated for review by responsible agencies, trustee agencies, other public agencies, special districts, organizations, citizen groups, and individual members of the public (collectively referred to as interested parties). As defined in Sections 15050 and 15367 of the State CEQA Guidelines, the lead agency is the public agency that has the principal responsibility for carrying out or approving a project; a responsible agency has discretionary approval over certain project aspects; and a trustee agency has discretionary approval or jurisdiction by law over natural resources affected by a project.

2.2. Issues to be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved:

- Determine whether the EIR adequately describes the environmental impacts of the proposed Project;
- Choose among the Project alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether additional mitigation measures need to be applied to the proposed Project.

2.3. Definitions of Key Terms

The terms listed below are defined to assist reviewers in understanding this Draft EIR. Additional definitions of terms are listed in CEQA Article 20 Sections 15350 to 15387.

- **Project** means the whole of an action that has the potential to result in a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.
- **Environment** means the physical conditions that exist in the area and would be affected by the proposed Project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is that in which significant direct or indirect impacts would occur as a result of the proposed Project. The environment includes both natural and man-made (artificial) conditions.
- **Impacts** analyzed under CEQA must be related to a physical change. Impacts are:
 - Direct or primary impacts that would be caused by a project and would occur at the same time and place; or

- Indirect or secondary impacts that would be caused by a project and would be later in time or further removed in distance, but that would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other impacts related to induced changes in the pattern of land use, population density, growth rate, or related effects on air and water and other natural systems, including ecosystems.
- **Significant Impact on the Environment** means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the proposed Project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.
- **Mitigation** consists of measures that avoid or substantially reduce the proposed Project’s significant environmental impacts by:
 - Avoiding the impact altogether by not taking a certain action or parts of an action;
 - Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
 - Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
 - Reducing or eliminating the impact over time through preservation and maintenance operations during the life of the action; or
 - Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.
- **Cumulative impact** refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.
 - The individual impacts may be changes resulting from a single project or separate projects.
 - The cumulative impact from several projects is the change in the environment which results from the incremental impact of the proposed Project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period.

This DEIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- A designation of “**No Impact**” indicates no adverse changes to the environment are expected.
- A “**Less than Significant Impact**” will not cause a substantial adverse change to the environment.

- A “**Less than Significant Impact with Mitigation Incorporated**” avoids a substantial adverse impact on the environment through adoption of mitigation measures.
- A “**Significant and Unavoidable Impact**” is a substantial adverse effect on the environment that cannot be reduced to a less than significant level even with the implementation of feasible mitigation measures.

2.4. Agency Roles and Responsibilities

The Project would require permits and approvals from various federal, state and local regulatory agencies. The agencies are identified below.

2.4.1. Lead Agency

The County of Imperial (County) is the lead agency for the environmental review of the Vikings Solar Energy Generation and Storage Project. The County will be required to consider a Conditional Use Permit (CUP) (#20-0025). The County will also be responsible for certification of the Final EIR.

2.4.2. Responsible and Trustee Agencies

Projects or actions undertaken by the lead agency, in this case the Imperial County Planning and Development Services Department, may require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Other such agencies are referred to as responsible agencies and trustee agencies. Pursuant to §15381 and §15386 of the CEQA Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- A responsible agency is a public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term responsible agency includes all public agencies other than the lead agency that have discretionary approval power over the project (§15381).
- A trustee agency is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California (§15386).
- The Project may require permits or approvals from various agencies for the facility and activities that constitute the project including but are not limited to the following:

Federal

- U.S. Army Corps of Engineers (USACE)

State

- California Department of Transportation (Caltrans)

- California Department of Fish & Wildlife (CDFW)
- California Department of Public Health
- State Water Resources Control Board (SWRCB)
- California Regional Water Quality Control Board (RWQCB), Region 7

Regional and Local

- Imperial County Department of Public Health (DPH)
- Imperial County Air Pollution Control District (ICAPCD)
- Imperial County Department Public Works (DPW)
- Imperial Irrigation District (IID)

The approvals anticipated to be required from the lead agency, trustee agencies, and/or responsible agencies are provided in Chapter 3.0 (Table 3-2).

2.5. Environmental Review Process

CEQA establishes mechanisms whereby the public and affected public agencies can be informed about the nature of the project being proposed and the extent and types of impacts that the proposed Project and its alternatives would have on the environment should the proposed Project or alternatives be implemented. The CEQA review process allows interested parties to share expertise, discuss the analyses, check for accuracy, detect omissions, discover public concerns, and solicit mitigation measures and alternatives capable of avoiding or reducing the significant effects of a project, while still attaining most of the basic objectives of the proposed Project.

The CEQA process for this EIR includes:

- Preparation of an Initial Study which determined that the proposed Project requires preparation of an EIR;
- Filing and distribution of the Notice of Preparation;
- Holding a CEQA public agency scoping meeting;
- Preparation of the Draft EIR;
- Release of the Draft EIR for public review; and
- Preparation and release of the Final EIR, including responses to comments on the Draft EIR.

2.5.1. Notice of Preparation and Initial Study

In accordance with Section 15082 of the CEQA Guidelines, the Imperial County Planning and Development Services Department (ICPDSD) issued a Notice of Preparation (NOP) of an EIR for

the Project and an accompanying Initial Study (California State Clearinghouse [SCH]# 2021050036) (Appendices A-1 and A-2, respectively). The NOP was submitted to federal, state, and local agencies and other interested parties for an extended 37¹-day public review period beginning on May 4, 2021, and ending on June 9, 2021. The NOP was published in the *Imperial Valley Press* and the *Holtville Weekly Chronical* newspapers on May 6, 2021.

In response to the initial CUP application, the County received comment letters from the following agencies:

- Imperial Irrigation District;
- Imperial County Office of the Agriculture Commission;
- Imperial County Air Pollution Control District;
- Imperial County Executive Office;
- Imperial County Public Health Department;
- Imperial County Fire Department; and
- Imperial County Department of Public Works.

In response to the NOP, the County received comment letters from the following agencies:

- Native American Heritage Commission;
- Department of Toxic Substances (Imperial Certified Unified Program Agency [CUPA]);
- California Department of Transportation; and
- Imperial Irrigation District.

Table 2-1 summarizes written comments received during the public scoping process.

TABLE 2-1: SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
GOVERNOR'S OFFICE OF PLANNING AND RESEARCH (STATE CLEARINGHOUSE AND PLANNING UNIT) – DATE JUNE 14, 2021	
<ul style="list-style-type: none"> • Confirmed filing of NOP and identified the state -level review period as May 6th through June 9th, 2021. 	<ul style="list-style-type: none"> • Chapter 2.0, Introduction
NATIVE AMERICAN HERITAGE COMMISSION MAY 5, 2021	
<ul style="list-style-type: none"> • Assembly Bill 52 (AB 52) applies to any project for which an NOP, a notice of negative 	<ul style="list-style-type: none"> • Section 4.5, Cultural Resources • Section 4.16, Tribal Cultural Resources

¹ Typical 35-day NOP comment period was extended by two days to align with NOP publication.

TABLE 2-1: SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
declaration, or a mitigated negative declaration is filed on or after July 1, 2015.	<ul style="list-style-type: none"> AB 52 Consultation Letters and Responses (App. H-2)
<ul style="list-style-type: none"> NAHC recommends that lead agencies consult with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the Project. 	<ul style="list-style-type: none"> Section 4.5, Cultural Resources Section 4.16, Tribal Cultural Resources AB 52 Consultation Letters and Responses (App. H-2)
<ul style="list-style-type: none"> Both Senate Bill (SB 18) and AB 52 have tribal consultation requirements. 	<ul style="list-style-type: none"> Section 4.5, Cultural Resources Section 4.16, Tribal Cultural Resources AB 52 Consultation Letters and Responses (App. H-2)
DEPARTMENT OF TOXIC SUBSTANCES CONTROL (IMPERIAL CUPA) – MAY 4, 2021	
<ul style="list-style-type: none"> If the facility will generate hazardous waste, or have hazardous materials, an underground storage tank, or an aboveground storage tank they will need to generate a California Environmental Reporting System (CERS) account and be-in the Certified Unified Program Agencies (CUPA) program. 	<ul style="list-style-type: none"> Section 4.9, Hazardous Materials
CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) – JUNE 8, 2021	
Traffic Engineering and Analysis	
<ul style="list-style-type: none"> All construction vehicles and heavy truck deliveries shall not use the dirt access road at the Intersection of State Route (SR)-115/Evan Hewes Highway and East Nelson Pit (dirt) Road. 	<ul style="list-style-type: none"> Section 4.15, Transportation and Traffic
<ul style="list-style-type: none"> Access to the Project site shall be made via only the paved roads of Kavanaugh Road, Miller Road, and East Nelson Pit Road. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description Section 4.15, Transportation and Traffic
<ul style="list-style-type: none"> The intersections of SR-115/Evan Hewes Highway at Miller Road, and SR- 115/Evan Hewes Highway at Kavanaugh Road will require some type of notice to motorist on SR--115 of construction vehicles entering/exiting the construction site. <ul style="list-style-type: none"> Offsite traffic control signs or portable changeable message signs (PCMSs) might be required on SR-115. b. Possible Encroachment Permit might be required. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description Section 4.15, Transportation and Traffic
<ul style="list-style-type: none"> Provide a construction access route exhibit to see how trucks will impact SR-115. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description Traffic Report, Appendix M
<ul style="list-style-type: none"> Any impacts, structures, utilities, or other miscellaneous items related to this project that do encroach within Caltrans right of way will 	<ul style="list-style-type: none"> Chapter 4.0 Project Description

TABLE 2-1: SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
require further review and encroachment permits.	
Design	
<ul style="list-style-type: none"> If the intersections between SR-115 and the side streets leading to the entrance of the power generation plant are to be paved, the pavement and intersection should be designed per Caltrans Highway Design Manual (HDM), especially to accommodate the larger turning radius that may be needed for the trucks. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description Section 4.15, Transportation and Traffic
Traffic Control Plan/Hauling	
<ul style="list-style-type: none"> Caltrans has discretionary authority over highways under its jurisdiction and may require a special permit to operate or move a vehicle or combination of vehicles or special mobile equipment of a size or weight of vehicle or load that exceeds the maximum limitations specified in the California Vehicle Code. The Caltrans Transportation Permits Issuance Branch is responsible for the issuance of these special transportation permits for oversize/overweight vehicles on the State Highway network. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description
<ul style="list-style-type: none"> If a Traffic Control Plan is required, it is to be submitted to Caltrans District 11 at least 30 days prior to the start of any construction. Traffic shall not be unreasonably delayed. The plan shall also outline suggested detours to use during closures, including routes and signage. 	<ul style="list-style-type: none"> Comment noted.
<ul style="list-style-type: none"> Potential impacts to the highway facilities (SR--115) and traveling public from the detour, demolition and other construction activities should be discussed and addressed before work begins. 	<ul style="list-style-type: none"> Section 4.15, Transportation and Traffic
Right-of-Way	
<ul style="list-style-type: none"> Per Business and Profession Code 8771, perpetuation of survey monuments by a licensed land surveyor is required, if they are being destroyed by any construction. 	<ul style="list-style-type: none"> Comment noted.
<ul style="list-style-type: none"> Any work performed within Caltrans' right of way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required prior to construction. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description
IMPERIAL IRRIGATION DISTRICT (IID) – JUNE 7, 2021	
<ul style="list-style-type: none"> If the project requires temporary construction or permanent electrical service at the distribution level, the applicant should be advised to contact Joel Lopez, IID Customer Project Development 	<ul style="list-style-type: none"> This comment identifies IID's process for obtaining temporary construction or permanent electrical services at the Project site and does not pertain to the scope of the EIR.

TABLE 2-1: SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
<p>Planner, at (760) 482-3300, (760) 482-3444 or e-mail Mr. Lopez at jflopez@iid.com to initiate the customer service application process. In addition to submitting a formal application (available for download at the district website http://www.iid.com/home/showdocument?id=12923), the applicant will be required to submit a complete set of plans approved by the County of Imperial (in hardcopy and AutoCAD formats), including site plan, plan & profile drawings, one-line diagrams, and electrical loads, panel size, voltage requirements, project schedule, and the estimated in-service date, as well as the applicable fees, permits, easements and environmental compliance documentation pertaining to the provision of electrical service to the project.</p>	
<ul style="list-style-type: none"> The applicant shall be responsible for all costs and mitigation measures related to providing electrical service to the project. 	<ul style="list-style-type: none"> Mitigation measures associated with construction and operation of the proposed “gen-tie” line are addressed in Chapter 4 of the EIR.
<ul style="list-style-type: none"> Distribution-rated electrical service is limited in the area. A circuit study may be required. Any improvements or mitigation identified in the circuit study to enable the provision of electrical service shall be the financial responsibility of the applicant. 	<ul style="list-style-type: none"> Mitigation measures associated with construction and operation of the proposed “gen-tie” line are addressed in Chapter 4 of the EIR.
<ul style="list-style-type: none"> To insure there are no impacts to IID facilities, applicant should submit project plans, including grading & drainage and fencing plans, to IID Water Department Engineering Services for review and comment prior to final project design and CUP approval. IID Water Department Engineering Services can be contacted at (760) 339-9265 for further information on this matter. 	<ul style="list-style-type: none"> Mitigation measures associated with potential impacts to IID facilities are addressed in Chapter 4 of the EIR.
<ul style="list-style-type: none"> The project may impact IID drains with project site runoff flows draining into IID drains. To mitigate impacts, the project may require a comprehensive IID hydraulic drainage system analysis. IID’s hydraulic drainage system analysis includes an associated drain impact fee. 	<ul style="list-style-type: none"> Section 4.10 Hydrology and Water Quality
<ul style="list-style-type: none"> A construction storm water permit from the California Regional Water Quality Control Board (CRWQB) is required before commencing construction and an industrial storm water permit from CRWQCB is required for the operation of the proposed facility. The project’s Storm Water Pollution Prevention Plan 	<ul style="list-style-type: none"> Chapter 3.0 Project Description Section 4.10 Hydrology and Water Quality

TABLE 2-1: SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
<p>and storm water permits from CRWQCB should be submitted to IID for review.</p>	
<ul style="list-style-type: none"> In order to obtain a water supply from IID for a non-agricultural project, the project proponent will be required to comply with all applicable IID policies and regulations and may be required to enter into a water supply agreement. Such policies and regulations require, among other things, that all potential environmental and water supply impacts of the project be adequately assessed, appropriate mitigation developed if warranted, including any necessary approval conditions adopted by the relevant land use and permitting agencies. 	<ul style="list-style-type: none"> Section 4.7, Public Utilities and Service Systems
<ul style="list-style-type: none"> If IID implements a water allocation or apportionment program pursuant to the IID Equitable Distribution Plan, or any amending or superseding policy for the same or similar purposes, during all or any part of the term of said water supply agreement, IID shall have the right to apportion the project's water as an industrial water user. Information on how to obtain a water supply agreement can be found at the district website https://www.iid.com/water/municipal-industrial-and-commercial-customers or obtained by contacting Justina Gamboa-Arce, Water Resources Planner at (760) 339-9085 or jgamboarce@iid.com. 	<ul style="list-style-type: none"> This comment identifies IID's process for obtaining a water supply agreement and does not pertain to the scope of the EIR.
<ul style="list-style-type: none"> For information on procuring construction water, the applicant should contact IID South End Division at (760) 482-9800. 	<ul style="list-style-type: none"> This comment identifies IID's process for obtaining construction water does not pertain to the scope of the EIR
<ul style="list-style-type: none"> Any construction or operation on IID property or within its existing and proposed right of way or easements including but not limited to surface improvements such as proposed new streets, driveways, parking lots, landscape; and all water, sewer, storm water, or any other above ground or underground utilities; will require an encroachment permit, or encroachment agreement (depending on the circumstances). A copy of the IID encroachment permit application and instructions for its completion are available at https://www.iid.com/about-iid/departments-directory/real-estate. The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits or agreements. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description.

TABLE 2-1: SUMMARY OF PUBLIC SCOPING COMMENTS

Comment Summary	Where Comment Is Addressed
<ul style="list-style-type: none"> In addition to IID's recorded easements, IID claims, at a minimum, a prescriptive right of way to the toe of slope of all existing canals and drains. Where space is limited and depending upon the specifics of adjacent modifications, the IID may claim additional secondary easements/prescriptive rights of ways to ensure operation and maintenance of IID's facilities can be maintained and are not impacted and if impacted mitigated. Thus, IID should be consulted prior to the installation of any facilities adjacent to IID's facilities. Certain conditions may be placed on adjacent facilities to mitigate or avoid impacts to IID's facilities. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description.
<ul style="list-style-type: none"> The applicant may not use IID's canal or drain banks to access the project site. Any abandonment of easements or facilities shall be approved by IID based on systems (Irrigation, Drainage, Power, etc.) needs. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description.
<ul style="list-style-type: none"> An IID encroachment permit is required to utilize existing surface-water drainpipe connections to drains and receive drainage service from the district. Surface-water drainpipe connections are only modified in accordance with IID Water Department Standards. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description. Section 4.10, Hydrology and Water Quality
<ul style="list-style-type: none"> Any new, relocated, modified or reconstructed IID facilities required for and by the project (which can include but is not limited to electrical utility substations, electrical transmission and distribution lines, water deliveries, canals, drains, etc.) need to be included as part of the project's CEQA and/or National Environmental Policy Act (NEPA) documentation, environmental impact analysis and mitigation. Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent. 	<ul style="list-style-type: none"> Chapter 3.0 Project Description Chapter 4.0 Environmental Analysis

2.5.2. Public Scoping Meeting

One public scoping meeting was held by the County of Imperial to solicit input from governmental agencies, non-governmental organizations, and the public regarding the proposed Project, alternatives, mitigation measures, and environmental impacts to be analyzed in the EIR. The meeting was held on Wednesday, May 12th, 2021, at 6:00 p.m. in the County Administrative Center, Board Chambers, El Centro, California. No members of the public attended the scoping meeting and no

oral and/or written comments were received. Copies of the Scoping Meeting Materials are presented in Appendix B.

2.5.3. Public Notice/Review of Draft EIR Review

The DEIR will be circulated to the SCH, responsible and trustee agencies, and interested parties for a 50-day public review period (45-day minimum per CEQA, plus five days per County of Imperial CEQA Guidelines). The Draft EIR will also be made available review online at the Imperial Planning and Development Services Department website: <http://www.icpds.com>. Hard copies will also be available at the at the County of Imperial Planning and Development Services Department, 801 Main Street, El Centro, California 92243.

All public comments on the Draft EIR should be directed to:

Diana Robinson,
Imperial County Planning and Development Services Department,
801 Main Street,
El Centro, California 92243
DianaRobinson@co.imperial.ca.us

The public review and comment period starts on February 6th, 2022 and ends on March 28th, 2022. 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 procedures to certify the Final EIR.

2.5.4. Certification of Final EIR/Project Consideration

The County of Imperial Planning Commission (Commission) will consider the Final EIR and make its recommendation to the Board of Supervisors (Board) regarding the Project. If, in the exercise of its independent judgment and review, the finds that the Final EIR is “adequate and complete,” the Board may certify the Final EIR at a public hearing. The “rule of adequacy” generally holds that the Final EIR can be certified if it shows a good faith effort at full disclosure of environmental information and provides sufficient analysis to allow decisions to be made regarding the Project in contemplation of its environmental consequences.

Upon review and consideration of the Final EIR, the Board may take action to approve, revise, or reject the Project. A decision to approve the Project would be accompanied by written findings in accordance with CEQA Guidelines, Section 15091, and, if applicable, Section 15093. A Mitigation Monitoring and Reporting Plan (MMRP), as described below, would also be adopted for mitigation measures that have been incorporated into or imposed upon the Project to reduce or avoid significant impacts to the environment. The MMRP would be designed to ensure that these measures are carried out during Project implementation.

2.5.5. Mitigation Monitoring And Reporting Program

Section 21086.1 of CEQA requires that public agencies adopt a program for monitoring mitigation measures or conditions of project approval that reduce or eliminate significant impacts to the environment. As such, the County has prepared an MMRP for the proposed Project. The MMRP will be submitted to approving agencies along with the Final EIR prior to considering the Project for approval. Any mitigation measures adopted by the Planning Commission (or Board of Supervisors) as conditions for approval of the Project will be included in each of the MMRPs to track and verify compliance.

2.6. Intended Uses of the EIR

An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify possible ways to mitigate or avoid the significant effects, and describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project. The EIR is intended to provide documentation pursuant to CEQA to cover all local, regional, and state permits and approvals which may be needed or are desirable in order to implement the proposed Project.

2.7. EIR Content and Organization

This Draft EIR includes all applicable information required by Article 9 of the CEQA Guidelines (Sections 15120-15130). Table 2-2 contains a list of sections required under CEQA, along with a reference to the chapter in which they can be found in this document.

TABLE 2-2: REQUIRED EIR CONTENTS

Requirement (CEQA Section)	Location in EIR
Table of Contents (Section 15122)	Table of Contents
Executive Summary (Section 15123)	Chapter 1
Project Description (Section 15124)	Chapter 3
Environmental Setting (Section 15125)	Chapter 4, (Sections 4.1 through 4.17)
Significant Environmental Effects of Proposed Project (Section 15126.2(a))	Chapter 1; Chapter 4
Unavoidable Significant Environmental Impacts (Section 15126.2(b))	Chapter 1; Chapter 5
Significant Irreversible Environmental Changes (Section 15126.2(c))	Chapter 1; Chapter 5
Growth Inducing Impacts (Section 15126.2(d))	Chapter 1; Chapter 5
Mitigation Measures (Section 15126(e) and Section 15126.4)	Chapter 1; Chapter 4
Cumulative Impacts (Section 15130)	Chapter 1; Chapter 6
Alternatives to Project (Section 15126.6(f))	Chapter 8
Effects Found not to be Significant (Section 15128)	Chapter 1; Chapter 7
Organizations and Persons Contacted/List of Preparers (Section 15129)	Chapter 9

The content and organization of this Draft EIR are in accordance with the most recent guidelines and amendments to CEQA and the State CEQA Guidelines. Technical studies have been summarized within individual environmental analysis sections and/or summary sections. Full technical studies have been included in the appendices to this Draft EIR (see Volume 2 of the Draft EIR) and are available for review during the public comment period.

This Draft EIR has been organized in the following manner:

- **Chapter 1.0, Executive Summary** is provided at the beginning of the Draft EIR that outlines the conclusions of the environmental analysis and a summary of the proposed Project as compared to the alternatives analyzed in this Draft EIR. The Executive Summary also includes a table summarizing all identified environmental impacts, along with the associated mitigation measures proposed to reduce or avoid each impact.
- **Chapter 2.0, Introduction**, provides an overview of the Draft EIR, introducing the proposed Project, applicable environmental review procedures, and format of the Draft EIR.
- **Chapter 3.0, Project Description**, provides a description of the proposed Project, including its objectives, location (regional and local), general environmental setting, identification of discretionary actions and interested parties, and a list of cumulative projects. The setting discussion also addresses the relevant planning documents and existing land use designations of the Project site.
- **Chapter 4.0, Environmental Analysis**, provides a detailed impact analysis for each environmental issue, cumulative impacts and required mitigation measures, as applicable, that would result with project implementation.
- **Chapter 5.0, Analysis of Long-Term Effects**, addresses significant unavoidable impacts of the proposed Project, including those that can be mitigated but not reduced to below a level of significance; significant irreversible environmental changes that would result from the proposed Project, including the use of nonrenewable resources; and growth inducement.
- **Chapter 6.0, Cumulative Effects**, addresses the potential cumulative impacts associated with the proposed Project and other existing, approved, and proposed development in the area.
- **Chapter 7.0, Environmental Effects Found Not to Be Significant**, provides, for each environmental parameter analyzed, a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed Project; the existing environmental setting; the potential adverse and beneficial effects of the proposed Project; the level of impact significance before mitigation; the mitigation measures for the proposed Project; and, the level of significance of the adverse impacts of the proposed Project after mitigation is incorporated.

- **Chapter 8.0, Alternatives**, provides a description and evaluation of alternatives to the proposed Project. This section addresses the mandatory “No Project” alternative, as well as development alternatives that would reduce or avoid the proposed Project’s significant impacts.
- **Chapter 9.0, Preparers**, identifies persons involved in the preparation of this EIR and/or those contacted during preparation of this EIR who provided information or data incorporated into the document.
- **Chapter 10.0, References**, provides a list of informational sources and technical reports utilized in preparation of the EIR.
- **Appendices** provide information and/or relevant technical studies in support of the environmental analysis contained in this EIR.

Environmental issues evaluated in Chapter 5.0 of this Draft EIR include:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems

Approach To Analysis

CEQA Guidelines §15125(a) addresses how a lead agency should establish the baseline conditions against which potential environmental impacts of a project are measured, as follows:

An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or, if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

For the Vikings Solar Energy Generation and Storage Project, this Draft EIR describes physical environmental conditions, from both a local and regional perspective, as they existed at the time the Notice of Preparation was published.

Each environmental issue area in Chapter 4.0, Environmental Analysis, contains a description of the following:

- The physical environmental setting as it existed at the time the Notice of Preparation was published along with the existing land uses on the site. The environmental setting constitutes the baseline physical conditions against which the County determines whether an impact is considered significant and adverse.
- The regulatory framework governing each issue.
- The threshold(s) of significance determined to be appropriate by the County pursuant to Section 15064.7 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 for each environmental parameter for which the proposed Project may result in potentially significant adverse impacts.
- A determination of the level of significance after mitigation measures are implemented. If significant unavoidable adverse impacts are identified (i.e., significant adverse impacts which cannot be mitigated or that remain significant even after mitigation is incorporated), it will be necessary for the County of Imperial to determine if the benefits from implementing the proposed Project outweigh the unavoidable adverse effects and adopt a Statement of Overriding Considerations.
- The identification of any residual significant impacts following mitigation.

Environmental issues discussed in Chapter 7.0, Environmental Effects Found Not to Be Significant, include:

- Population and Housing
- Recreation
- Wildfire

2.8. Incorporation By Reference

This Draft EIR relies upon previously adopted regional and statewide plans and programs, agency standards, and background studies in its analysis, such as the County of Imperial General Plan, Title 9 Land Use Ordinance; Noise Abatement and Control Ordinance, ICAPCD's CEQA Air Quality Handbook. Whenever existing environmental documentation or previously prepared documents and studies are used in the preparation of the Draft EIR, the information is summarized for the convenience of the reader and incorporated by reference. In addition, each section which relies upon

previously adopted plans, programs, environmental documentation and background studies notes how it specifically relates to the proposed Project and that the information has been reconfirmed. In accordance with the CEQA Guidelines, Section 15150(b), the documents referenced in the Draft EIR will be made available to the public for inspection at the County upon request. In addition, referenced documents and other sources used in preparation of the Draft EIR are identified in Chapter 11.0 (References).

Technical studies and reports prepared for the proposed Project are included in the Appendices of and are considered part of the Draft EIR.

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3.0 PROJECT DESCRIPTION

Chapter 3 provides a description of the Vikings Solar Energy Generation and Storage 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 Project would consist of a nominal 150-megawatt (MW) solar photovoltaic (PV) energy generation project with an integrated, not to exceed 300 MW battery energy storage system (BESS). The energy produced by the Project would be conducted through the proposed 230 kilovolt (kV) switching station and delivered to the Imperial Irrigation District's (IID). The solar energy generation facility, BESS, switching station, generation tie line and associated improvements are collectively referred to as the "proposed Project" or "Project."

3.1 Project Location

The proposed Project would be located on approximately 604 acres of private and Imperial County-owned land located at the intersection of East Nelson Pit Road and Graeser Road in the western part of unincorporated Imperial County. The Project site is approximately 5.5 miles east of the City of Holtville in Section 36 within Township 15 South, and Range 16 East of the San Bernardino Base and Meridian (SBB&M) of the "Holtville East" 7.5-minute quadrangle. (Figure 3-1 and Figure 3-2). The Holtville Airport is located 1.6 miles north of the Project Site, which is traversed by the existing East Highline Canal and IID's 230 kV "KN & KS" transmission line.

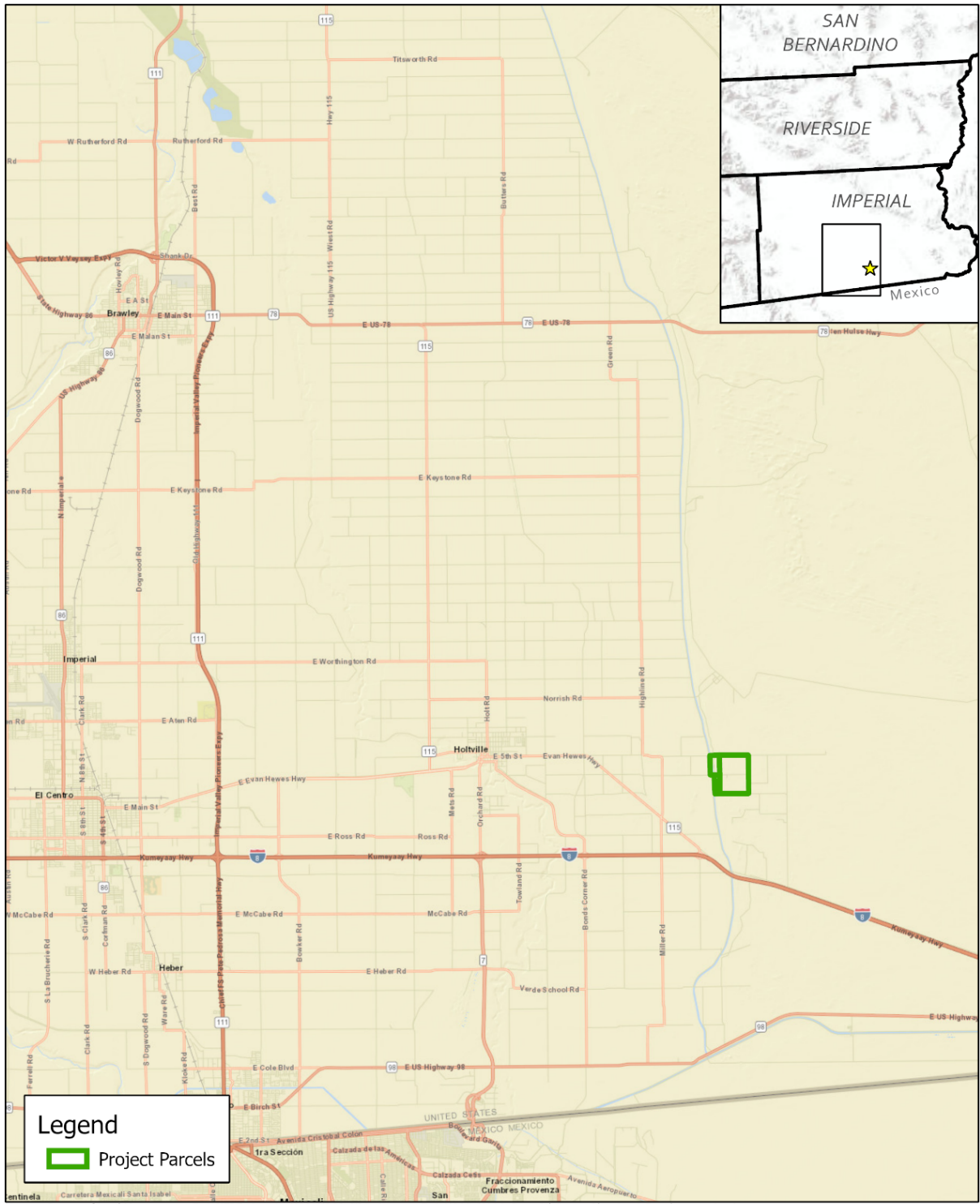
Solar Energy Facility

As shown on Figure 3-2, the solar energy facility would be located on three contiguous parcels (Assessor's Parcel Numbers [APNs] 050-070-018, 050-070-019, and 050-070-021). Table 3-1 identifies the individual APNs with their respective acreages, General Plan Land Use Destinations and Zone Classifications. The Project Site Plan is shown on Figure 3-3.

TABLE 3-1. PROJECT PARCELS, ACREAGES, AND ZONING

APN	Acreage	General Plan Land Use Designation	Zone Classification
050-070-018	480	Agriculture	A-2-RE
050-070-019	80	Agriculture	A-2-RE
050-070-021	43.61	Recreation/Open Space	GS-RE
TOTAL	603.61		

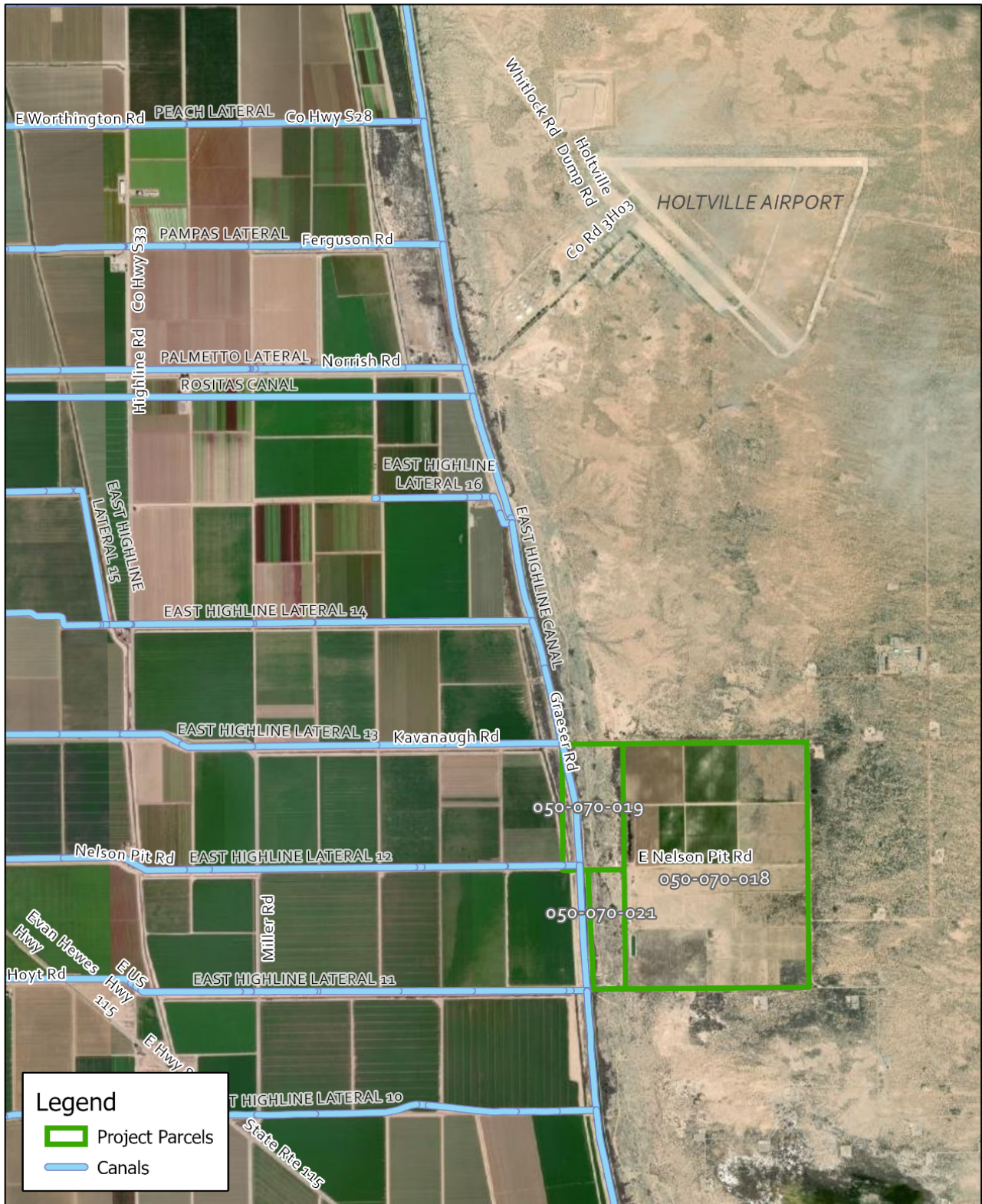
Source: Vikings Energy Farm, LLC, 2021.



Source: Bureau of Land Management, Esri, HERE, Garmin, NGA, USGS, NPS, Sources: Esri, USGS, NOAA, Imperial County Planning & Development Services

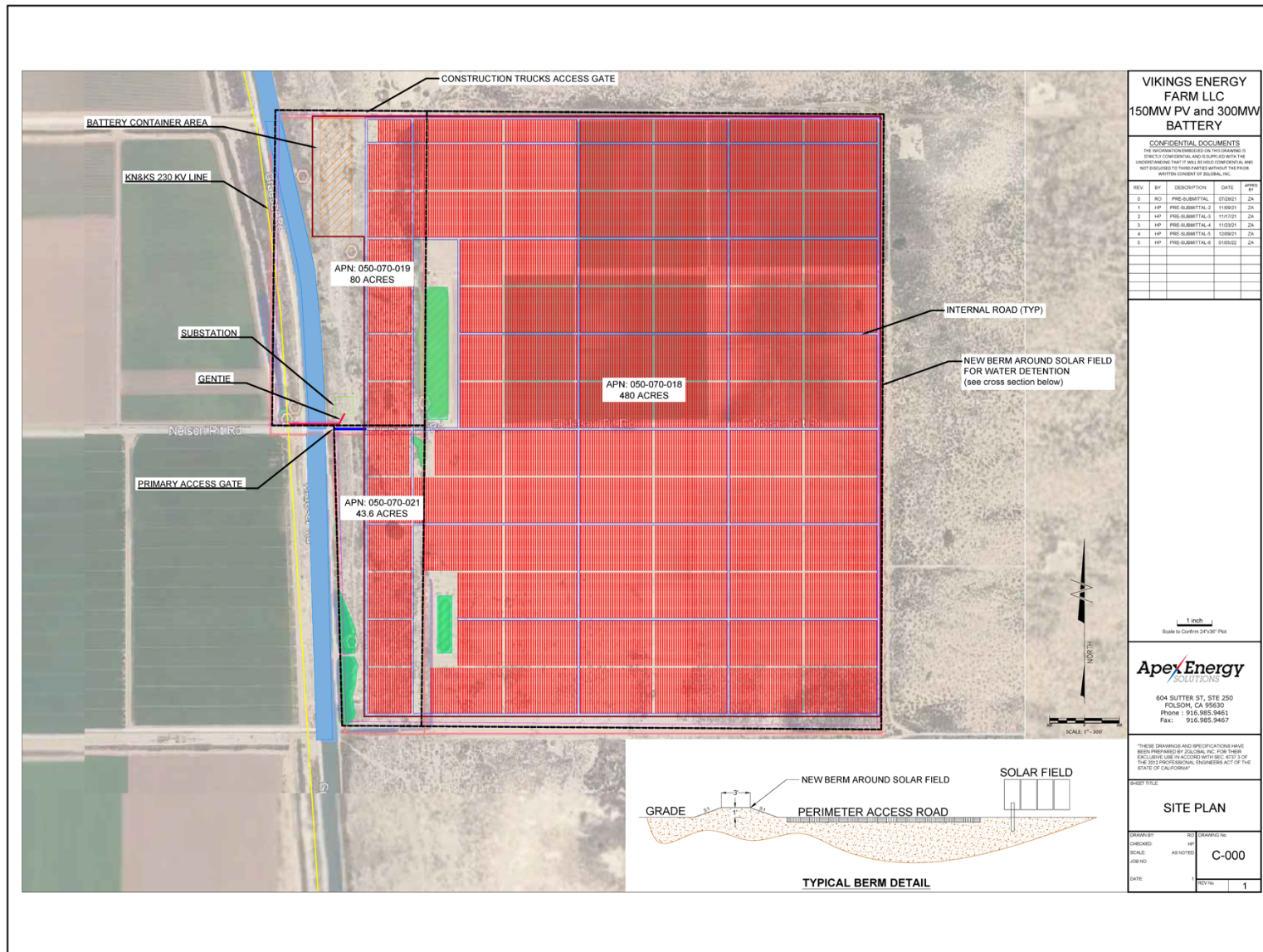


Regional Location
Vikings Solar Energy Generation and Storage Project
Figure 3-1



Source: Maxar, Imperial County Planning & Development Services

Project Location
Vikings Solar Energy Generation and Storage Project
Figure 3-2



Source: Kittelson & Associates 2021

Proposed Site Detailed Site Plan
Vikings Solar Energy Generation Project
Figure 3-3

Battery Energy Storage System (BESS)

As depicted on Figure 3-3, the Project includes a BESS that would be located on the southern boundary of APN 050-070-019. The BESS would be constructed as a multiple structure facility.

Project Substation

The electrical energy produced by the Project would be conducted through a new Project substation constructed near the southern boundary of APN 050-070-019 (See Figure 3-3). This substation would take the delivery of the up to 34.5 kV power from the Project and increase the voltage of the electricity to 230 kV, where it would feed into the interconnection switching station for metering and delivery to the IID 230 kV "KN & KS" Line.

General Plan Land Use and Zoning

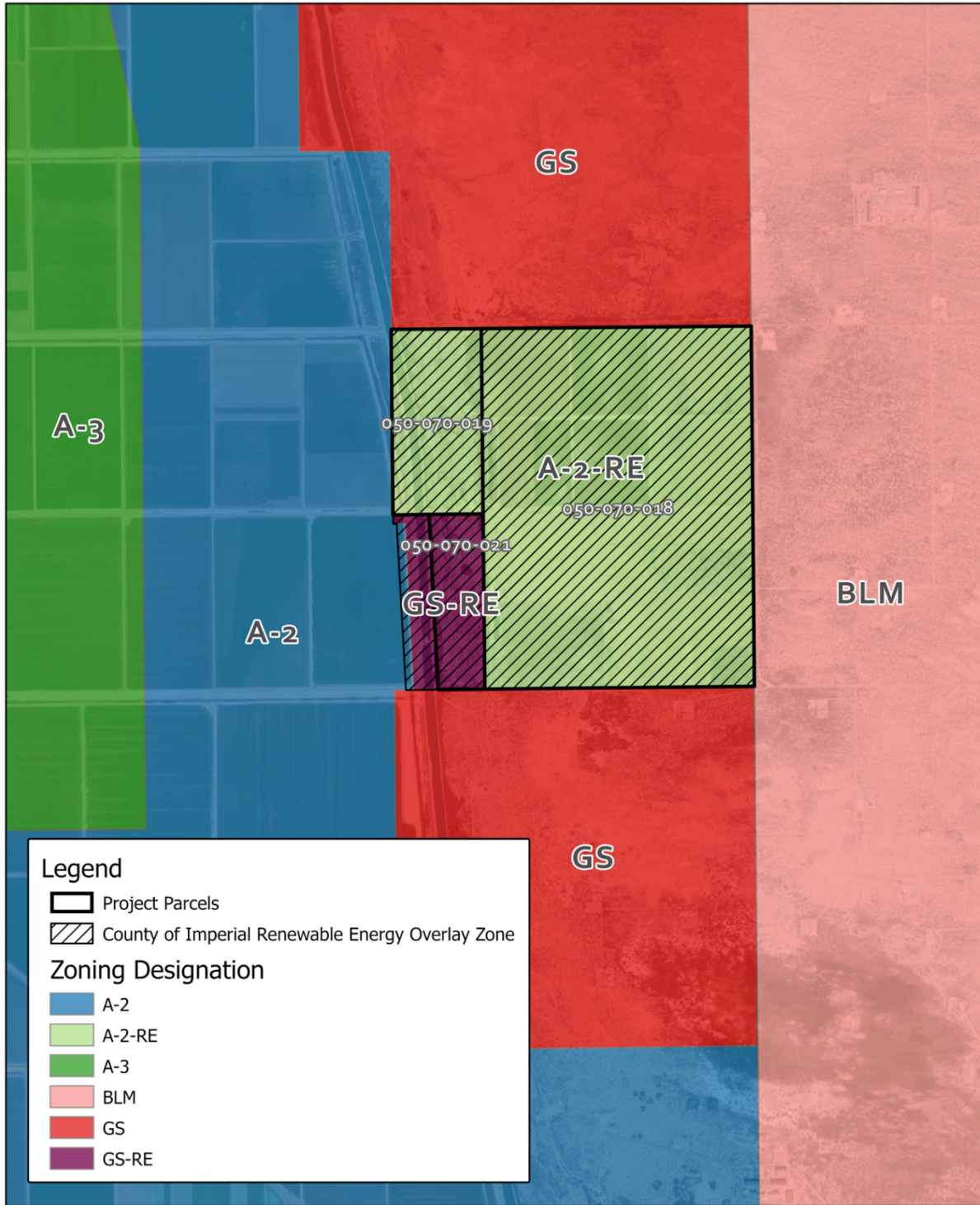
Two of the Project parcels are designated as "Agriculture" in the Imperial County General Plan and are zoned A-2-RE (General Agriculture with a Renewable Energy Overlay-areas) (Table 3-1). These areas are suitable and intended primarily for agricultural uses [limited] and agricultural related compatible uses. Major facilities relating to the generation and transmission of electrical energy are allowable uses within the A-2-RE zone, with the issuance of a Conditional Use Permit (CUP).

The third Project parcel is designated as "Recreation/Open Space" and is zoned GS-RE (Government/Special Public Zone with a Renewable Energy Overlay). These areas allow for the construction, development and operation of governmental facilities and special public facilities. Major facilities relating to the generation and transmission of electrical energy are also allowed within the GS-RE zone, with the issuance of a CUP (Figure 3-4, Existing Zoning).

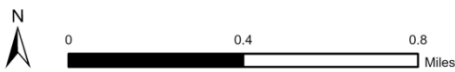
3.2 Project Objectives

The primary objective of the Project is to utilize Imperial County's abundance of available solar energy (sunlight) to generate renewable energy and store that energy on site, consistent with the County General Plan renewable energy objectives. The Vikings Solar Farm, LLC (the Project Applicant) identified the following objectives for the Project:

- Construct and operate a solar energy facility capable of producing up to 150 MW of electricity to help meet the State-mandated renewable portfolio standard (RPS) of providing 50 percent renewable energy by 2030.
- Provide a not to exceed 300 MW BESS, that would accommodate and store the power generated by the Project so that the facility can continue to provide renewable energy during non-daylight hours.



Source: Maxar, Imperial County Planning & Development Services



Existing and Surrounding Zoning Designations
Vikings Solar Energy Generation and Storage Project
Figure 3-4

- Operate a facility at a location that ranks amongst the highest in solar resource potential in the nation.
- Interconnect directly to the IID electrical transmission system.
- Operate a renewable energy facility that does not produce significant noise nor emit any greenhouse gases.
- Help reduce reliance on foreign sources of fuel.
- Supply on-peak power to the electrical grid in California.
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006).
- Provide an investment in California and Imperial County that will create jobs and other economic benefits.

3.3 Project Components

The proposed Project involves the construction of a 150 MW PV solar energy facility with an integrated, not to exceed 300 MW BESS on approximately 604 gross acres of land. Of the total 604 gross acres, approximately 560 acres would be developed with a ground mounted PV solar power generating system, supporting structures, on-site substation, battery storage system, and internal access roads. The Project would employ the use of PV power systems to convert solar energy into electricity using non-reflective technology.

The major components of the facility are PV modules, fixed-frame or horizontal single-axis tracker (HSAT) support structures, and electronic/electrical equipment to convert the electricity from the PV modules from direct current (DC) electricity to alternating current (AC) electricity and transfer the electricity to the new Project substation and ultimately to IID's 230 kV "KN & KS" line. Ancillary equipment includes switch/fuse panels, control and protection equipment, and communications hardware. Additional auxiliary facilities would include lighting and security systems, fire protection, site access and circulation, and the retention basin.

3.3.1 Photovoltaic Panels/Solar Arrays

PV solar cells convert sunlight directly into DC electricity. The process of converting light (photons) to electricity (voltage) in a solid-state process is called the PV effect. A number of individual PV cells are electrically arranged and connected into solar PV modules, sometimes referred to as solar panels. The Project proposes to utilize either thin film or crystalline solar PV technology modules mounted either on fixed frames or HSAT systems.

Fixed Tilt PV Modules

The fixed tilt PV module arrays would be mounted on racks that would be supported by driven piles (Figure 3-5). The depth of the piles would be dependent on the recommendations of the geotechnical report prepared for the Project. The fixed-frame racks would be secured at a fixed tilt of 20 to 30 degrees from horizontal facing a southerly direction. Current Project designs would have individual PV modules, mounted two feet high on a fixed frame, providing a two-foot ground clearance and resulting in the tops of the panels at a maximum of 10 feet above the ground. The fixed PV modules would be arranged in arrays spaced approximately 15 to 25 feet apart (pile-to-pile) to maximize performance and to allow access for panel cleaning (if necessary). These arrays would be separated from each other and the perimeter security fence by up to 20-foot-wide interior roads.



Figure 3-5. Representative Fixed-Tilt PV Trackers

Horizontal Single-Axis Trackers (HSAT)

If HSAT technology is used (Figure 3-6), the PV modules would rotate around the north-south HSAT axis so that the PV modules would continue to face the sun as the sun moves across the sky throughout the day. The PV modules would reach their maximum height (up to nine [9] feet above



Figure 3-6. Representative Horizontal Single-Axis Trackers

the ground, depending on the final design) at both sunrise and sunset, when the HSAT is rotated to point the modules at the rising or setting sun. At noon, or when stowed during high winds, when the HSAT system is rotated so that the PV modules are horizontal, the nominal height would be about six (6) feet above the ground, depending on the final design. The individual PV systems would be arranged in

large arrays by placing them in columns spaced approximately ten feet apart to maximize operational performance and to allow access for panel cleaning and maintenance.

The Project design includes individual HSAT PV modules, each approximately two feet wide by four feet long (depending on the specific PV technology selected), mounted on a frame attached to an HSAT system. These HSAT arrays would be separated from each other and the perimeter security fence by up to 20-foot-wide roads consistent with agency emergency access requirements.

3.3.2 Electrical Power System

Electricity generated by the PV modules would be collected by a DC collection system routed underground in trenches. This DC power would be delivered to one of the pad-mounted inverters in weatherproof enclosures located within the arrays. The inverters would convert the DC power to three-phase AC. The inverters could be connected to AC interconnection facilities which, if needed, would raise the voltage to 34.5 kV, or the interconnection voltage selected by the Project. Underground (for private roads) or overhead collection lines (for public roads) (up to 34.5 kV) would transmit the electricity to the new Project substation.

3.3.3 Battery Energy Storage System (BESS)

The proposed BESS would consist of either lithium ion (Li-ion) or flow batteries. The batteries would either be housed in storage containers or buildings fitted with HVAC and fire suppression systems as necessary, depending on the final selection of battery technology. Inside the housing the batteries will be placed on racks, the orientation of which depends on the type of housing. Underground trenches with conduits will be used to connect the batteries to the control and monitoring systems, and inverters to convert the PV produced DC power to AC power.

The storage capacity of the BESS would not exceed 300 MW. The BESS would be constructed as a multiple structure facility, consisting of up to 20 battery modules at full build out the footprint of which would be up to 450 square feet per module. Each module will house the batteries, mounting racks and associated electrical equipment. Each module will be of a metal frame construction, retrofitted to add insulation, air-conditioning, and fire suppression for battery reliability, with separate rooms for the electronic controls, inverters, and rectifiers. Due to the slightly positive pressure required within each module to ensure functionality of the fire suppression system, the modules will not be vented. Each module will utilize a supply and return air conditioning system; this system has a fresh air (economizer mode) intake system and is also referred to as a closed loop system.

3.3.4 Interconnection Facilities

A new Project substation would be constructed on the southern boundary of APN 050-070-019 (See Figure 3-3). This substation would take the delivery of the up to 34.5 kV power from the Project and increase the voltage of the electricity to 230 kV, where it would feed into the

interconnection switching station for metering and delivery to the IID 230 kV "KN & KS" Line. The substation would include a transformer, circuit breakers, meters, disconnect switches, and microwave or other communication facilities.

A new interconnection switching station would be constructed at the southern boundary of APN 050-070-019, immediately adjacent to the Project substation. The interconnection switching station would include circuit breakers, switches, overhead bus work, protective relay equipment and an electrical control building. This station would operate at 230 kV and be equipped with two circuit breakers, allowing for looping in of the IID 230 kV "KN & KS" Transmission line as well as connection to the Project substation. The Project substation and interconnection switching station would be connected via a single overhead 230 kV, gen-tie line. The gen-tie line would not exceed 120 feet in height. The interconnection switching station would be enclosed within its own fence.

To connect to the Projects' interconnection facilities, the medium voltage power produced by the Project would be conveyed underground, or above ground where necessary, to cross over any sensitive site features. The Projects' interconnection facilities design would meet all necessary utility standards and requirements. As required, surge arrestors would be used to protect facilities and auxiliary equipment from lightning strikes or other disturbances. Distribution from the site would be via an overhead connection.

The proposed improvements would be constructed across the property lines. For this reason, the Project will be conditioned to require the Applicant/Developer to execute and record a "lot tie agreement" which will bind all of the several properties together for the duration of the Project life. The "lot tie agreement" shall be executed and recorded prior to issuance of any building or grading permits.

3.4 Auxiliary Facilities/Improvements

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

3.4.1 Site Security and Fencing

Six-foot high security fencing 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. 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.

3.4.2 Security Lighting System

Project lighting with motion detectors, would be installed at ingress and egress gates and at strategic locations around the facility for security. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships. Project lighting would conform to National Electric Safety Code requirements and all applicable outdoor lighting codes per the local ordinance.

3.4.3 Fire Protection

The Project site is located within the jurisdiction of the Imperial County Fire Department. A minimum of 40,000 gallons of fire water would be maintained across the site and kept filled during operations for on-site fire protection. Portable fire extinguishers would be provided at various locations throughout the solar energy facility site and at the BESS. Both the access and service roads (along the perimeter of the solar energy facility site) would have turnaround areas at any dead-ends to allow clearance for fire trucks per fire department standards (70 feet by 70 feet, and 20-foot-wide access road).

For the battery storage system, air conditioning equipment will be used to maintain safe ambient operating temperature conditions. An effective method for Li-ion battery storage is to use a fire containment and suppression system that would deal with a battery fire event. Such systems contain the fire event and encourage suppression through cooling, isolation, and containment. The Project would incorporate adequate explosion prevention protection as required in NFPA 855 or International Fire Code Chapter 12, where applicable and include 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 (external alarms, plus automatic notification to an Underwriters Laboratory Listed central station and corresponding fire department notification). Historically, water has been recommended as fire suppression because of its ability to cool and limited side effects.

This risk will be mitigated through monitoring and a fire suppression system that includes water and or a suppression agent (e.g., 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.

3.4.4 Site Access and Circulation

The Project site would include one primary access driveway, currently contemplated on East Nelson Pit Road, bisecting the Project site. This driveway would be provided with a minimum of 30-foot double swing gates with "Knox Box" for keyed entry. Internal to the Project site up to 20-foot-wide roads would be provided between the PV arrays. These would be provided as well as

around the perimeter of the Project site inside the six-foot high perimeter security fence. This would provide access to all areas of each site for maintenance and emergency vehicles.

A secondary access driveway would be located at the northwest corner of the Project site, with access provided from Norrish Road.

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

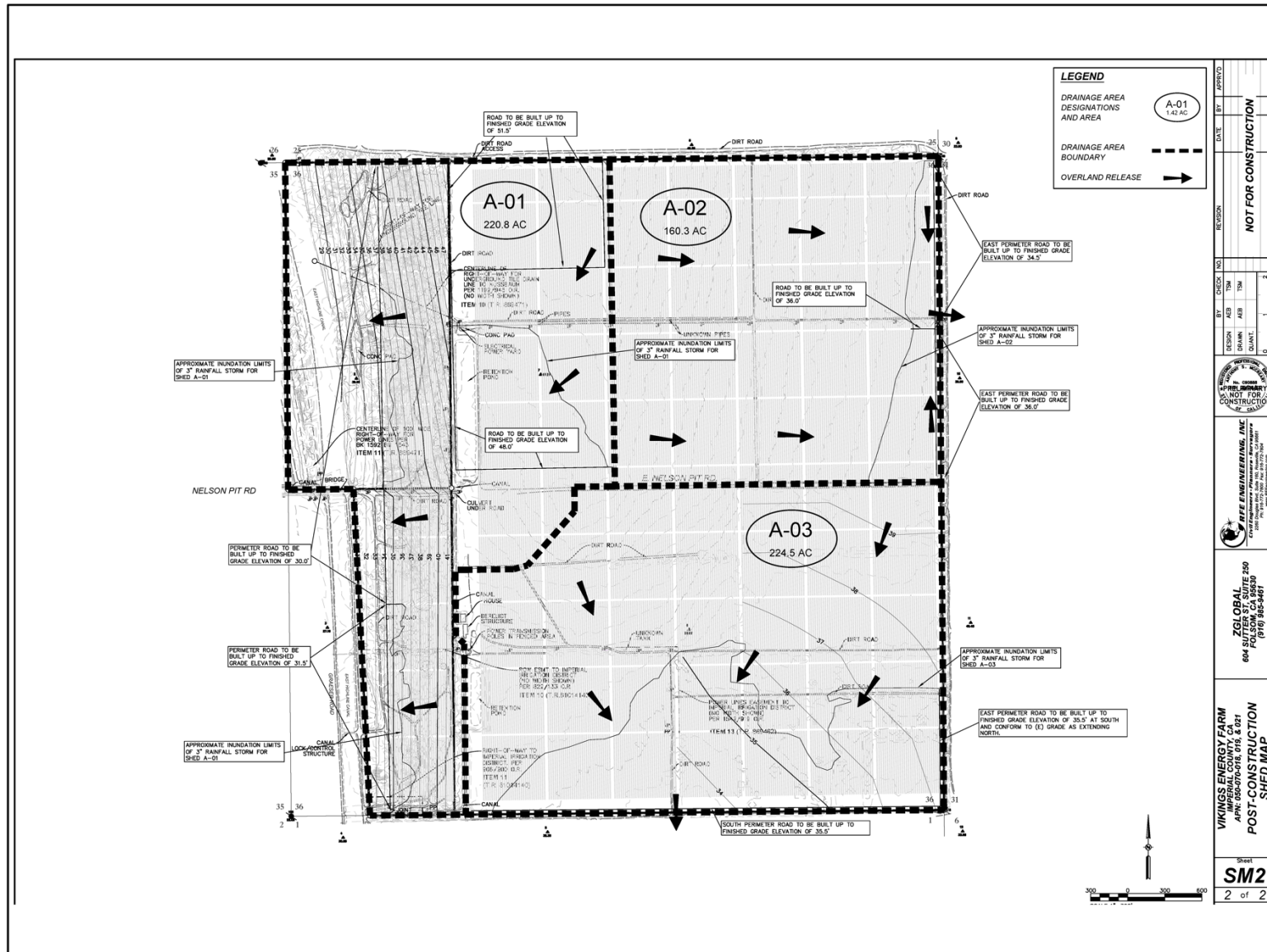
3.4.5 Retention Basins

To retain the total volume of a 3-inch precipitation covering the solar energy facility site with no reduction from infiltration, storm water retention basins would be constructed on the solar energy facility site. These retention basins would be sized to empty within 72 hours (through draining, evaporation, or infiltration, or any combination thereof) in order to provide mosquito abatement. In the unlikely event that conditions prevent removal of accumulated storm water from any of the retention basins within 72 hours, measures would be implemented to control mosquito breeding in the affected basin consistent with the requirements of the Imperial County Health Department, Environmental Health and Consumer Protection Services, Vector Control Program.

There would be three drainage areas post-construction, Areas AO-1, AO-2, and AO-3 (Figure 3-7). The proposed onsite roads will be built up to a finish grade elevation above the existing ground and act as berms to allow onsite ponding and make the project site a “retention basin.”

3.5 Site Operations and Maintenance

Once construction is completed the Project would be remotely controlled. No employees would be based at the Project site. Primary security-related monitoring would be done remotely. Security personnel may conduct unscheduled security visits and would be dispatched to the site in response to a fence breach or other alarm. Site maintenance workers may access the Project site periodically to clean the panels and maintain the equipment and Project area. The public would not have access to the facility. Access to the Project site would be infrequent and limited to authorized personnel.



Source: RFE Engineering, Inc., 2021

Post Construction Drainage Areas
Vikings Solar Energy Generation Project
Figure 3-7

Operational Water Use

Once the Project is operational, water would be required for solar panel washing and fire protection. Periodic washing of the PV modules could be needed to remove dust to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at five (5) AF per washing, with up to two washings per year, for a total of up to 10 AF per year. This water would be water purchased from the IID and delivered to the site via truck. Each washing is expected to take one to two weeks to complete.

Vegetation growing on the site would periodically (approximately every three months) be removed manually and/or treated with herbicides.

3.6 Site Construction

3.6.1 Project Phasing

The Project would be constructed in up to three phases, with the solar PV, the battery energy storage, and the Project substation each substantiating a potential phase. Each phase would be constructed individually on a serial basis, or multiple phases could be constructed concurrently as appropriate to accommodate market demand and Project economics. The construction equipment, materials, and labor involved in building the Project remain similar whether the Project is constructed in single or concurrent phases over time versus over a single full buildout. The buildout of the entire Project at once results in greater intensity of labor and equipment during the construction period.

Construction would be limited to the hours of 7 AM to 7 PM, Monday through Friday, and 9 AM to 5 PM on Saturday, unless the Imperial County Planning and Development Services Department (ICPDSD) Director authorizes otherwise. No construction activities would occur on Sunday or holidays.

It is anticipated that construction activities would start in the second quarter of 2022 and would last approximately 12 months with the Project operations starting in 2023. For purposes of this analysis, it is assumed that all three phases would be constructed during the same 12-month construction (Table 3-2).

The number of on-site construction workers for the solar facilities is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the battery storage facility and the substation is not expected to exceed 100 workers at any one time. If the two components (Solar PV and BESS) were constructed at the same time, the on-site construction workers is not expected to exceed 250 workers at any one time. Onsite parking would be provided for all construction workers.

TABLE 3-2: CONSTRUCTION PHASING

Duration	Month 1	Month 2	Month 3	Month 4	Months 5 - 12	Month 13
	Weeks					
	Construction Phase					
Demolition/Site Preparation	■	■	■			
Grading		■	■	■		
Trenching			■	■		
Interconnection Construction				■	■	
Solar Array /Battery Installation				■	■	■
	Operations Phase					
Operations						■

Source: SWCA, 2022f.

3.6.2 Site Preparation

Site preparation would primarily involve demolition of infrastructure and existing residences, and grubbing and grading of the Project site. Site development would require minimal site grading for the PV panel areas, building pad preparation for the battery containers, underground utility installation, site paving and all weather road surfacing (Landmark Consultants, Inc., 2021; Appendix I).

Dust generated during construction would be controlled by watering and, as necessary, the use of other dust suppression methods and materials accepted by the Imperial County Air Pollution Control District (ICAPCD) or the California Air Resources Board (CARB). A temporary, portable construction supply container would be located at the Project site at the beginning of construction and removed at the end of construction.

3.6.3 System Installation

Construction activities would primarily involve demolition and grubbing; grading of the Project site to establish access roads and pads for electrical equipment (inverters and step-up transformers); trenching for underground electrical collection lines; and the installation of equipment and security fencing. Construction work would be limited to daylight hours, Monday through Friday unless otherwise necessary due to scheduling or deliveries. If construction does occur during the summer months, then starting time may be during early morning darkness for the safety of employees. There will be temporary construction offices during the construction phase, but these would be removed upon completion of the Project. Onsite parking would be provided for all construction workers. All equipment such as PV modules, mounting structures, and BESS systems would be manufactured off-site and delivered to the Project site for installation.

3.6.4 Facility Commissioning

Facility commissioning includes final inspections testing, start-up and certification. Once all of the equipment and components have been installed and inspected, all mechanical and electrical connections would be inspected. The facility would be brought on-line in stages starting at low power levels and methodically increasing the capacity until the facility is operating at full power. Testing would occur at every stage to correlate electricity output to weather conditions.

3.6.5 Existing Utilities

The Project applicant's contractors would implement an underground services alert to identify existing underground utilities and service connections prior to commencing any excavation work. Existing utility locations would be determined by hand-excavated test pits dug at locations determined and approved by the construction manager (also referred to as "potholing"). Service on such lines would not be disrupted until prior approval is received from the construction manager and the service provider.

3.6.6 Construction Traffic

The construction worker traffic is expected to travel to the site from either State Route (SR) -115 east or Highway 8 east, to north on Miller Road and east on East Nelson Pit Road. An estimated two delivery trucks would arrive at the Project site each day during the first few weeks of the construction of the solar generating facility. Since the bridge on the Nelson Pit Road, which is used by construction workers, has a weight capacity of 55,000 to 60,000 pounds, delivery trucks are prohibited from crossing it. Delivery trucks beyond the 60,000 pounds range are expected to use the bridge on Norrish Road to access the Project site through the secondary access gate at the northwest corner of the Project site (See Figure 3-8, Proposed Construction Haul Route).

If any non-public roads are used to access the Project site, the Applicant will obtain written approval from any private owners or other agencies for their use. As a condition of the Project, a copy of such written approval shall be submitted to the Imperial County Department of Public Works (DPW) prior to the approval of grading plans.

3.6.7 Water Supply

Water would be required during for construction for such activities as dust suppression, soil compaction, and grading. Water may also be used at points of ingress/egress to minimize the tracking of dirt off-site onto local roadways from construction vehicles. It is anticipated that water would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. Water would be picked up from a nearby lateral canal and delivered to the construction location by a water truck capable of carrying approximately 4,000 gallons per load. It is estimated that up to 275 acre-feet (AF) of water would be needed over the expected construction period. The actual amount of water required to be brought on site will vary depending upon site conditions such as wind speed, direction, and the amount and timing of rainfall.



Source: Kittelson & Associates 2022

Proposed Construction Haul Route
Vikings Solar Energy Generation Project
Figure 3-8

Bottled water would be provided to the construction workers. Additionally, on-site restroom facilities (temporary sanitation facilities) for the construction workers would be provided by portable units to be serviced by licensed providers; no connection to a public sewer system is required for Project construction, and therefore, water for such purposes is not required.

3.6.8 Storm Water

Applicable local, state, and federal requirements and best management practices (BMPs) would be implemented during the construction phase. Consistent with the County's Code of Ordinances (Title 9, Division 8, Chapter 11 Grading Regulations) and with guidelines provided in the California Stormwater Quality Association's Best Management Practice Handbook, BMPs would be implemented, including preparation of a Stormwater Pollution Prevention Plan (SWPPP) including soil erosion and sedimentation controls to reduce the potential for erosion and to minimize effects on stormwater quality. Stabilized construction entrances and exits would be installed at the entrances to each site to reduce the tracking of sediment onto adjacent public roadways.

Additionally, site preparation would occur in conformance with ICAPCD rules for dust control.

3.6.9 Dust Control

Fugitive dust would be controlled during construction as required by ICAPCD Regulation VIII. A Construction Dust Control Plan would be prepared in conformance with ICAPCD requirements to address construction and earthmoving activities, track-out, open areas and unpaved roads.

3.7 Project Features and Best Management Practices

The following sections describe standard project features and best management practices that would be applied during construction and long-term operation of the Project to maintain safety and minimize or avoid environmental impacts.

3.7.1 Spill Prevention and Containment

Spill prevention and containment for construction and operation of the Project will adhere to the Environmental Protection Agency's guidance on Spill Prevention Control and Countermeasures.

3.7.2 Solid Waste Management

Management of these wastes would be the responsibility of the construction contractor(s). Typical management practices required for non-hazardous waste management include recycling in compliance with state and County mandates, proper storage of waste and debris to prevent wind dispersion, and weekly pickup and transport of waste to local Class III landfills.

Construction related waste would be transported to a local landfill authorized to receive this waste for disposal. Portable toilets would be located on-site during construction and sanitary waste would be removed from the site by a local contractor.

Small quantities of hazardous wastes would be generated over the course of construction. These may include paint, spent solvents, and spent welding materials, spent oil filters and used oils from equipment maintenance, rags, or other cleanup materials.

All hazardous wastes generated during facility construction and operation would be handled and disposed of in accordance with applicable laws, ordinances, regulations, and standards. Any hazardous wastes generated during construction would be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area located on site. The accumulated waste would be delivered to an authorized waste management facility. Hazardous wastes would be recycled or managed and disposed of properly in a licensed Class I waste disposal facility authorized to accept the waste.

3.7.3 Inert Solids

Inert solid wastes resulting from construction activities may include recyclable items such as paper, cardboard, solid concrete and block, metals, wire, glass, type 1-4 plastics, drywall, wood, and lubricating oils. Non-recyclable items include insulation, other plastics, food waste, vinyl flooring and base, carpeting, paint containers, packing materials, and other construction wastes. A Construction Waste Management Plan will be prepared for review by the County. Consistent with local regulations and the California Green Building Code, the Plan would provide for diversion of a minimum of 50 percent of construction waste from landfills.

Chemical storage tanks (if any) would be designed and installed to meet applicable local and state regulations. Any wastes classified as hazardous such as solvents, degreasing agents, concrete curing compounds, paints, adhesives, chemicals, or chemical containers will be stored (in an approved storage facility/shed/structure) and disposed of as required by local and state regulations. Material quantities of hazardous wastes are not expected.

No municipal solid waste or hazardous waste is expected to be generated during normal operations. Sanitary waste generated during Project maintenance operations would be handled by bringing portable toilets to the Project site, with waste removed periodically by a local contractor.

3.8 Decommissioning and Reclamation

The projected life of the Vikings Solar Energy and Battery Storage Project is 30 years. At the end of the Project's operational term, the Project proponent may determine that the Project should be decommissioned and deconstructed, or it may seek an extension of the CUP. Because the solar BESS's supporting equipment would sit on the surface of the land when they are removed after the Project's lifetime the land would be largely unaltered from its natural state. The Project proponent

would work with County of Imperial to put an agreement in place that would ensure decommissioning of the Project after its productive lifetime. The Project would use BMPs to ensure the collection and recycling of PV modules and batteries and minimize the potential for such materials to be disposed of as municipal waste.

Prior to issuance of the initial grading permit for the Project, a Site Reclamation Plan in conformance with County of Imperial requirements would be prepared for review and approval by the ICPDSD. This plan would be implemented at the end of power operations and would describe the proposed equipment dismantling, removal and site restoration program, in conformance with County requirements. Decommissioning and reclamation may include: 1) packaging PV modules and batteries for removal and recycling or otherwise ensuring removal and disposal in a permitted facility; 2) removing ancillary facilities; and 3) reclamation, re-vegetation, restoration, and soil stabilization to return the site to pre-Project/agricultural conditions.

The PV modules are expected to still have useful life and would still be capable of producing electricity; these would be marketed for resale. Material and equipment such as the racking structures and mechanical assemblies would be recycled. The inverters and transformer(s) would also be reused or recycled. The concrete equipment pads would be crushed and recycled. Any underground conduit and wire would be removed by uncovering the trenches and backfilling when done. The remaining balance of material and/or waste generated from the Project would either be recycled as appropriate for the type of material or disposed of at the local transfer station and/or landfill facility.

The Project parcels would be restored to a condition for future agricultural and public and government uses.

3.9 Permit Requirements

Table 3-3 provides a list of required approvals and permits.

TABLE 3-3. REQUIRED APPROVALS AND PERMITS

Jurisdiction Level	Permit, Approval or Report	Agency	Purpose
State	Construction Stormwater General Permit (Order No. 2009-0009-Department of Water Quality as amended). Serves as a National Pollutant Discharge Elimination System (NPDES) permit in compliance with §402 of the Clean Water Act.	Regional Water Quality Control Board (RWQCB), Region 7	Regulates discharges of storm water associated with construction activities that disturb more than 1 acre of land. Notice of Intent (NOI), development of SWPPP required under Section 401. Proof of compliance with the Construction Stormwater General Permit is required prior

TABLE 3-3. REQUIRED APPROVALS AND PERMITS

Jurisdiction Level	Permit, Approval or Report	Agency	Purpose
			to obtaining a grading or building permit.
State	Transportation Permit for oversized/overweight vehicles	Caltrans District 11	Required for oversized / overweight vehicles.
State	Encroachment Permit	Caltrans, District 11	Required for any work that takes place within Caltrans right-of-way (R/W).
Local	Encroachment Permit	IID	Required for encroachment of IID facilities.
Local	CUP (#20-0025)	ICPDSD	Required for development of the Project.
Local	Authority to Construct, Permit to Operate, Permit for Alteration/ Modification, Emission Reduction Credits, Rule 310 and Rule 403 Permit (Fugitive Dust)	ICAPCD	Authority to Construct - required prior to constructing, erecting, installing, modifying, or replacing any article, machine, equipment or contrivance, the use of which may emit or control air contaminants. Permit to Operate – required prior to operation of any article, machine, equipment, or other contrivance that emits air contaminants.
Local	Grading Permit	ICPDSD / Imperial County DPW	Excavation or earthwork that involves over 2 feet in depth and/or fills over 1 foot in depth.
Local	Traffic Control Plan	Imperial County DPW	Traffic management for lane closures during construction.
Local	Encroachment Permit	Imperial County DPW	Required for any activity/work within Imperial County rights-of-way. ⁽¹⁾
Local	Transportation Permits	Imperial County DPW	Required for the transportation of oversized loads traveling on Imperial County roads.

⁽¹⁾ May include installation of stabilized construction entrances, primary/secondary access driveways, site fence installation, lash underground/overhead electrical crossings, road repairs, bridge removal/ replacement, road dust mitigation practices and/or improvements, temporary traffic control, or any other road improvements.

3.10 Intended Use of the EIR

In compliance with the California Environmental Quality Act (CEQA), this Project EIR has been prepared to analyze potential environmental impacts that may result from implementation of the proposed Project. This Project EIR also identifies feasible mitigation measures and/or alternatives that would minimize or eliminate the potential significant impacts associated with the proposed Project. Lead agencies, such as the County, are charged with the duty to substantially lessen or avoid significant environmental effects where feasible (CEQA Guidelines Sections 15002[a][3] and 10 15021[a][2]). Where a Lead Agency identifies unavoidable adverse environmental effects of a proposed Project, CEQA Guidelines Section 15093 authorizes the agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed Project against its unavoidable adverse environmental effects when determining whether to approve the Project. If the specific economic, legal, social, technological, or other benefits outweigh the unavoidable adverse environmental effects, these effects may be deemed acceptable by the agency as substantiated in a statement of overriding considerations.

This Project EIR will serve as an informational document for the County, acting as Lead Agency, when considering approval of the proposed Project. This Project EIR serves as a fact-finding tool, allowing residents, property owners, agency staff, and decision-makers an opportunity to collectively review and evaluate the potentially significant environmental impacts of the proposed Project and the ways in which those impacts could be reduced to less-than-significant levels, either through the imposition of mitigation measures or adoption of all, or portions, of recommended alternatives. This Project EIR is intended to provide decision-makers and the public with information that enables informed consideration of the potential environmental consequences of the proposed Project.

4.0 ENVIRONMENTAL ANALYSIS

This chapter evaluates environmental impacts that would result from the construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project (Project or proposed Project) which has been proposed by Vikings Energy Farm, LLC (Vikings or the Applicant) and alternatives to the Project. The chapter includes sections for each of the following resource areas:

- | | |
|-------------------------------------|----------------------------------|
| 4.1 Aesthetics | 4.10 Hydrology/Water Quality |
| 4.2 Agricultural and Forestry | 4.11 Land Use and Planning |
| 4.3 Air Quality | 4.12 Mineral Resources |
| 4.4 Biological Resources | 4.13 Noise |
| 4.5 Cultural Resources | 4.14 Public Services |
| 4.6 Energy | 4.15 Transportation and Traffic |
| 4.7 Geology and Soils | 4.16 Tribal Cultural Resources |
| 4.8 Greenhouse Gas Emissions | 4.17 Utilities & Service Systems |
| 4.9 Hazards and Hazardous Materials | |

Resource Area Format

Each resource area section is organized under the following headings:

- Environmental Setting;
- Regulatory Setting;
- Impact Analysis;
- Mitigation Measures; and
- Cumulative Effects.

Information contained under each heading is described below.

Environmental Setting

Each resource area section contains a discussion of the environmental setting (the existing environmental conditions in the vicinity of the entire proposed Project [Project site]) and identifies the baseline physical conditions by which the significance of the Project's environmental impacts will be assessed. The baseline physical conditions for the proposed Project are the existing environmental conditions at the Project site at the time of the publication of the Notice of Preparation (NOP) (May 2021). The discussion of the environmental setting in each resource area section

contains information necessary to understand the potential impacts of the Project as well as alternatives to the Project (California Environmental Quality Act [CEQA] Guidelines §15125(a)).

Regulatory Setting

Laws, ordinances, regulations, standards, and policies applicable to the Project and resource areas are discussed in the regulatory setting sections for each resource area. Laws and regulations may also identify permits, reviews and approvals necessary for authorization or evaluation and require agency consultation.

Impact Analysis

A discussion of environmental impacts and mitigation measures for the Project is presented for each environmental resource area, as applicable.

Significance Thresholds

Significance thresholds serve as a benchmark for determining if the Project would result in significant impacts when evaluated against the baseline conditions established in the environmental setting and regulatory setting sections for each resource area. The significance criteria used are from the checklist presented in the Appendix G of the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, Sections 1500015387).

Environmental Impacts

The impacts analyses presented in this chapter evaluate impacts that may occur from the potential development of the Vikings Solar Energy Generation and Storage Project. The discussion evaluates the significance of impacts, identifies mitigation measure(s) for significant impacts, and provides a determination of significance after mitigation. The analysis also evaluates additional impacts that could result from implementation of the mitigation measures, if any.

Mitigation Measures

This section provides the text of mitigation measures specific to the resource area that would be implemented to reduce significant impacts of the Project.

Terminology

The following terminology is used in this Draft Environmental Impact Report (EIR) to denote the significance of the Project's environmental impacts:

- **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 Effect** on the environment is defined in CEQA Section 21068 as one that would cause “a substantial, or potentially substantial, adverse change in the environment”, which includes any of the physical conditions within the area affected by the project as they exist at the time the notice of preparation is published.” 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 Section 15093, explaining why the lead agency would proceed with the project in spite of the potential for significant impacts.

Approach to the Cumulative Impact Analysis

CEQA Guidelines, Section 15130 requires that EIRs include an analysis of the cumulative impacts to determine if the project’s effect is considered cumulatively considerable. As defined by CEQA Guidelines, Section 15065(a)(3), “...‘Cumulatively considerable’ 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...” Section 15130(b)(1) goes on to identify two approaches for performing a cumulative analysis: (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 local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. The cumulative analysis for the proposed Project utilized the list approach. According to Section 15130(b)(2), when using a list, it is important to consider the nature of each environmental resource being examined, the location of the project, and its type. In keeping with these provisions, a list of cumulative projects was developed and includes projects known at the time of release of the NOP of the Draft EIR, as well as additional projects that have been proposed since the NOP date. Table 6-1 lists the cumulative projects, the locations of which are shown on Figure 6-1.

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4.1 Aesthetics

This section addresses potential impacts to aesthetics and visual resources from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the Project, as applicable.

Information used in preparing this section and in the evaluation of potential aesthetic impacts was derived, in part, from the *Visual Resource Assessment for the Vikings Solar Energy Storage Project* prepared by SWCA which is provided as Appendix D this Draft Environmental Impact Report (EIR) (SWCA, 2022a).

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from regulatory agencies and the public. No issues related to aesthetics were raised during the scoping period.

4.1.1. Environmental Setting

Regional Setting

The Project site is located approximately 5.5 miles east of Holtville at the intersection of Graeser Road and East Nelson Pit Road in Imperial County, California. Geographically, the Project site is located within the lower Colorado River Sonoran Desert Region in the east central portion of Imperial County. A network of smooth, light grey to dark grey, paved roads; textured, light tan to dark tan, dirt access roads; and associated road signage is present throughout the entire viewshed. This includes the heavily traveled Evan Hewes Highway (also known as County Route S80 and State Route (SR)-115 in this area) and Interstate (I)-8, and lightly traveled local roads. The roads contribute contrast with the existing agricultural fields (SWCA, 2022a). The Holtville Airport is located approximately 1.6 miles north of the Project site.

Existing Visual Character

Within and adjacent to the west of the Project site lies the East Highline Canal that runs from the All-American Canal in the south to just south of the Niland Marina in the north. The overall character of the immediate landscape is agricultural to the west and natural open space to the north, east, and south. The Project vicinity is characterized by open and vast views with flat to undulating topography. A mixed semi-desert landscape is present to the north, east, and south; smooth dirt and soft sand dunes that lead to distant mountain forms are present to the north and east; and agricultural cropland dominates the landscape to the west. The most notable natural features in the landscape are the textured dirt and soft, light tan, scenic sand dunes leading to

mountain ranges in the background. The dark grey, subdued formations of the Chocolate Mountains approximately 25 miles to the north of the Project vicinity are approximately 2,000 feet above mean sea level (AMSL) and are visible along the horizon; other portions of the mountain range are not prominent in the landscape given their distance from the Project vicinity. The Algodones Dunes, including the Imperial Sand Dunes Recreation Area and North Algodones Dunes Wilderness Area, are approximately 12 miles east of the Project area. The dunes consist of gradually sloping sand dune formations that reach up to 400 feet AMSL (SWCA, 2022a).

Agricultural development to the west of the Project site largely contributes to the human-made changes in the natural landscape, as have surrounding roads and transmission lines with scattered rural residences and agricultural buildings located on subdivided land. Vegetation in the geometric agricultural fields is defined by distinct edges of exposed soils, with consistent groupings of bright yellow to dark green colors and a smooth, carpet-like texture. The vegetation to the north, east, and south is consistent and includes localized, isolated areas of globular shaped trees with pale green foliage and grey with woody trunks and branches ranging from 20 to 50 feet in height, with smooth, light khaki to dark brown, low-profile desert shrubs near residential developments throughout the landscape. The existing human-made features in the landscape are primarily geometric and consist of vertical, continuous, galvanized, grey to silver (metallic) and light brown to dark brown (woodtone) transmission line infrastructure; rectangular, constructed agricultural buildings; stacked crop bales covered with bright white sheeting; and blocky, bright yellow to dark green agricultural plots. Additionally, geometric forms (aboveground pipelines) from the geothermal energy facilities are visible to the east and south of the Project site (SWCA, 2022a).

Local Character

The Project site consists of previously graded, agricultural land and undeveloped Sonoran Desert scrub. The Project site elevation ranges from 25 to 45 feet AMSL (Landmark Consultants, 2021).

Scenic Highways

Per the List of Officially Designated State Scenic Highways from Caltrans, SR-78 is not a designated scenic route. The nearest State designated Scenic Highways is SR--111 near Bombay Beach, which is approximately 46 miles northeast of the Project site.

Scenic Vistas

There are no Caltrans designated vista points in the Project vicinity. The nearest vista point, Inspiration Point, is approximately 103 miles west of the Project site.

Principal Viewpoints

Three key observation points (KOPs) were identified to assess the level of visual change resulting from the Project on the existing environment (Figure 4.1-1). The locations of the three (3) KOPs

are KOP 1) the intersection of I-8 and Evan Hewes Highway (representing I-8 travelers south of the Project site), KOP 2) the intersection of Norrish Road and Highline Road (representing local road travelers and isolated residences northwest of the Project site), and KOP 3) the intersection of Evan Hewes Highway and East Nelson Pit Road (representing Evan Hewes Highway travelers east of the Project site) (SWCA, 2022a). Photos and photo simulations of the Project site from each KOP are presented in Figures 4.1-2, 4.1-3 and 4.1-4.

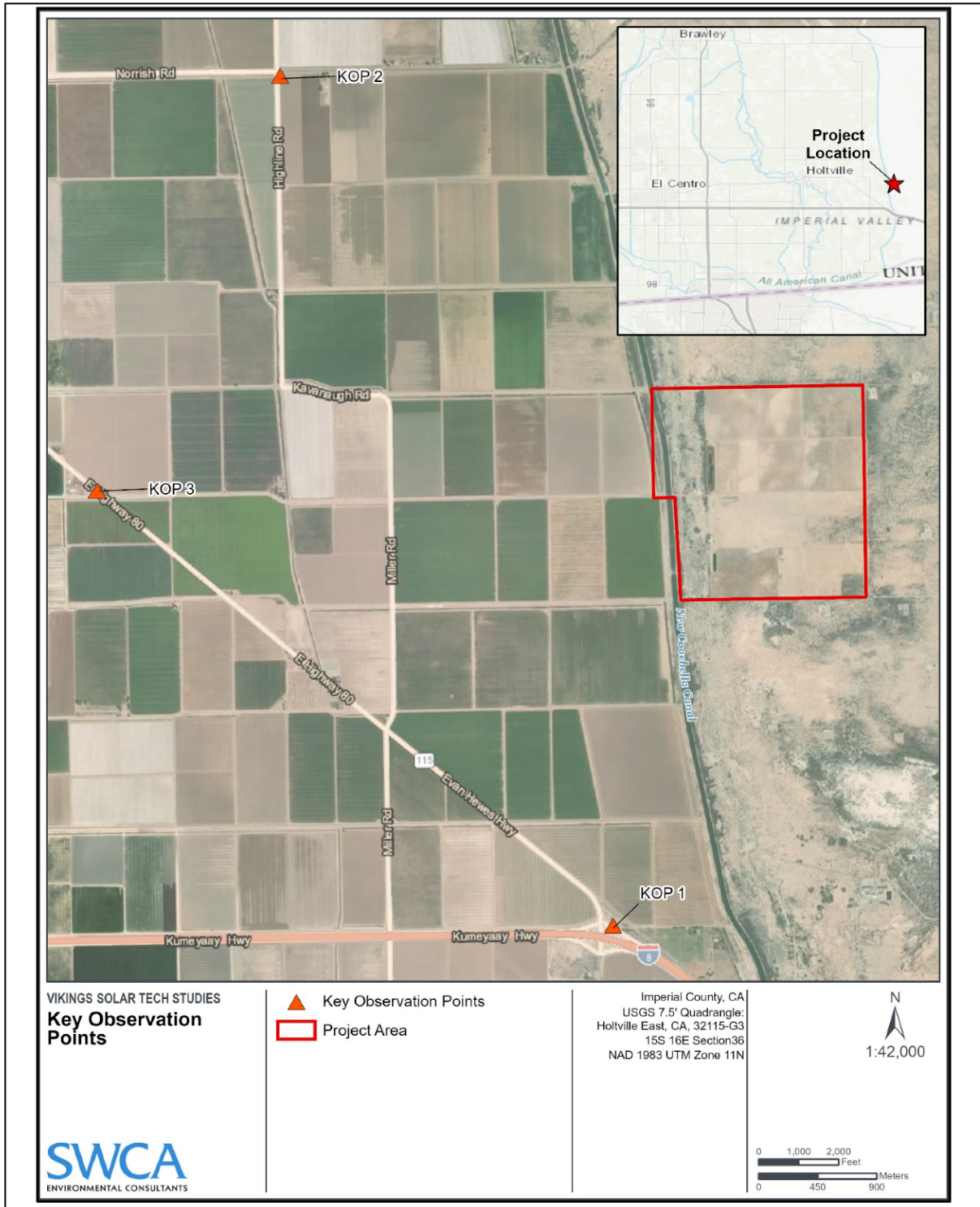
Key Observation Point (KOP) 1: Interstate 8 and Evan Hewes Highway, Looking East

This KOP represents the view of a passenger in a vehicle traveling northwest on Evan Hewes Highway, departing the I-8 overpass, southwest of the Project site (see Figure 4.1-2). The view from this KOP is characterized by broad, panoramic views of flat, consistent, and horizontal terrain with isolated areas of light khaki to light brown desert shrubs and clustered, low, rounded, globular, moderately tall, green to dark green trees. In the foreground area, distinct agricultural plots are defined by distinct edges of exposed soils and yellow to light green vegetation. Transmission lines made of light brown to dark brown, vertically standing wood poles are consistent horizontally across the landscape. In the background, distant views of the vertical, galvanized metal transmission line and slow, gradual rise in elevation lead to dark-colored landforms.

The transmission lines and large, white, stacked crop bales in the midground draw the eye and are a focus of attention from this KOP location due to the dominance and prominence of the features within the broad, panoramic landscape and against the pale blue sky. The Project site would be approximately 1.5 miles south of this KOP location. Based on the inferior viewer perspective, the overall distance from the KOP, and the location of the Project site in relation to the viewer, the Project would not be perceivable from this KOP. The presence of existing vegetation and agricultural improvements and the prominence of the existing transmission line structures and stacked crop bales in the foreground and midground would be the focus of viewer attention. The Gen-tie line would be perceivable, but would be similar in form, line, color, and texture to the existing transmission line infrastructure in the immediate area. Therefore, it is anticipated that there would be no perceived visual contrast created by the Project within the existing landscape from this KOP (SWCA, 2022a).

KOP 2: Norrish Road and Highline Road, Looking Southeast

This KOP represents the view from local residences and vehicular traffic traveling south on Highline Road, northwest of the Project site (see Figure 4.1-3). Views of the immediate foreground from this KOP are represented by perpendicular roads with light brown, uniform, rectangular, and white residential and agricultural buildings; light to dark grey, concave, concrete irrigation canals; smooth brown to dark brown, vertical, wood and galvanized metal transmission lines; and fine, light tan soils intermixed with dark tan shrubs. The midground of the KOP includes



Source: SWCA 2021

KOP Locations
Vikings Solar Energy Generation and Storage Project
Figure 4.1-1



KOP 1: Interstate 8 and Evens Hewes Highway looking northeast - Existing Condition



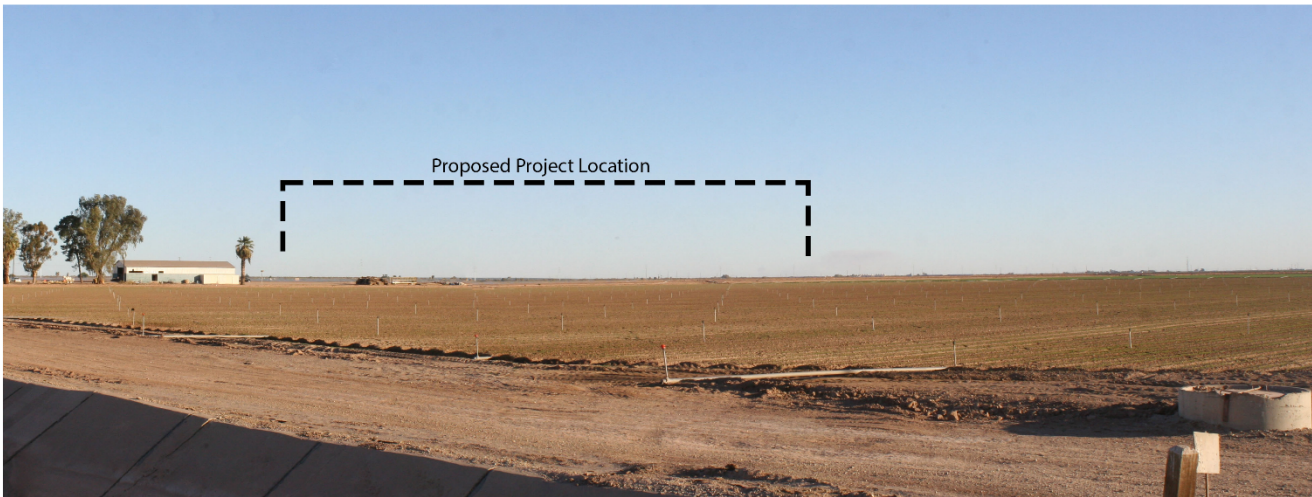
KOP 1: Interstate 8 and Evens Hewes Highway looking northeast - Simulated Condition

Source: SWCA 2021

Existing Conditions & Visual Simulation - KOP 1
Vikings Solar Energy Generation Project
Figure 4.1-2



KOP 2: Highline Road and Norrish Road looking southeast - Existing Condition



KOP 2: Highline Road and Norrish Road looking southeast - Simulated Condition

Source: SWCA 2021

Existing Conditions & Visual Simulation - KOP 2
Vikings Solar Energy Generation Project
Figure 4.1-3



KOP 3: Evans Hewes Highway and Nelson Pit Road looking east - Existing Condition



KOP 3: Evans Hewes Highway and Nelson Pit Road looking east - Simulated Condition

Source: SWCA 2021

Existing Conditions & Visual Simulation - KOP 3
Vikings Solar Energy Generation Project
Figure 4.1-4

geometric agricultural plots with light bright green to dark green vegetation divided by light tan access roads consisting of farming equipment. In the background, distant views of concentrated, upright trees are intermixed with the consistent, horizontal lines of low vegetation in agricultural plots; tall, vertical, galvanized metal transmission lines are visible and consistent across the horizon. The human-made, uniform, rectangular building structures in the foreground draw the eye and are a focus of attention from this KOP because of their prominence against the broad, panoramic landscape and the pale blue sky.

The Project site is approximately 2.3 miles southeast of this KOP location. Based on the inferior viewer perspective and the presence of existing features within the immediate foreground area that dominate the viewshed and obstruct views towards the Project, the Project would not be perceivable from this KOP. In the midground area of the KOP, the irrigated agricultural fields influence visibility of Project components due to the similar color characteristics; the light to dark grey tones blend in with the Project features. Therefore, it is anticipated that there would be no perceived visual contrast created by the Project within the existing landscape from this KOP (SWCA, 2022a).

KOP 3: Evan Hewes Highway and East Nelson Pit Road

This KOP represents the view of a passenger in a vehicle traveling southeast on Evan Hewes Highway west of the Project site (see Figure 4.1-4). Views from this KOP are characterized by broad, panoramic views of flat, consistent, and horizontal terrain with isolated areas of light khaki to light brown desert shrubs and clustered, low, rounded, globular, moderately tall, green to dark green trees. In the immediate foreground, existing upright, geometric roadway signage is prominent within the vast, horizontal landscape. Distinct edges of exposed soft light tan soils and vegetation along access roads and a concave canal are prominent in the foreground. In the background, distant views of clustered trees with consistent agriculture fields visible across the horizon the lead to dark colored mountain landforms in the distance. The light tan horizontal access road and parallel canal in the foreground draw the eye to the isolated residence in the midground and are a focus of attention from this location because of their prominence in the broad, panoramic landscape.

The Project site would be approximately 2.6 miles east of this KOP location. Based on the inferior viewer perspective, the location of the Project in relation to the viewer, the overall distance from the KOP, the presence of existing vegetation, and the isolated landforms in the background, the Project would not be perceivable from this KOP. From KOP 3, much of the Project site is obscured by existing vegetation, residential and agricultural structures, and existing transmission lines. Therefore, it is anticipated that there would be no perceived visual contrast created by the Project within the existing landscape from this KOP (SWCA, 2022a).

Light Environment

The Project site currently contains minimal lighting (from the existing on-site residential structure). The main source of nighttime lighting is from vehicle lights from travelers along local roadways, Evans Hewes Highway and I-8. These lighting sources produce a minimum to moderate amount of nighttime lighting in the project area. When light is not sufficiently screened and spills over into areas outside of a particular development area the effect is called “light trespassing.”

Solar Panel Glare Potential

A solar panel comprises numerous solar cells. A solar cell differs from a typical reflective surface in that its surface is microscopically irregular and designed to trap the rays of sunlight for the purposes of energy production. The intent of solar technology is to increase efficiency by absorbing as much light as possible (which further reduces reflection and glare). A common misconception about solar photovoltaic (PV) panels is that they inherently cause or create “too much” glare, posing a nuisance to neighbors and a safety risk for pilots. In certain situations, the glass surfaces of solar PV systems can produce glint (a momentary flash of bright light) and glare (a reflection of bright light for a longer duration); however, light absorption, rather than reflection, is central to the function of a solar PV panel so that it may absorb solar radiation and convert it to electricity. Solar PV panels are constructed of dark-colored (usually blue or black) materials and are covered with anti-reflective coatings. Modern PV panels reflect as little as two percent of incoming sunlight, which is similar to water and less than soil and wood shingles (Palmer and Laurent, 2014).

Despite their low potential to create glare, PV panels can reflect sunlight skyward toward the light source, creating a potential glare impact for aircraft in the area. The effect is similar to what a motorist experiences when the sun is low in the sky and the car passes between the sun and a glass-fronted building that has been treated with an anti-reflective coating. If the motorist is heading directly toward the building, the glare would be in the motorist’s eyes. Otherwise, the motorist would have to rotate his or her head to observe the glare off to the side. Because aircraft typically travel at a higher rate of speed than vehicles, the effect is momentary, lasting only as long as the angle between the sun, water body, and aircraft is maintained. Unless an aircraft were descending at an angle sloped directly at the solar array with the sun directly behind the aircraft, any glare that might occur from solar panels would be below the pilot’s horizon. In the project area, effects on eastbound motorists would likely be greatest in the early evening hours, when the sun is at its lowest arc in the western horizon.

4.1.2. Regulatory Setting

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

Federal

The Bureau of Land Management (BLM) uses a Visual Resources Inventory (VRI) class system as a baseline description of the existing scenic values in the environment that does not provide objectives as to how the land should be used or managed. The BLM's process is an industry standard and is often applied to non-BLM visual assessments to provide Project proponents and authorizing agencies a consistent and translatable methodology for understanding visual impacts from proposed projects.

Visual resource inventory classes are assigned through the inventory process. Class I is assigned to those areas where a management decision has been made previously to maintain a natural landscape. This includes areas such as national wilderness areas, the wild section of national wild and scenic rivers, and other congressionally and administratively designated areas where decisions have been made to preserve a natural landscape. Classes II, III, and IV are assigned based on a combination of scenic quality, sensitivity level, and distance zones. This is accomplished by combining the three overlays for scenic quality, sensitivity levels, and distance zones and using the guidelines to assign the proper class. Inventory classes are informational in nature and provide the basis for considering visual values in the Resource Management Plan process. They do not establish management direction and should not be used as a basis for constraining or limiting surface disturbing activities.

State

The 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

The Project site is under the County of Imperial jurisdiction and subject to the County Development Code and General Plan guidelines. Section 92407.01 of the Development Code includes development criteria for facilities located within one-half-mile of a designated scenic highway, however there are no designated scenic highways within one-half-mile of the Project site. The County General Plan does not specifically contain a visual element; however, it addresses related topics in the following General Plan Sections:

- Land Use Element;
- Circulation & Scenic Highways Element;
- Conservation and Open Space Element; and
- Renewable Energy and Transmission Element.

In addition, the Renewable Energy and Transmission Element (Imperial County, 2015b) includes specific goals, policies and standards for renewable energy and specifically solar projects. Table 4.1-1 provides an analysis of the Project's consistency with the Conservation and Open Space, Land Use and Circulation and Scenic Highway Elements (Imperial County, 2008, 2015, and 2016).

TABLE 4.1-1: CONSISTENCY WITH APPLICABLE GENERAL PLAN AESTHETICS GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
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.	Yes	The Project would result in changes to the visual character of the Project site, which is currently characterized as an agricultural landscape. As described in Section 4.1.3, the Project site does not contain high levels of visual character or quality; therefore, the Project would not result in a significant deterioration in the visual character of the Project site or Project vicinity.
Objective 5.1: Encourage the preservation and enhancement of the natural beauty of the desert and mountain landscape.	Yes	The Project site is located within an agricultural portion of the County and generally avoids both desert and mountain landscapes.
Goal 7: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.	Yes	See discussion above regarding Goal 5.
Land Use Element		
Goal 3: Achieve balanced economic and residential growth while preserving the unique natural, scenic, and agricultural resources of Imperial County.	Yes	See discussion below regarding Objective 4.3.
Objective 3.4: Protect/improve the aesthetics of Imperial County and its communities.	Yes	The Project would result in changes to the visual character of the Project site, which is currently characterized as an agricultural landscape. As described in Section 4.1.3, the Project site does not contain high levels of visual character or quality; therefore, the Project would not result in a significant deterioration in the visual character of the Project site or Project vicinity.
Circulation and Scenic Highways Element		
Objective 4.3: Protect areas of outstanding scenic beauty along any scenic highways and protect the aesthetics of those areas.	Yes	The Project is not sited in the vicinity of a designated scenic highway.
Objective 4.5: Develop standards for aesthetically valuable sites. Design review may be required so that structures, facilities,	Yes, with mitigation	The Project has been designed to avoid impacts to scenic resources.

TABLE 4.1-1: CONSISTENCY WITH APPLICABLE GENERAL PLAN AESTHETICS GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
and activities are properly merged with the surrounding environment.		
Policy 9 (b): The County shall emphasize protection of scenic highway resources in all County actions affecting land use.	Yes	There are no scenic highways in the Project vicinity The nearest designed highway is SR-111 near Bombay Beach, which is approximately 46 miles northeast of the Project site.

Source: County of Imperial, General Plan Circulation and Scenic Highway Element, 2008; Land Use Element, 2015b; and Conservation and Open Space Element, 2016.

4.1.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

Except as provided in Public Resources Code (PRC) Section 21099, a project would be considered to have a significant impact if it would:

1. Have a substantial adverse effect on a scenic vista?
2. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?
3. Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?
4. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Methodology

A glare analysis was conducted to determine the potential for significant glint or glare from solar panels and other built-project components that may affect residents and motorists traveling on I-8, Evan Hewes Highway, and local roads, The Sandia National Laboratory’s online Solar Glare Hazard Analysis Tools by Forge Solar was used to perform the analysis. To provide a conservative assessment, the glare analysis assumed the PV panels used would be fixed frame racks with a tilt of 30 degrees from horizontal (“Fixed Tilt”); facing a southern direction; with the tops of the panels at a maximum height of 10 feet above the ground. This would be consistent with what is described in Section 3.0 (Project Description). Two things should be noted: in the fixed frame racks the tilt could be from 20 to 30 degrees. If a design with a tilt of 20 degrees is chosen it is unknown if the amount of glare would be increased or decreased. Similarly, if the HSAT design

with a variable tilt is selected, it is unknown if the glare generated would be increased or decreased.

Based on the parameters used, the Project has the potential to create low-potential afterimage (green ocular impact) and potential temporary afterimage (yellow ocular impact) glare for the receptors looking directly east at the Project site from KOP 3. Viewers at KOP 3 may experience glare from the northeastern-most Project array area if no vegetation or structures are in the field of view which is likely since all solar projects in Imperial County remove vegetation from the site. KOP 3 will have potential for glare for up to 133 minutes per year; the glare would occur from mid-March to mid-April and mid-August to mid-September, within the hour between 2:30 PM and 3:30 PM, for approximately 5 minutes per day.

The other array areas will not produce glare. Regarding the nearest airport (Holtville Airport, approximately 1.6 miles north of the Project site), four potential flight paths were considered. During takeoff and landing procedures, airborne viewers (e.g., pilots) would be elevated in relation to the Project site. The results of the glare analysis indicate that airborne viewers would not experience glare within the four, 2-mile-long takeoff and landing flight path segments. It is worth noting that if other parameters were used the result could be different. This airport does not have an air traffic control tower, so no tower viewers were analyzed (SWCA, 2022a).

Analysis

Impact 4.1-1: Would the Project have a substantial adverse effect on a scenic vista?

There are no designated scenic vistas in the Project vicinity. Therefore, no impacts to scenic vistas would occur. No mitigation would be required.

Impact 4.1-2: 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 scenic highways in the Project vicinity. The nearest State designated Scenic Highways is SR-111 near Bombay Beach, which is approximately 46 miles northeast of the Project site. Therefore, no impacts to trees, rock outcroppings, and historic buildings within a state scenic highway would occur. No mitigation would be required.

Impact 4.1-3: Would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

The existing visual character from public viewpoints would not be substantially altered in the vicinity of the Project site. From KOP 1, which represents an elevated view overlooking the

Project site, the proposed gen-tie line would be visible but would be mostly unnoticed due to the current existing structures that obscure the view. From KOP 2, the Project would visually blend in with the existing built features and irrigated agricultural fields between the viewer and the Project site. The view from KOP 3 is mostly blocked by existing vegetation, residential and agricultural structures, and transmission lines running east to west across the landscape. As previously described, the Project would not substantially degrade the existing visual character or quality of public views from this distance; rather, the horizontal and rectangular Project facilities would appear to be absorbed into the existing vegetation and built features that comprise the broader landscape. The Project would not substantially degrade existing visual character and quality and the impact would be less than significant.

Impact 4.1-4: 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 substantial source of nighttime light in the vicinity of the Project site. Any lighting required for safety and security within the Project site would be hooded and oriented downward so as not to spill over into adjacent parcels.

The glare analysis for the Project concluded that viewers at KOP 3 may experience glare from the northeastern-most Project array area for up to 133 minutes per year if no vegetation or structures are in the field of view based on the parameters provided. The glare would occur from mid-March to mid-April and mid-August to mid-September, within the hour between 2:30 PM and 3:30 PM, for approximately 5 minutes per day. The other array areas will not produce glare (see Appendix D). Glare is a result of the location of the observer, orientation and tilt of the PV panels, reflectance of Project components, local environmental conditions, and ocular factors (e.g., flash blindness). The conditions which exist to produce glare only occur at this location during these time periods. Given the short period of time glare would be produced (5 minutes a day for 2 months), these effects are considered less than significant. Implementation of Mitigation Measure (MM) VIS-1 would further reduce project-related glare.

4.1.4. Mitigation Measures

Project impacts were evaluated against the California Environmental Quality Act (CEQA) significance criteria above to identify opportunities to mitigate for impacts to aesthetics and visual resources resulting from sources of visual contrast and glare that would potentially affect views in the area. Mitigation measures, such as the use of non-reflective materials, finishes and surface treatments on Project components, would further reduce visual contrast and glare associated with the Project.

MM VIS-1: Install Warning Signs along Evan Hewes Highway and East Nelson Pit Road

Warning signs shall be installed along Evan Hewes Highway and East Nelson Pit Road to alert drivers to the potential for glare to occur for approximately 5 minutes

per day between the hours 2:30 PM and 3:30 PM from mid-March to mid-April and from mid-August to mid-September. These signs could alert drivers to lower their visors, put on sunglasses, or reduce their speed to avoid an accident.

Timing/Implementation: *Prior to and during construction.*

Enforcement/Monitoring: *Imperial County Planning and Development Services Department (ICPDSD), Imperial County Department of Public Works (DPW)*

Level of Significance After Mitigation

Impact 4.1-4 would be less than significant after implementation of MM VIS-1.

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4.2 Agricultural and Forestry Resources

This section addresses potential agricultural and forestry impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions at the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the Project, as applicable. The analysis in this section is based on information obtained from the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) and the *Land Evaluation and Site Assessment (LESA)* prepared by SWCA Consultants (SWCA, 2022b), which is included as Appendix E of this Draft Environmental Impact Report (EIR).

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

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from regulatory agencies and the public. No comments related to agricultural and forestry resources were received.

4.2.1. Environmental Setting

The Project would be located at the intersection of Nelson Pit Road and Graeser Road, approximately 5.5 miles east of the City of Holtville. According to the County of Imperial's Office of the Agricultural Commissioner, one of the Project's parcels (Assessor's Parcel Number [APN] 050-070-018) is active agricultural land. The Agricultural Commissioner's public available records extend back to 2014 and indicate that between 2014 and 2021, parcel -018 has produced carrots, alfalfa and wheat (Orozco, Lupe, 2021). Available records also showed that the other two Project APNs (050-070-019, 050-070-021) had not been farmed. Much of the land base in the vicinity of, and within the Project site, is considered productive farmland where irrigation water is available. Farming operations in this area generally consist of medium to large-scale crop production with related operational facilities. Crops generally cultivated in the area may include alfalfa, barley, and/or Bermuda grass in any given year. Row and vegetable crops, such as corn, melons, and wheat, are also prominent in the area.

Two of the Project area parcels are designated as "Agriculture" in the Imperial County General Plan and are zoned A-2-RE (General Agriculture with a Renewable Energy Overlay) and intended primarily for limited agricultural uses and agricultural related compatible uses. Renewable energy projects are an allowable use with a Conditional Use Permit (CUP). The third Project area parcel is designated as "Recreation/Open Space " and is zoned GS-RE (Government/Special Public Zone), This zone allows for the construction, development and operation of all types of governmental-

owned facilities and special public facilities. It also allows for special public uses such as security facilities, jails, solid and/or hazardous wastes facilities and other similar special public benefit uses. Renewable energy projects are also an allowable use within GS-RE zone, with a CUP.

Important Farmlands

The California DOC FMMP produces Important Farmland maps, which are a hybrid of soil resource quality and land use information. The goal of the FMMP is to provide consistent and impartial data to decision makers for use in assessing present status, reviewing trends, and planning for the future of California’s agricultural land resources.

According to the most recent California DOC FMMP (2018) the Project site contains: Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance and Other Land as shown on Table 4.2-1 and as depicted on Figure 4.2-1.

Farmland Classification	APN			TOTAL
	050-070-018	050-070-019	050-070-021	
Prime Farmland	18.1	0.2	0	18.3
Farmland of Statewide Importance	212.7	0.8	0	213.5
Farmland of Local Importance	236.9	79	43.61	359.51
<i>TOTAL IMPORTANT FARMLANDS</i>	<i>467.7</i>	<i>80</i>	<i>43.61</i>	<i>591.31</i>
Other Land	12.3	0	0	12.3
TOTAL SITE ACREAGE	480	80	43.61	603.61

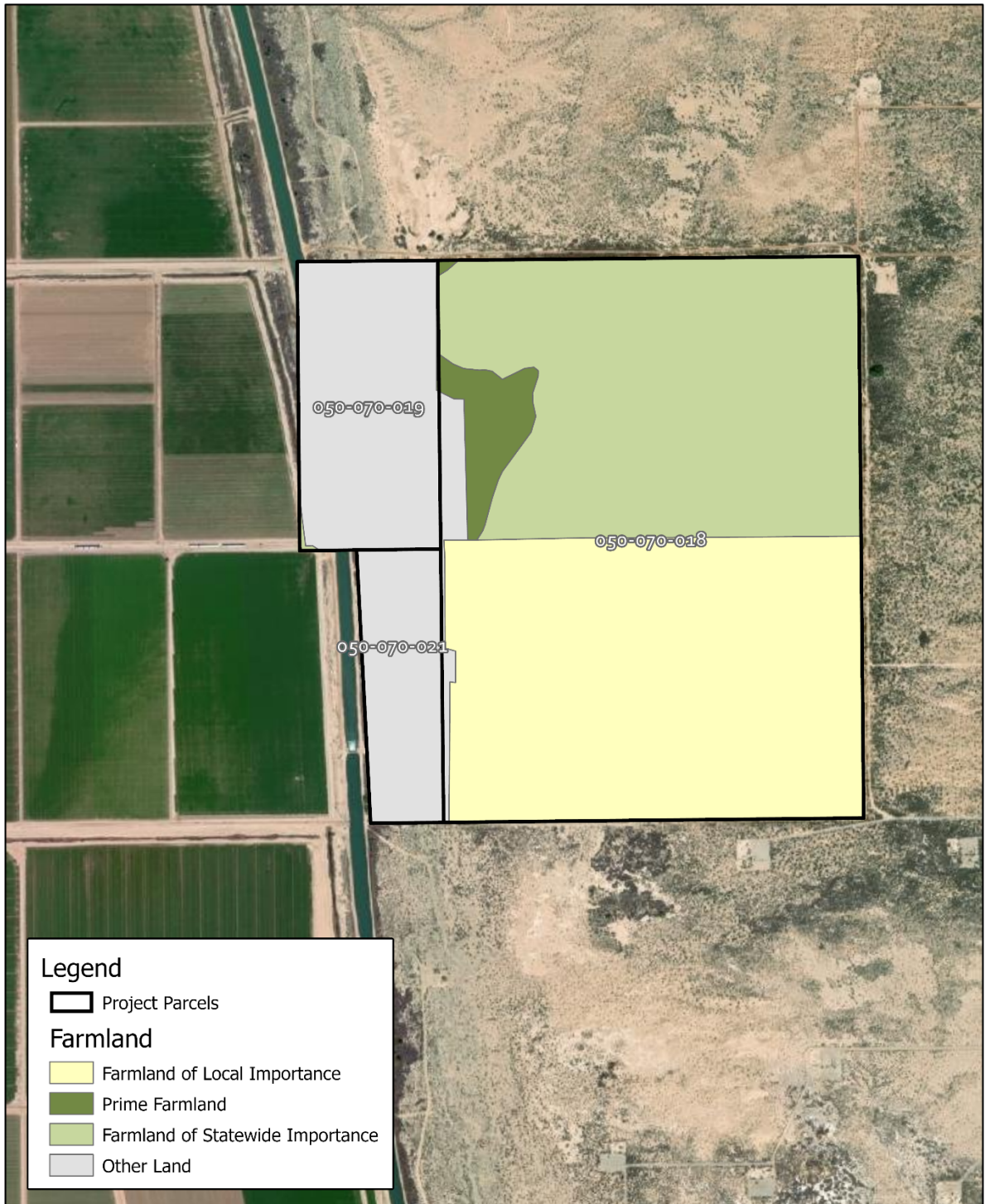
Source: California DOC, 2018.

Farmland Quality

Land Evaluation and Assessment (LESA) Model

The California Agriculture LESA Model was used to rate the quality and availability of agricultural resources at Project site and to identify whether conversion of the site to a non-agricultural use would meet the threshold criteria as a significant impact on agricultural resources under California Environmental Quality Act (CEQA) Guidelines. The LESA Model is a “point-based” approach for rating the relative importance of agricultural land resources based upon specific measurable features. It evaluates land use and site assessment factors to determine whether a project would result in a significant agricultural resource impact.

Specifically, the LESA Model evaluates the quality of the soil, the size (acreage) of a project, the availability of water resources, the amount of agricultural lands surrounding the site, and amount of “projected resource” lands surrounding the Project. These factors are rated, weighted, and combined, resulting in a Land Evaluation sub-score and a Site Assessment sub-score. The sub-scores are then combined to determine a single numeric score. A project’s single numeric score becomes the basis for determining a project’s potential impact (California DOC, 2011).



Important Farmlands
Vikings Solar Energy Generation and Storage Project
Figure 4.2-1

The California Agriculture LESA Model evaluates the quality of the soil, the project’s size, availability of water resources, surrounding agricultural lands, and surrounding protected resource lands. It also identifies whether the proposed project would meet the threshold criteria as a significant impact on agricultural resources under CEQA Guidelines (Appendix M). The LESA evaluates land use and site assessment factors to determine whether the proposed Project would result in a significant agricultural resources impact.

The LESA evaluates soil resource quality, project size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. Upon completion of each of the Land Evaluation factors and Site Assessment factors scores, each factor is weighted based on the standard weights assigned in the LESA Instruction Manual and added together for a final score based on a 100-point scale. Table 4.2-2 provides a summary of the LESA Analysis and the LESA Model’s scoring thresholds. Based on these thresholds, the Project site represents a significant agricultural resource because each of the Land Evaluation factors and Site Assessment factors scores are greater than or equal to 20 points (California DOC, 2011).

TABLE 4.2-2: SUMMARY OF LESA ANALYSIS

	Factor Scores	Factor Weight	Weighted Factor Scores
Land Evaluation			
Land Capability Classification	52.24	0.25	13.06
Storie Index	33.45	0.25	8.36
Land Evaluation Subtotal		0.50	21.42
Site Assessment			
Project Size	100	0.15	15
Water Resource Availability	75	0.15	11.25
Surrounding Agricultural Land	0	0.15	0
Protected Resource Land	0	0.05	0
Site Assessment Subtotal		0.50	26.25
TOTAL LESA SCORE			47.67

Source: SWCA, 2022b.

Total Score	Scoring Decision
0-39 points	Not Considered Significant
40-59 points	Considered Significant only if Land Evaluation and Site Assessment sub-scores are each greater than or equal to 20 points
60-79 points	Considered Significant unless either Land Evaluation or Site Assessment sub-score is less than 20 points.
80-100 points	Considered Significant

Soil Resources

Agricultural Soil Productivity

The U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) uses two systems to assess a soil’s agricultural productivity: the Soil Capability Classification System and the Storie Index Rating System. Under both systems, the prime soil classifications would require the least application of management techniques to produce a consistent and high yield of agricultural products. Common management techniques that have to be used on non-prime soils include fertilization and drainage or leveling of the Project area.

Soil Capability Classification System

Soils are characterized according to their appearance, depth, consistency, slope, and erosion factors. The soil survey groups the various soil types into eight Soil Capability Classes. These classes are indicated in Table 4.2-3. Soils are graded I through VIII, with “I” denoting the most suitable class and “VIII” denoting the least suitable class for cultivation.

TABLE 4.2-3: SOIL CAPABILITY CLASSIFICATION

Class	Description
I	Soils have few limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants or that require special conservation practices.
III	Soils have severe limitations that reduce the choice of plants or that require special conservation practices or both.
IV	Soils have very severe limitations that reduce the choice of plants or that require very careful management or both.
V	Soils are not likely to erode but have other limitations, impractical to remove, that limit their use.
VI	Soils have severe limitations that make them generally unsuitable for cultivation.
VII	Soils have very severe limitations that make them unsuitable for cultivation.
VIII	Soils and landforms have limitations that nearly preclude their use for commercial crop production.

Source: SWCA, 2022b

According to the LESA prepared for the Project, the majority of the Project site is rated as Class III (approximately 479 acres), the remainder is Class IV-VIII (93.1 acres) and Class I-II (24.2 acres) (SWCA, 2022b).

Storie Index Rating System

Soils are also rated by the Storie Index, a numerical system expressing the relative degree of suitability or value of a soil for general intensive agriculture use. The index considers a soil’s color and texture, the depth of nutrients, presence of stones, and slope, all of which relate to the adequacy of a soil type for use in crop cultivation. The rating does not take into account other factors such as

the availability of water for irrigation, the climate, and the distance from markets. Values of the index range from 1 to 100 and are divided into six grades, with an index of 100 and a grade of 1 being the most suitable and a grade of 6 being the least suitable for farming.

Soils that have a Storie rating of 10 or below are considered to have a very low agricultural potential. Soils are considered to be prime for high-quality agricultural production if their Storie Index Rating is 80 or greater. Table 4.2-4 lists the six NRCS soil grades, ranges in index rating, and definitions for each soil grade. According to the LESA prepared for the Project, the Storie Index for soil resources within the Project site is generally classified as Grade 4 (Poor) with the rest Grade 3 (Fair) and Grade 5 (Very Poor).

TABLE 4.2-4: STORIE INDEX RATING SYSTEM

Grade	STORIE Index Rating	Description
1 - Excellent	80 through 100	Soils are well suited for growing irrigated crops that are climatically suited to the region.
2 - Good	60 through 79	Soils are good agricultural soils, although they may not be as desirable as Grade 1 because of moderately coarse or gravelly surface soil texture; somewhat less permeable subsoil; lower plant=available water holding capacity, fair fertility; less well-drained conditions or slight to moderate flood hazards, all acting separately or in combination.
3 – Fair	40 through 59	Soils are only fairly well suited to general agricultural use and are limited in their use because of moderate slopes; moderate soil depths; less permeable subsoil; fine, moderately fine, or gravelly surface soil textures; poor drainage; moderate flood hazards; or fair to poor fertility levels, all acting alone or in combination.
4 - Poor	20 through 39	Soils are poorly suited. They are severely limited in their agricultural potential because of shallow soil depths; less permeable subsoil; steeper slope; or more clayey or gravelly surface soil textures than Grade 3 soils, as well as poor drainage; greater flood hazards; hummocky micro-relief; salinity; or fair to poor fertility levels, all acting alone or in combination.
5 - Very Poor	10 through 19	Soils are very poorly suited for agriculture, are seldom cultivated and are more commonly used for range, pasture, or woodland.
6 - Nonagricultural	Less than 10	Soils are not suited for agriculture at all due to very severe to extreme physical limitations, or because of urbanization.

Source: SWCA, 2022b

Surrounding Agricultural Land Use Rating

The Surrounding Agricultural Land Use Rating is based on the identification of a project's Zone of Influence (ZOI), which is defined as land within any parcels that are within 0.25 mile of the boundaries of the smallest rectangle that encloses the whole of the Project property. The boundary of the Project ZOI is illustrated on Figure 4.2-2. Based on the California FMMP, the ZOI consists of approximately 42.98 acres of land designated as Urban and Built-Up Land, 1.42 acres of land designated as Farmland of Local Importance, 424.91 acres of land designated as Prime Farmland, 195.59 acres of land designated as Farmland of Statewide Importance, and 3,127.27 acres of Other

land (DOC 2018). Aerial imagery was also evaluated to ensure accuracy of which surrounding land appeared to have been used for agricultural uses. Therefore, the percentage of land within the ZOI that consisted of agricultural uses was calculated by combining the acreages of Farmland of Local Importance, Prime Farmland, and Farmland of Statewide Importance and dividing by the total acreage of the ZOI. Approximately 16.4% of the ZOI consists of land in agricultural uses, and this resulted in a score of 0 on the DOC’s LESA Model Instruction Manual rating scale as it was less than 40% (Table 4.2-5).

TABLE 4.2-5: SURROUNDING AGRICULTURAL LAND AND SURROUNDING PROTECTED RESOURCE LAND SCORES

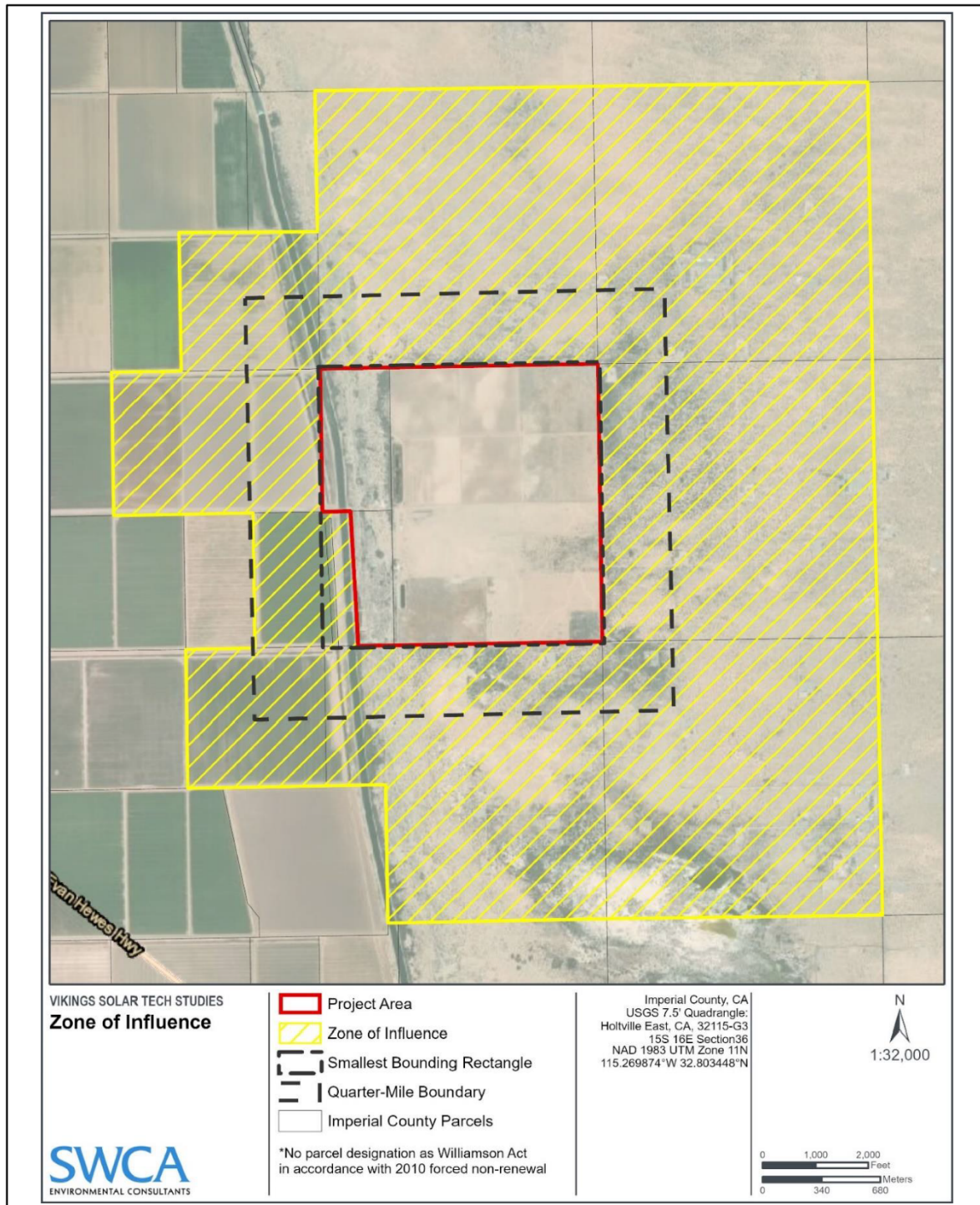
Zone of Influence					Surrounding Agricultural Land Score	Surrounding Protected Resource Land Score
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture	Percent Protected Resource Land		
3,792.17	621.92	0	16.4	0	0	0

Source: SWCA, 2022b.

Surrounding Protected Resource Land Rating

The “Surrounding Protected Resource Land Rating” functions as an extension of the “Surrounding Agricultural Land Use Rating” and is similarly scored. “Protected resource lands” are defined as lands that are subject to long-term restrictions that are compatible with or supportive of agricultural uses of land, including, but not limited to, Williamson Act contracted lands; publicly owned lands maintained as park, forest, or watershed resources; and lands with agricultural, wildlife habitat, open space, or natural resource easements that restrict the conversion of such land to urban or industrial uses (California DOC, 2011).

On February 23, 2010, the County Board of Supervisors approved Minute Order #10a forcing all existing Williamson Act contracts within the county into non-renewal, and the County is not currently entering into new contracts (SWCA, 2022b). The last of the active contracts within the county were due to expire on January 1, 2021; therefore, for the purposes of this assessment, it is assumed that no lands under an active Williamson Act contract are located within the Project ZOI (SWCA, 2022b). In regard to “Protective Resource Lands” in the ZOI, the nearest publicly owned lands maintained as parks, include the U.S. Bureau of Land Management’s (BLM) Imperial Sand Dunes Recreational Area (i.e., Algodones Dunes), located 12 miles east of the Project site; BLM Hot Springs, located two (2) miles south of the Project site; and several wildlife areas and wildlife refuges located 22 miles to the northwest of the Project site (SWCA, 2022b). There are no Protected Resource Lands within the Project ZOI. The Project resulted in a Surrounding Protected Resource Land score of 0, based on the LESA Instruction Manual rating scale, as protected resource land represents less than 40% of the ZOI (see Table 4.2-5).



Source: SWCA 2021

Zone of Influence Map
Vikings Solar Energy Generation and Storage Project
Figure 4.2-2

4.2.2. Regulatory Setting

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

Federal and State

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) (7 United States Code [USC] Section 4201) was passed by U.S. Congress in 1994 with the intention to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with state and local units of government and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every 2 years.

The FPPA does not authorize the federal government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners. For the purpose of FPPA, farmland includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land (SWCA, 2022b).

California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, also known as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments, which are much lower than normal because they are based upon farming and open space uses as opposed to full market value (SWCA, 2022b).

No portion of the Project site is currently under a Williamson Act contract (SWCA, 2022b).

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 (Imperial County, 2015a).

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.

Table 4.2-6 provides a General Plan goal and policy consistency evaluation for the Project.

TABLE 4.2-6: CONSISTENCY WITH APPLICABLE GENERAL PLAN AGRICULTURAL GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Agricultural Element		
<p>Goal 1: All Important Farmland, including the categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance, as defined by federal and state agencies, should be reserved for agricultural uses.</p>	<p>Yes, with mitigation</p>	<p>The Project would temporarily convert land designated as Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance to non-agricultural uses. However, in accordance with Mitigation Measure (MM) AG-2, a reclamation plan when the Project is decommissioned at the end of its life spans will be implemented. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, battery storage systems, transformers and other</p>

TABLE 4.2-6: CONSISTENCY WITH APPLICABLE GENERAL PLAN AGRICULTURAL GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
		structures on the 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, or Farmland of Local Importance to non-agricultural uses.
Objective 1.5: Direct development to less valuable farmland (i.e., Unique Farmland and Farmland of Local Importance rather than Prime Farmland or Farmland of Statewide Importance) when conversion of agricultural land is justified.	Yes, with mitigation	See discussion above regarding Goal 1.
Objective 1.8: Allow conversion of agricultural land to non-agricultural uses including renewable energy only where a clear and immediate need can be demonstrated, based on economic benefits, population projections and lack of other available land (including land within incorporated cities) for such nonagricultural uses. Such conversion shall also be allowed only where such uses have been identified for non-agricultural use in a city general plan or the County General Plan, and are supported by a study to show a lack of alternative sites.	Yes	The Project would help the State of California meet its Renewable Energy Portfolio Standard (RPS) of 60% by 2030 and 100% by 2045.
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.	Yes	Two of the Project parcels are zoned for agriculture land use in the County General Plan. All three parcels are within the Renewable Energy Overlay Zone. The Project includes development of a solar facility and associated infrastructure adjacent to productive agricultural lands; however, the Project site is located adjacent to undeveloped BLM land to the east. Additionally, this development would not include a residential component that would induce urbanization adjacent to the Project. Furthermore, with the approval of a Conditional Use Permit (CUP) the Project would be consistent with the County’s Land Use Ordinance and the General Plan.
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.	Yes	See discussion above regarding Goal 2.
Objective 2.3: Maintain agricultural lands in parcel size configurations that help	Yes, with mitigation	The Project would temporarily convert agricultural land to non-agricultural uses.

TABLE 4.2-6: CONSISTENCY WITH APPLICABLE GENERAL PLAN AGRICULTURAL GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
assure that viable farming units are retained.		However, the Project does not include the subdivision of agricultural lands into smaller parcels. In accordance with MM AG-2 , 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.	Yes with mitigation	See response to Objective 2.3 above.
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.	Yes	The proposed Project would be an allowable use within applicable agricultural and recreation/open space zones, with the approval of a CUP and presents no conflict with continued agricultural use of adjacent properties to the west of the site.
Objective 3.2: Enforce the provisions of the Imperial County Right-to-Farm Ordinance (No. 1031).	Yes	The Imperial County Right-to-Farm Ordinance would be enforced. Existing nuisance issues such as noise, dust, and odors from existing agricultural use would not impact the Project given that once completed, the Project would be remotely controlled; with no employees based at the site.
Objective 3.6: Where a development permit is sought adjacent to agricultural land use, protect agricultural operations by requiring appropriate buffer zones between agricultural land and new developments, and then keep these zones aesthetically pleasing and free of pests by cleaning them of all garbage and noxious vegetation. Vegetation for the purpose of dust control shall be planted and maintained in an attractive manner. The buffer shall occur on the parcel for which the development permit is sought and shall favor protection of the maximum amount of farmland.	Yes, with mitigation	The East Highline Canal, Graeser Road and the KN&KS 230 kV Transmission Line Easement are located west of the Project site and serve as a buffer between the Project site and the next parcel of land used for agricultural purposes. The Applicant would develop be required to develop a Pest Management Plan (MM AG-3) and an Operational Dust Control Plan (MM AIR-3) which will minimize impacts to surrounding agricultural lands.
Objective 3.7: Land use decisions regarding property contiguous to agricultural operations shall give consideration to creation of large parcel sizes to minimize conflicts with such operations.	Yes, with mitigation	See response to Objective 2.3 above.
Renewable Energy and Transmission Element		
Goal 1: Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.	Yes, with mitigation	The Project would temporarily convert land designated as Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance to non-agricultural uses, however, in accordance with MM AG-2 , a reclamation plan when the Project is decommissioned at

TABLE 4.2-6: CONSISTENCY WITH APPLICABLE GENERAL PLAN AGRICULTURAL GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
		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 storage systems, transformers and other structures on the site, as well as restoration of the site to its pre-Project condition. Therefore, the proposed Project would not permanently convert Prime Farmland, Farmland of Statewide Importance, or Farmland of Local Importance to non-agricultural uses.
Objective 1.2: Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.	Yes, with mitigation	See response to Goal 1 above.
Objective 1.4: Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate.	Yes, with mitigation	Potential impacts on agricultural, biological, and cultural resources are addressed in Sections 4.2, 4.4, and 4.5 of this EIR, respectively. Mitigation measures have been incorporated into the Project to reduce impacts to below a level of significance.
Objective 1.5: Require appropriate mitigation and monitoring for environmental issues associated with developing renewable energy facilities.	Yes, with mitigation	Mitigation measures have been incorporated into the Project to reduce all significant impacts to below a level of significance. A Mitigation, Monitoring and Reporting Program (MMRP) shall be adopted for the Project, as part of the Planning Commission’s consideration of the Final EIR.
Land Use Element		
Goal 1: Preserve commercial agriculture as a prime economic force.	Yes, with mitigation	The Project would temporarily convert land designated as Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance to non-agricultural uses, however, in accordance with MM AG-2 , a reclamation plan will be implemented at the end of the solar generating facilities’ useful life that will restore the site to its pre-Project condition. The Project would not permanently convert Prime Farmland, Farmland of Statewide Importance, or Farmland of Local Importance to non-agricultural uses.
Objective 1.1: Encourage the continued agricultural use of prime/productive agricultural lands.	Yes, with mitigation	See response to Goal 1 above.
Objective 1.2: Discourage the location of incompatible development adjacent to or within productive agricultural lands.	Yes	The Project, with the approval of a CUP, is an allowable use within applicable agricultural and recreation/open space zones, and the existing zoning of the Project site would be consistent with the existing General Plan land use designation.

TABLE 4.2-6: CONSISTENCY WITH APPLICABLE GENERAL PLAN AGRICULTURAL GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Objective 1.3: Identify compatible agriculture-related uses or renewable energy projects appropriate for location in agricultural areas.	Yes	See response to Objective 1.2 above.
Objective 1.4: Encourage and enhance the continued participation in the County Williamson Act Program.	Yes	The Project site is not subject to a Williamson Act contract.
Objective 3.2: Preserve agriculture and natural resources while promoting diverse economic growth through sound land use planning.	Yes	The Project would help the State of California meet its RPS of 60% by 2030 and 100% by 2045 and provide jobs related to construction through the development of this Project.

Source: County of Imperial General Plan Agricultural Element, 2015a; Land Use Element, 2015b; and Renewable Energy and Transmission Element, 2015c.

4.2.3. Analysis of Project Effects and Significance Determination

This section lists the thresholds used to conclude whether an agricultural or forestry impact would be significant.

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

- 1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- 2) Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- 3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
- 4) Result in the loss of forest land or conversion of forest land to non-forest use.
- 5) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

Analysis

Impact 4.2-1: Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

As shown on Table 4.2-1, implementation of the Project would result in the temporary conversion of approximately 18.3-acres Prime Farmland, 213.5-acres of Farmland of Statewide Importance and 359.51-acres of Farmland of Local Importance to a non-agricultural use during its lifetime. This impact is typically considered to be significant unless other mitigation is incorporated.

The LESA assessed the agricultural viability of the land and soils to determine the potential impact of the conversion of agricultural resources to non-agricultural uses. Based on the LESA's scoring methodology, a site scoring of 60 points or higher is typically considered "significant." A site score of 40 to 59 points is considered Significant only if Land Evaluation and Site Assessment sub-scores are each greater than or equal to 20 points. A site scoring of 0 to 39 points is not considered significant. The LESA scoring Project is provided in Table 4.2-2. As shown, the Project site received a Land Evaluation Subscore of 21.42 and a Site Assessment Subscore of 26.25; for a Total LESA score of 47.67. The conversion of agricultural land on sites with a Total LESA score of between 40 and 59 points is considered significant only if the Land Evaluation and Site Assessment sub-scores are each greater than or equal to 20 points. Because the Land Evaluation and Site Assessment subscores for the Project were both greater than 20 points, the site's conversion to non-agricultural use, albeit temporary, is considered a significant impact. This impact would be mitigated to below a level of significance with implementation of Mitigation Measure (MM) AG-1, MM AG-2, and MM AG--3.

Impact 4.2-2: Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Williamson Act Contract

The last of the active Williamson Act contracts within the county were due to expire on January 1, 2021; therefore, for the purposes of this assessment, it is assumed that no portion of the Project site is currently under a Williamson Act contract. Therefore, implementation of the Project would not conflict with a Williamson Act contract.

Agricultural Zoning

Existing zoning on the Project site is shown in Figure 3-4, Existing and Surrounding Zoning. As shown on Figure 3-4, two of the Project parcels (APN 050-070-018 and -019) are zoned A-2-RE (General Agriculture with a Renewable Energy Overlay). Lands within the A-2-RE zone are suitable and intended primarily for agricultural uses [limited] and agricultural related compatible uses. Major facilities relating to the generation and transmission of electrical energy are also allowed within the

A-2-RE zone, with the issuance of a CUP. The third Project parcel (APN 050-070-021) is zoned GS-RE (Government/Special Public Zone with a Renewable Energy Overlay. Major facilities relating to the generation and transmission of electrical energy are allowed within the GS-RE zone, with the issuance of a CUP. Pursuant to Title 9, Division 17, Chapter 1 of the Imperial County Land Use Code, solar renewable energy projects are permitted within the A-2-RE and GS-RE zones, subject to the County's approval of a CUP.

Project implementation would result in the temporary conversion of agricultural land to non-agricultural uses. However, with the issuance of a CUP, the proposed use would be consistent with the existing A-2-R-G zoning 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 Project would result in no impact under this criterion and no mitigation would be required.

Impact 4.2-3: Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code [PRC] Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). No forest or timber land is present in the Project site; therefore, no forest or timber land would be affected by the Project and there would be no impact. No mitigation would be required.

Impact 4.2-4: Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

The proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. As discussed in Impact 3, no forest land is present at the Project site, and no forest land would be affected by the Project. Therefore, Project implementation would not result in the loss of forest land or conversion of forest land to non-forest use, and no impact would occur.

Impact 4.2-5: Would the Project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

As discussed under Impact 4.2-1, the Project's temporary conversion of farmlands to non-agricultural use would be significant. However, the Project does not include changes to the environment that would result in the conversion of surrounding farmland to non-agricultural uses nor the conversion of forest land to non-forest use.

The Project would not directly impact the movement of agricultural equipment on roads in the area and access to existing agriculture-serving roads would not be precluded or hindered. No modifications to roadways are proposed that would affect surrounding agricultural operations. Furthermore, existing agricultural-related nuisance issues such as noise, dust, and odors would have an impact on the Project given the general lack of associated sensitive uses (e.g., residences). Likewise, with mitigation measures proposed in other resource sections (e.g., air quality, noise, etc.), Project-related activities would not adversely affect adjacent agricultural operations.

Additionally, the Project would not develop infrastructure that would attract or encourage new development of adjacent farmlands. At the end of the Project's useful life, disturbed lands on the site would be restored to suitability for agricultural use. Further, the provisions of the Imperial County Right-to-Farm Ordinance (No. 1031) and the State nuisance law (California Code Sub-Section 3482) would continue to be enforced. Based on these considerations, the Project would not result in the conversion of surrounding farmlands to non-agricultural uses and no impact would occur.

4.2.4. Mitigation Measures

The following mitigation measures would ensure that impacts associated with the temporary conversion of Important Farmlands to a non-agricultural use are reduced to below a level of significance.

MM-AG-1: Payment of Agricultural and Other Benefit Fees.

One of the following options included below shall be implemented prior to the issuance of a grading permit or building permit (whichever is issued first) 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 to 1" basis on land that is in farmable conditions, of equal size, of equal quality farmland, outside the path of development. The conservation easement shall meet DOC regulations (California Civil Code Section 815) and shall be recorded prior to issuance of any grading or building permits. Mitigating farmland must be maintained in farmable condition, including repairs as needed to the infrastructure. Additionally, any plans to mitigate farmland taken out of production through the use of easements must ensure that the mitigating farm ground is in farmable conditions. If the mitigation plan involves a "Parceling Project", any parcels to remain in farming must align with existing infrastructure such as canals, delivery ditches, and surface and subsurface drainage systems; 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 to 1” basis on land of equal size, of equal quality farmland, outside the path of development. The conservation easement shall meet DOC regulations and shall be recorded prior to issuance of any grading or building permits; 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 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; 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.

<i>Timing/Implementation:</i>	<i>Prior to the issuance of a grading permit or building permit (whichever is issued first).</i>
<i>Enforcement/Monitoring:</i>	<i>Imperial County Planning and Development Services Department (ICPDSD) and Imperial County Office of the Agricultural Commissioner</i>

Significance After Mitigation

With the implementation of MM AG-1, the Project applicant shall be required to minimize the impact associated with the temporary 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.

MM-AG-2: Site Reclamation Plan

The Applicant shall submit to Imperial County a Reclamation Plan prior to issuance of a grading or building permit (whichever is issued first). The Reclamation Plan shall document the procedures by which the Project site will be returned to its current agricultural condition. The reclamation plan shall include a written description of the crop history of each field, water delivery system, drainage system, physical infrastructure, the parties responsible for conducting reclamation, and a detailed description of the recycling, and/or disposal of all solar arrays, inverters, transformers, and other structures on each of the Project site as well as restoration of the site to its pre-Project condition. The Plan shall be submitted to the Imperial County Agricultural Commission for their review and approval.

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 CUPs. 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 event Permittee fails to perform the Reclamation Plan.

Timing/Implementation: *Prior to issuance of a grading or building permit (whichever is issued first).*

Enforcement/Monitoring: *ICPDSD and Imperial County Office of the Agricultural Commissioner*

Significance After Mitigation

MM AG-2 will ensure that the Project applicant adheres to the terms of the agricultural reclamation plan prepared for the Project site that would restore the Project site to pre-Project conditions following decommissioning of the Project (after its use for solar generation activities). Compliance with this measure would reduce agricultural conversion impacts to a level less than significant.

MM-AG-3: 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 submitted to/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 USDA. 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, U.S. Environmental Protection Agency (USEPA) 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.
- A long-term strategy for weed and pest control and management during the operation of the proposed Project. 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.

Timing/Implementation: *Prior to issuance of a grading or building permit (whichever is issued first) and during Project operations.*

Enforcement/Monitoring: *ICPDSD and Imperial County Office of the Agricultural Commissioner*

Significance After Mitigation

With the implementation of MM AG-3, the Project applicant would be required to adhere to the terms of the Pest Management Plan that would restore the Project site to pre-Project conditions following decommissioning of the Project (after their use for solar generation activities) and implement a Pest Management Plan. Compliance with this measure would reduce this impact to a level less than significant.

4.3. Air Quality

This section addresses potential air quality impacts from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions at the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the Project, as applicable. The analysis is based on criteria derived from the California Environmental Quality Act (CEQA) Guidelines and the Imperial County Air Pollution Control District's (ICAPCD) Air Quality Handbook; and mitigation measures to reduce these impacts.

Information used in preparing this section and in the evaluation of potential air quality impacts was derived from the *Air Quality Technical Report Vikings Solar Energy Storage Project Imperial County, California* which is provided as Appendix F this Draft Environmental Impact Report (EIR) (SWCA, 2022c).

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from regulatory agencies and the public. No comments were received related to air quality.

4.3.1. Environmental 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. Ambient air quality is affected by the climate, topography, and the type and amount of pollutants emitted (SWCA, 2022c).

Climate

The SSAB is generally an arid desert region, with a significant portion located below sea level. The climatic condition in the SSAB is strongly influenced by the large-scale sinking and warming of air within the semi-permanent subtropical high-pressure center over the Pacific Ocean. The flat terrain near the Salton Sea, intense heat from the sun during the day, and strong radiational cooling at night create deep convective thermals during the daytime and equally strong surface-based temperature inversions at night. The temperature inversions and light nighttime winds trap any local air pollution emissions near the ground. The area is subject to frequent hazy conditions at sunrise, followed by rapid daytime dissipation as winds pick up and the temperature rises (SWCA, 2022c).

The lack of clouds and atmospheric moisture creates strong diurnal and seasonal temperature variations ranging from an average summer maximum of 108 degrees (°) Fahrenheit down to a winter morning minimum of 38° Fahrenheit. The most pleasant weather occurs from about mid-October to early May when daily highs are in the 70s and 80s with very infrequent cloudiness or

rainfall. Imperial County experiences significant rainfall an average of only four times per year. The rainy period of the year lasts for 3.4 months, from December 4 to March 16, with a sliding 31-day rainfall of at least 0.5 inches. The rainless period of the year lasts for over 8 months, from March to early December (SWCA, 2022c).

Winds in the Project vicinity are driven by a complex pattern of local, regional, and global forces, but primarily reflect the temperature difference between the cool ocean to the west and the heated interior of the entire desert southwest. Imperial County is predominately agricultural land. This is a factor in the cumulative air quality of the SSAB. The agricultural production generates dust and small particulate matter through the use of agricultural equipment on unpaved roads, land preparation, and harvest practices. Imperial County experiences unhealthy air quality from photochemical smog and from dust because of extensive surface disturbance and the very arid climate (SWCA, 2022c).

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (USEPA) to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. The act also mandates that the state submit and implement a State Implementation Plan (SIP) for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met (SWCA, 2022c).

Attainment Status

Depending on whether or not the applicable ambient air quality standards (AAQS) are met or exceeded, the air basin is classified as being in “attainment” or “nonattainment.” The USEPA and California Air Resources Board (CARB) determine the air quality attainment status of designated areas by comparing ambient air quality measurements from state or local ambient air monitoring stations with the NAAQS and California Ambient Air Quality Standards (CAAQS). These designations are determined on a pollutant-by-pollutant basis. Consistent with federal requirements, an unclassifiable/ unclassified designation is treated as an attainment designation (SWCA, 2022c).

Table 4.3-1 presents the federal and state attainment status for the Project vicinity. As shown in the Table 4.3-1, Imperial County is currently designated as nonattainment for Ozone (O₃) and respirable particles less than 10 microns in diameter (PM₁₀) under state standards. Under federal standards, the County is in marginal nonattainment for O₃, serious nonattainment for PM₁₀, and moderate nonattainment for fine particles less than 2.5 microns in diameter (PM_{2.5}). The area is currently in attainment or unclassified status for all other ambient air quality standards.

TABLE 4.3-1: ATTAINMENT STATUS - IMPERIAL VALLEY PORTION OF THE SALTON SEA AIR BASIN

Pollutant	Federal Designation	State Designation
Ozone (O ₃) ¹	Marginal Nonattainment	Nonattainment
Particulate Matter (PM ₁₀)	Serious Nonattainment	Nonattainment
Particulate Matter (PM _{2.5})	Moderate Nonattainment – partial ²	Attainment
Carbon Monoxide (CO)	Unclassified/ Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Unclassified/ Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead (Pb)	Unclassified/ Attainment	Attainment
Hydrogen Sulfide (H ₂ S)	-	Unclassified
Sulfates	-	Attainment
Visibility Reducing Particles	-	Unclassified

Notes:

(-) = Not Identified/ No Status.

¹ The SSAB is marginal nonattainment for the 2015 O₃ standard and moderate attainment for the 2008 standard.² Only the Imperial Valley portion of the County is nonattainment for PM_{2.5} NAAQS. USEPA Greenbook 2018, and Source: CARB 2017 Source: SWCA, 2022c.

Existing Air Quality

Existing levels of ambient air concentrations and historical trends and projections in the Project area are best documented by measurements made by the ICAPCD and the CARB. The closest, most representative air monitoring station to the Project site is the El Centro Monitoring Station on 9th Street. The El Centro Monitoring Station monitors O₃, PM_{2.5}, and PM₁₀. This was determined to be appropriate since the Project vicinity is only nonattainment for O₃, PM₁₀ and PM_{2.5}. The most recent published data for the monitoring stations is presented in Table 4.3-2, which encompasses the years of 2015 through 2019 (SWCA, 2022c).

TABLE 4.3-2: EXISTING AMBIENT AIR QUALITY FROM 2015 – 2019 (EL CENTRO MONITORING STATION)

Pollutant	Averaging Time	Standard	2015	2016	2017	2018	2019
O ₃	1-Hour	Maximum Concentration (ppm)	0.099	0.108	0.110	0.102	0.080
		Days > CAAQS (0.09 ppm)	2	4	4	2	0
	8-Hour	Maximum Concentration (ppm)	0.079	0.082	0.092	0.090	0.071
		Days > NAAQS (0.07 ppm)	11	11	17	14	1
PM ₁₀	24-Hour	Maximum Concentration (µg/m ³) - National	166	285	269	256	124
		Max. Concentration (µg/m ³) - State	172	*	186	253	130
		Days > NAAQS (150 µg/m ³)	6	10	5	5	0
		Days > CAAQS (50 µg/m ³)	44	*	60	113	54
	Annual	State Annual Average (20 µg/m ³)	35.6	45.0	41.6	47.3	34.9

**TABLE 4.3-2: EXISTING AMBIENT AIR QUALITY FROM 2015 – 2019
(EL CENTRO MONITORING STATION)**

Pollutant	Averaging Time	Standard	2015	2016	2017	2018	2019
PM _{2.5}	24-Hour	Maximum Concentration (µg/m ³)	31.2	31.3	23.2	22.4	24.1
		Days > NAAQS (35 µg/m ³)	0	0	0	0	0
		National Std. 98th Percentile	14	26	21	18	18
	Annual	National Annual (12.0 µg/m ³)	6.2	9.4	8.4	8.6	7.8

Notes: CAAQS = California Ambient Air Quality Standards; NAAQS = National ambient air quality standards;

ppm = parts per million; µg/m³ = micrograms per cubic meter; * = sufficient data not available to determine the value

Ambient data for CO, NO₂, SO₂ and Pb not included - entire County in compliance with state and federal standards for these pollutants.

Source: SWCA, 2022c.

Sensitive Receptors

Some population groups, such as children, the elderly, and acutely and chronically ill persons are considered more sensitive to air pollution than others. Sensitive receptor locations typically include residential areas, hospitals, elder-care facilities, rehabilitation centers, daycare centers, and parks. The Project site is in a rural area surrounded by agricultural fields. A single residential structure is located on the Project site; however, it is slated to be demolished as part of the Project and does not qualify as a “sensitive residential receptor”. The nearest sensitive receptors (residences) are located west of the East Highline Canal, approximately 1.6 miles south of the Project site.

4.3.2. Regulatory Setting

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

Federal

The federal CAA, which was passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The CAA delegates primary responsibility for clean air to the USEPA. The USEPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies.

National Ambient Air Quality Standards

Under the CAA, the 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. The six criteria air pollutants include: O₃, CO, NO₂, SO₂, Pb, and PM₁₀/PM_{2.5}. O₃ is a secondary pollutant; while Nitrogen oxides (NO_x) and volatile organic compounds (VOCs) are of particular interest as they are precursors to O₃ formation.

The NAAQS are divided into primary and secondary standards; the primary standards are set to protect human health within an adequate margin of safety, and the secondary standards are set to

protect environmental values, such as plant and animal life. The standards for all criteria pollutants are presented in Table 4.3-3 (SWCA, 2022c).

TABLE 4.3-3: STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards	National Standards	
			Primary	Secondary
O ₃	1 Hour	0.09 ppm (180 µg/m ³)	--	Same as Primary
	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)	
PM ₁₀	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary
	Annual Mean	20 µg/m ³	--	
PM _{2.5}	24 Hour	--	35 µg/m ³	Same as Primary
	Annual Mean	12 µg/m ³	12.0 µg/m ³	15 µg/m ³
CO	1 Hour	20 ppm (23 µg/m ³)	35 ppm (40 mg/m ³)	--
	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	--
NO ₂	1 Hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	--
	Annual Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as Primary
SO ₂	1 Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	--
	3 Hour	--	--	0.5 ppm (1300 µg/m ³)
	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm	--
	Annual Mean	--	0.030 ppm	--
Pb	30 Day Average	1.5 µg/m ³	--	--
	Calendar Quarter	--	1.5 µg/m ³	Same as Primary
	Rolling 3-Month Average	--	0.15 µg/m ³	Same as Primary
Visibility reducing particles	8 Hour	10-mile visibility standard, extinction of 0.23 per kilometer	No National Standards	
Sulfates	24 Hour	25 µg/m ³		
H ₂ S	1 Hour	0.03 ppm (42 µg/m ³)		
Vinyl chloride	24 Hour	0.01 ppm (265 µg/m ³)		

Notes: ppm = parts per million; ppb = parts per billion; mg/m³ = milligram per cubic meter; µg/m³ = micrograms per cubic meter; "--" = no standard.

Source: CARB 2016; SWCA, 2022c.

State

California Ambient Air Quality Standards

The State of California began to set its ambient air quality standards (i.e., CAAQS) in 1969 under the mandate of the Mulford-Carrell Act. The California Clean Air Act (CCAA) was adopted by the CARB in 1988. The CCAA requires all air district of the state to achieve and maintain the CAAQS by the earliest practical date. Table 4.3-3 shows the CAAQS currently in effect for each of the criteria pollutants, as well as the other pollutants recognized by the State. As shown in Table 4.3-3, 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 (SWCA, 2022c).

The CARB and local air districts are responsible for achieving CAAQS, which are to be achieved through district-level air quality management plans (AQMPs) that are incorporated into the SIP. In California, the USEPA has delegated authority to prepare SIPs to the CARB, which in turn, has delegated that authority to individual air districts. Each district plan is required to either (1) achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements (SWCA, 2022c).

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air districts) and setting emissions standards for new motor vehicles and for other emission sources, such as consumer products and certain off-road equipment.

The CCAA substantially adds to the authority and responsibilities of air districts. CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of indirect and area-wide sources of air pollutant emissions and gives local air pollution control districts explicit authority to regulate indirect sources of air pollution.

Toxic Air Contaminants Regulation

California regulates toxic air containments (TACs) primarily through the *Tanner Air Toxics Act* (Assembly Bill [AB] -1807) and the *Air Toxics Hot Spots Information and Assessment Act* of 1987 (AB-2588 – Connelly). In the early 1980s, the CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The *Toxic Air Contaminant Identification and Control Act of 1983* (AB-1807) created California’s program to reduce exposure to air toxics. The *Air Toxics “Hot Spots” Information and Assessment Act* (AB-2588) supplements the AB-1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks (SWCA, 2022c).

In August 1998, CARB identified diesel particular matter (DPM) emissions from diesel-fueled engines as a TAC. In September 2000, the 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% in 2010 and by 85% 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.). During the control measure phase, specific statewide regulations designed to further reduce diesel PM emissions from diesel-fueled engines and vehicles will be evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce diesel PM emissions. The proposed Project would be required to comply with applicable diesel control measures (SWCA, 2022c).

Local

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. The air district was formed by the Air Pollution Control Act of 1947.

The ICAPCD adopted its *CEQA Air Quality Handbook: Guidelines for the Implementation of the California Environmental Quality Act of 1970* in 2007, which was amended in December 2017. The ICAPCD *CEQA Air Quality Handbook* provides guidance on how to determine the significance of impacts, including air pollutant emissions, related to the development of residential, commercial, and industrial projects. Where impacts are determined to be significant, the ICAPCD *CEQA Air Quality Handbook* provides guidance to mitigate adverse impacts to air quality from development projects. The ICAPCD is the agency principally responsible for comprehensive air pollution control in the region (SWCA, 2022c).

The ICAPCD has developed rules and regulations that regulate stationary sources, area sources, and certain mobile source emissions, and is responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases (SWCA, 2022c).

The following ICAPCD rules are applicable to the Project:

Rule 106 – Abatement. If the ICAPCD determines that any person is in violation of the Rules and Regulations for limiting the discharge of air contaminants into the atmosphere, the ICAPCD may issue and order for abatement.

Rule 107 – Land Use. The Air Pollution Control Officer has the responsibility to protect public health and property from the damaging effects of air pollution and will review and advise the appropriate land use authorities on all new construction or changes in land use which could become a source of air pollution problems.

Rule 310 – Operational Development Fee. Provides the ICAPCD with a sound method for mitigating emissions produced from operations of new commercial and residential development projects by requiring project proponents to pay fees based on the project's emissions, type and size. The operational fees would assist 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 Chart 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.

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.

Stationary Sources

Rule 201 – Permits Required. The construction, installation, modification, replacement, and operation of any equipment which may emit, or control, TAC 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 AAQS.

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.

Fugitive Dust Control

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 (SWCA, 2022c). Regulation VIII includes the following specific rules:

- Rule 800–Fugitive Dust Requirements for Control of PM_{2.5}
- Rule 801–Construction and Earthmoving Activities
- Rule 802–Bulk Materials
- Rule 803–Carry Out and Track Out
- Rule 804–Open Areas
- Rule 805–Paved and Unpaved Roads
- Rule 806–Conservation Management Practices

Additionally, ICAPCD’s standard design measures for construction equipment and fugitive PM₁₀ must be implemented at all construction sites. The implementation of design measures, as listed in the ICAPCD CEQA handbook, apply to those construction sites which are 5 acres or more for non-residential developments such as the proposed Project. Additionally, in an effort to reduce PM₁₀ or fugitive dust generation, the Project would be required to develop a dust management plan consistent with Regulation VIII of ICAPCD’s *Rules and Regulations*. Additionally, the Project shall not exceed the 20 percent opacity threshold under Rule 801 (SWCA, 2022c).

Air Quality Plans

The ICAPCD has also developed plans and strategies to achieve attainment for air quality ambient standards. The latest plans include the following:

- *2009 Imperial County Plan for PM₁₀*
- *2012 Annual PM_{2.5} SIP*
- *2013 Plan for 2006 24-hour PM_{2.5} for moderate nonattainment area*
- *2017 Plan for 2008 8-hour O₃ standard*
- *2018 Redesignation Request and Maintenance Plan for PM₁₀*

Imperial County General Plan

The Imperial County General Plan contains goals, objectives, policies and/or programs to conserve the natural environment of Imperial County, including air quality. Table 4.3-4 summarizes the Project’s consistency with the applicable air quality goal and objectives from the General Plan.

TABLE 4.3-4: CONSISTENCY WITH APPLICABLE GENERAL PLAN AIR QUALITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency	Analysis
Land Use Element		
<p>Goal 9: Identify and preserve significant natural, cultural, and community character resources and the County's air and water quality.</p> <ul style="list-style-type: none"> • Objective 9.6: Incorporate the strategies of the Imperial County Air Quality Attainment Plan in land use planning decisions and as amended. 	Yes	<p>The Air Quality Attainment Plan includes the rules and regulations promulgated by the ICAPCD that are applicable to land use projects in Imperial County. The Project must comply with applicable ICAPCD rules and regulations, either through Project design or inclusion of mitigation, to qualify for the required air quality permits. Mitigation Measures (MMs) AQ-1, AQ-2 and AQ-3 would ensure the Project is consistent with the County's General Plan.</p>
<p>Objective 9.7: Implement a review procedure for land use planning and discretionary project review which includes the ICAPCD.</p>	Yes	<p>As the air pollution control district for the County, the ICAPCD must review all projects subject to environmental documentation. This review may entail the required inclusion of mitigation or other measures to reduce Project emissions to levels acceptable per ICAPCD rules and regulations. The ICAPCD will review the Project as part of the CEQA process.</p>
Conservation and Open Space Element		
<p>Goal 7: The County shall actively seek to improve and maintain the quality of air in the region.</p> <ul style="list-style-type: none"> • Objective 7.1: Ensure that all project and facilities comply with current Federal, State, and local requirements for attainment of air quality objectives. • Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all Federal, State and local agencies in the effort to attain air quality objectives. • Objective 7.4: Enforce and monitor environmental mitigation measures relating to air quality. 	Yes	<p>The ICAPCD will review the Project as part of the CEQA process. The proposed Project will comply with all applicable ICAPCD rules and MMs AQ-1, AQ-2 and AQ-3 have been incorporated into the Project. The County Planning Commission will consider adoption of a Mitigation Monitoring and Reporting Program (MMRP) for this project, when considering approval of the Conditional Use Permit (CUP).</p>
<p>Protection of Air Quality and Addressing Climate Change Policy: Reduce PM₁₀ and PM_{2.5} emissions from unpaved roads, agricultural fields, and exposed Salton Sea lakebed.</p> <p>Programs: Implement all ICAPCD particulate matter (PM) emission controls including the Final PM₁₀ 2009 SIP and the 2013 SIP for the 2006 24- Hour PM_{2.5} Moderate Nonattainment Area.</p>	Yes	<p>The ICAPCD seeks to improve and maintain the quality of air in Imperial County through issuance of air quality management plans, rules, and regulations that reflect both state and federal requirements for meeting air quality objectives. The Project must comply with the requirements of these plans, rules, and regulations to gain approval from the County.</p>

TABLE 4.3-4: CONSISTENCY WITH APPLICABLE GENERAL PLAN AIR QUALITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency	Analysis
Circulation and Scenic Highways Element		
Objective 3.8: Attempt to reduce motor vehicle air pollution. Require all major projects to perform an air quality analysis to determine the amount of pollution, as well as the alternative reduction options.	Yes	An air quality analysis has been prepared for the proposed Project (Appendix F) which identified emissions that would be generated by the Project along with applicable reduction measures.

Source: Imperial County General Plan Land Use Element, 2015; Imperial County Conservation and Open Space Element, 2016. Imperial County General Circulation and Scenic Highways Element, 2008.

4.3.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan?
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
3. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?
4. Expose sensitive receptors to substantial pollutant concentrations?

The ICAPCD has also established significance thresholds based on the state CEQA significance criteria. adopted guidelines for implementation of CEQA in its CEQA Air Quality Handbook (ICAPCD, 2007, as updated December 12, 2017). The ICAPCD recommended thresholds of significance are discussed below.

During operations, any development with a potential to emit criteria pollutants below significance levels defined by the ICAPCD is referred to as a “Tier I Project,” and is considered to have less than significant potential adverse impacts on local air quality. For Tier I projects, the project proponent must implement a set of feasible “standard” mitigation measures (determined by the ICAPCD) to reduce the air quality impacts to an insignificant level. A “Tier II Project” is one whose emissions exceed any of the ICAPCD thresholds. Its impact is significant, and the project proponent must select and implement all feasible “discretionary” mitigation measures (as determined by the ICAPCD) in addition to the standard measures. Tier I and Tier II daily thresholds for operational emissions are shown in Table 4.3-5.

TABLE 4.3-5: ICAPCD DAILY OPERATIONAL EMISSIONS THRESHOLDS

Pollutant	Tier I	Tier II
NO _x and ROG	Less than 137 lbs/day	Greater than 137 lbs/day
PM ₁₀ and SO _x	Less than 150 lbs/day	Greater than 150 lbs/day
CO and PM _{2.5}	Less than 550 lbs/day	Greater than 550 lbs/day

Notes: NO_x = oxides of nitrogen ROG = reactive organic gas SO_x = oxides of sulfur

Source: ICAPCD, 2017 (Table 1)

The ICAPCD has also developed specific quantitative thresholds that apply to short-term construction activities, which are shown on Table 4.3-6.

TABLE 4.3-6: ICAPCD DAILY CONSTRUCTION EMISSION THRESHOLDS

Pollutant	Threshold (lbs/day)
PM ₁₀	150
ROG	75
NO _x	100
CO	550
PM _{2.5}	(1)
SO _x	(1)

Notes:

(1)The ICAPCD has not adopted a significance threshold for operational or construction related emission of PM_{2.5} or construction related emissions of SO_x. Recent projects in the ICAPCD have used a PM_{2.5} threshold for operation emissions of 55 pounds per day based on the South Coast Air Quality Management District (SCAQMD's) Final Methodology to Calculate PM_{2.5} and PM_{2.5} Significance Thresholds.

Source: ICAPCD, 2017 (Table 4)

Methodology

Construction of the Project was assumed to commence in the first quarter of 2022 and was estimated to take approximately 12 months to complete. The Project would result in both short-term and long-term emissions of air pollutants associated with construction and operations. 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.

Construction and operational emissions were estimated using the latest version of California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operation of a variety of land use projects. The model utilizes widely accepted federal and state models for emission estimates and

default data from sources such as USEPA AP-42 emission factors, CARB vehicle emission models, and studies from California agencies such as the California Energy Commission (CEC). The model quantifies direct emissions from construction and operations, as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use (SWCA, 2022c). The model was developed in collaboration with the air districts in California. Default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions (SWCA, 2022c).

Construction Emissions

Construction emissions associated with the proposed Project, including emissions associated with the operation of off-road equipment, haul-truck trips, on-road worker vehicle trips, vehicle travel on paved and unpaved surfaces, and fugitive dust from material handling activities were calculated using CalEEMod version 2020.4.0. Emissions modeling included emissions generated during the following phases: demolition/site preparation (grubbing), grading (to establish access roads and pads for electrical equipment (inverters and step-up transformers), trenching (for underground electrical collection lines), interconnection connection (substation, transmission lines and installation of electrical infrastructure), and solar array and battery installation (including security fencing) (SWCA, 2022c).

Modeling input data was based on anticipated construction schedule and phasing. Construction equipment and usage required for each phase were obtained using information provided by the Applicant, or derived from similar projects, and default parameters contained in the model for the project site (Imperial County). Project construction would consist of different activities which would be undertaken in phases, through to the operation of the Project. Construction of the Project is expected to consist of the following activities which occur over the 12 months and have been broken down into five CalEEMod “phases.”

- Demolition/Site Preparation;
- Grading;
- Trenching;
- Interconnection Construction; and
- Solar Array and Battery Installation.

It has been conservatively assumed that several of these phases would occur simultaneously. Table 3-2, Proposed Construction Phasing, shows the Project’s anticipated construction schedule and the phases that overlap to make the “worst-case” construction time period. This occurs in the last week of Month 3 when trenching, interconnection construction, solar array installation and installation of the battery storage system occur simultaneously.

Table 4.3-7 lists the construction equipment that is expected to be used, along with the construction worker’s vehicle trips that would be generated during construction (SWCA, 2022c).

TABLE 4.3-7: CONSTRUCTION EQUIPMENT AND VEHICLE TRIPS

Phase (Duration)	Equipment Used			Construction Worker's Daily Vehicle Trips
	Type	Number	Hrs./day	
1. Demotion/Site Preparation (26 working days)	Rubber Tired Dozers	2	8	180 one-way (inbound) 180 one-way (outbound)
	Scrapers	1	8	
	Skid Steer Loaders	1	8	
	Tractors/Loaders/Backhoes	2	8	
2. Grading (44 working days)	Excavators	1	8	180 one-way (inbound) 180 one-way (outbound)
	Graders	2	8	
	Off-Highway Trucks	1	8	
	Rubber Tired Dozers	1	8	
	Scrapers	1	8	
	Tractors/Loaders/Backhoes	1	4	
3. Trenching (27 working days)	Cranes	1	7	N/A – Due to overlapping construction phases
	Forklifts	3	8	
	Trenchers	2	8	
	Skid Steer Loaders	1	8	
	Generator Sets	2	8	
	Other General Industrial Equipment	1	8	
	Tractors/Loaders/Backhoes	1	4	
	Welders	1	8	
4. Interconnection Connection (16 working days)	Cranes	1	6	N/A – Due to overlapping construction phases
	Forklifts	1	4	
	Generator Sets	1	8	
	Other General Industrial Equipment	1	8	
	Aerial Lifts	1	6	
	Tractors/Loaders/Backhoes	2	4	
	Welders	1	8	
5. Solar Array and Battery Storage Installation (243 working days)	Cranes	1	7	180 one-way (inbound) 180 one-way (outbound)
	Forklifts	5	4	
	Bore/Drill Rigs	2	4	
	Skid Steer Loaders	2	8	
	Generator Sets	1	8	
	Off-Highway Trucks	1	6	
	Tractors/Loaders/Backhoes	3	7	
	Welders	1	8	

Notes: CalEEMod defaults were used for parameters not provided in the table (e.g., equipment horsepower and load factor).

A maximum of 360 one-way daily worker trips and 4 daily vendor trips was utilized for the entirety of 12-month construction period.

CalEEMod defaults for on-road vehicles trip lengths were modified for worker and vendor/delivery to 14 miles due to Project's location.

Approximately 1.25 miles of unpaved roads to the Project which is 91% paved roads for workers, vendors, and haul truck trips.

Source: SWCA, 2022c.

Operational Emissions

The Project requires minimal operations and maintenance activities and would not require the presence of full-time employees. To provide a conservation analysis, operational activities were assumed to include inspections and minor maintenance and/or equipment repairs, as well as panel washing. Operational vehicle trips were assumed to include two (2) vehicle trips per day for full-time employees to commute to and from the Project site, to conduct inspections and perform minor maintenance and/or equipment repairs. Panel washing was assumed to require one water truck operating 8 hours/day and 4 days/year; occur twice annually. Each panel washing event was assumed to take two (2) days; and result in additional daily trips for 10 workers (including the water transport truck). As shown on Table 4.3-8 this analysis assumes a total of 24 one-way worker trips per day during operational maintenance events. Operational emissions were quantified using CalEEMod version 2020.4.0.

TABLE 4.3-8: OPERATIONAL VEHICLE TRIPS

Operational Worker Trips	Daily Trips	
Site Inspection and Minor Repairs	2	One Way Trips (Inbound)
	2	One Way Trips (Outbound)
Panel Washing	10	One-Way Trips (Inbound)
	10	One-way Trip (outbound)
TOTAL	24	One-way Trips

To determine whether construction or operation of the Project would cause a regional air quality impact, the net increase in emissions over baseline conditions were compared with the ICAPCD’s recommended regional emission thresholds.

Analysis

Impact 4.3-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

A project is conforming with applicable adopted plans if it complies with the applicable ICAPCD rules and regulations and emission control strategies in the applicable air quality attainment plans. The Project would comply with the applicable rules and regulations, including the use of standard mitigation measures for construction equipment and fugitive PM₁₀.

Consistency with air quality plans is typically based on a comparison of project-generated growth with growth projections in the AQMP generated by the Southern California Association of Governments. While the Project would contribute to the supply of available energy, which is one factor of population growth, the proposed Project 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 Renewable Portfolio Standard (RPS).

Furthermore, the thresholds of significance adopted by ICAPCD, determine compliance with the goals of attainment plans in the region. As such, emissions below the ICAPCD regional mass daily emissions thresholds presented in Table 4.3-5 and Table 4.3-6 would not conflict with or obstruct implementation of the applicable air quality plans.

Construction and Operations

As shown on Table 4.3-9, construction of the Project would result in peak unmitigated daily emissions of 731.08 lbs/day of PM₁₀, which would exceed ICAPCD's significance threshold of 150 lbs/day. This exceedance would be considered a significant impact. With implementation of the requirements contained within Regulation VIII – Fugitive Dust Control Measures, mitigation measure (MM) AQ-1 (Fugitive Dust Control), and MM AQ-2 (Construction Equipment Control Measures) construction-related PM₁₀ generation would be reduced to below a level of significance.

Operational emissions, which are presented on Table 4.3-10, would be below the thresholds of significance and no mitigation would be required. Therefore, operation of the Project would not conflict with implementation of the ICAPCD applicable air quality plans.

Decommissioning

The proposed Project is anticipated to operate a total of approximately 20 – 30 years. At the end of the Project site's operational term, the Applicant may determine that the Project site should be decommissioned and deconstructed, or it may seek an extension of its CUP. The emissions associated with decommissioning of the Project are not quantitatively estimated, as the extent of activities and emissions factors for equipment and vehicles at the time of decommissioning are unknown. The overall activity would be anticipated to be somewhat less than Project construction, and the emissions from off- road and on-road equipment are expected to be much lower than those for the Project construction. However, without changes in fugitive dust control methods it is likely that fugitive dust emissions would be closer to those estimated for construction. Overall, similar to construction, emissions associated with decommissioning would be less than significant.

In summation, while implementation of the proposed Project would increase air pollutant emissions during site preparation, construction, operations and decommissioning, the emissions would not exceed ICAPCD thresholds with the incorporation of the requirements contained within Regulation VIII – Fugitive Dust Control Measures, MM AQ-1 and MM AQ-2. Therefore, the Project's potential to conflict with or obstruct an applicable air quality plan is considered less than significant with mitigation incorporated.

TABLE 4.3-9: UNMITIGATED AND MITIGATED CONSTRUCTION EMISSIONS SUMMARY

Construction Phase	Unmitigated Pollutant Emissions (pounds per day)						Mitigated Pollutant Emissions (pounds per day)					
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂
Trenching	2.66	24.36	23.80	1.38	1.30	0.04	2.66	24.36	23.80	1.38	1.30	0.04
Interconnection Connection	1.31	11.84	12.36	0.58	0.55	0.02	1.31	11.84	12.36	0.58	0.55	0.02
Solar Array Installation	2.44	22.65	23.74	1.04	0.97	0.05	2.44	22.65	23.74	1.04	0.97	0.05
Off-site (travel to/from Project)	2.28	1.49	18.42	678.58	68.33	0.04	2.28	1.22	18.32	121.28	12.69	0.04
Peak Daily Emission	8.72	61.59	78.33	731.08	78.97	0.15	8.72	61.59	78.33	143.47	18.43	0.15
ICAPCD Significance Thresholds	75	100	550	150	<i>N/A</i>	<i>N/A</i>	75	100	550	150	<i>N/A</i>	<i>N/A</i>
<i>Threshold Exceeded?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>Yes</i>	<i>N/A</i>	<i>N/A</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>N/A</i>	<i>N/A</i>

Notes: N/A = Not Applicable; no adopted significance threshold.
Source: SWCA, 2022c.

TABLE 4.3-10: UNMITIGATED OPERATIONAL EMISSIONS SUMMARY

Activity	Pollutant Emission (pounds per day)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Panel Washing/Normal Maintenance	0.54	4.29	3.78	23.10	2.48
Peak Daily Emission (Total Operational)	0.54	4.29	3.78	23.10	2.48
ICAPCD Significance Thresholds	137	137	550	150	550
<i>Threshold Exceeded?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: SWCA, 2022c.

Impact 4.3-2: 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?

Construction and Operation

As shown in the Table 4.3-1, the Project site located within the Imperial Valley portion of the SSAB, which is currently designated as nonattainment for O₃ and PM₁₀ under state standards. Under federal standards, Imperial County is in marginal nonattainment for O₃, serious nonattainment for PM₁₀, and moderate nonattainment for PM_{2.5}. Imperial County is currently in attainment or unclassified status for all other ambient air quality standards.

The Project implementation would generate criteria air pollutants emissions of O₃, PM₁₀ and PM_{2.5} during construction and operation. The estimated emissions from construction and operations of the Project are summarized in Table 4.3-9 and Table 4.3-10, respectively. The detailed assumptions and calculations, as well as CalEEMod outputs are provided in Appendix A of the *Air Quality Technical Report Vikings Solar Energy Storage Project Imperial County, California*.

As shown on Table 4.3-9, the estimated unmitigated construction emissions for all pollutants, except PM₁₀, are below ICAPCD significance thresholds. With implementation of mitigation measure MM AQ-1 (Fugitive Dust Control) and MM AQ-2 (Construction Equipment Control Measures) construction-related PM₁₀ generation would be reduced to below a level of significance.

Prior to construction, the construction contractor will perform recordkeeping of a construction equipment list. The equipment list will include the Make, Model, Horsepower, and actual hours of usage for off-road equipment. The equipment list(s) will be submitted periodically to the ICAPCD to perform a NO_x analysis. The ICAPCD's NO_x analysis will then be used to assure the Project has remained in compliance with the Less Than Significant Finding of this report. If the ICAPCD's NO_x analysis indicates exceedances of thresholds, the Project would be mitigated per Policy 5.

The Project's operation is limited to inspection activities, conservatively assumed up to 12 employee vehicle trips per weekday. Operational emissions are summarized in Table 4.3-10. As shown, the Project emissions during operations of the facility would be well below the significance thresholds.

As discussed under Impact 4.3-1, the proposed Project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. The impact is less than significant, and no mitigation required; however, per requirements of ICAPCD, the standard mitigation measures would be implemented during construction and operation of the Project, including an Operational Dust Control Plan (ODCP) outlining strategies for controlling dust emissions during Project operations. The required ICAPCD mitigation measures (for all projects) are listed in Section 4.3.4.

Impact 4.3-3: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Some population groups, such as children, the elderly, and acutely and chronically ill persons are considered more sensitive to air pollution than others. Sensitive receptor locations typically include residential areas, hospitals, elder-care facilities, rehabilitation centers, daycare centers, and parks. The Project site is in a rural area surrounded by agricultural fields and no sensitive receptors located within one mile of the Project site.

Implementation of the proposed Project would not result in the long-term operation of any emission sources that would adversely affect nearby sensitive receptors. Short-term construction activities (12 months) could result in temporary increases in pollutant concentrations. With incorporation of the requirements contained within Regulation VIII – Fugitive Dust Control Measures, MM AQ-1 and MM AQ-2, emissions of all criteria pollutants would be below the ICAPCD thresholds and would not result in significant impacts. The Project’s emissions of toxic air pollutants would be minimal and would consist of DPM emissions during construction activities. The employee commuting to the site during Project construction or operation would use gasoline-fueled vehicles.

In conclusion, because of the minimal emissions of DPM during the short-term Project construction (12 months), the distance from nearest sensitive receptor (more than 1 mile), and incorporation of the requirements contained within Regulation VIII – Fugitive Dust Control Measures, MM AQ-1 and MM AQ-2, implementation of the Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant and no additional mitigation would be required.

Fugitive Dust. During construction and operations activities, the Project would implement dust control measures as shown in Section 4.3.4, including an ODCP, to ensure receptors in the Project vicinity would not be impacted by the Project’s long-term dust emissions during operations.

Naturally Occurring Asbestos. Airborne asbestos is classified as a known human carcinogen and was identified by as a TAC by the CARB in 1986. The California Geological Survey prepared maps and lists of the naturally occurring asbestos areas within California counties. According to the 2011 report, the Project site is not an area of naturally occurring asbestos (SWCA, 2022c).

Impact 4.3-4: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Substantial objectionable odors are normally associated with agriculture, wastewater treatment, industrial uses, or landfills. The Project would involve the construction, operation and maintenance, and decommissioning of a solar energy and battery storage facility and associated infrastructure that do not produce objectionable odors. A single residential structure is currently located on the Project site; however, it is slated to be demolished as part of the Project and does not qualify as a “sensitive residential receptor”. The nearest sensitive receptors (residences) are located west of the East Highline Canal, approximately 1.6 miles south of the Project site.

During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. Construction-related odors would disperse and dissipate and would not cause substantial odors at the nearest sensitive receptors (nearby residences). In addition, construction-related odors would be short-term and would cease upon completion of construction. Operation of the Project would not emit any odorous compounds. No impact would occur.

4.3.4. Mitigation Measures

MM AQ-1 Fugitive Dust Control

In compliance with the ICAPCD requirements, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. Because these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the standard and enhanced mitigation measures, required in the ICAPCD CEQA Handbook are listed below, and shall be implemented prior to and during construction.

The County Department of Public Works (DPW) shall verify implementation and compliance with these measures as part of the grading permit review/approval process.

Additionally, the Applicant shall notify the ICAPCD 10 days prior to the commencement of all construction and/or decommissioning activities.

Standard Mitigation Measures for Construction 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 off-site unpaved roads shall 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 shall 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 shall 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 amounts of 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 opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.

Discretionary Mitigation Measures for Fugitive Dust (PM₁₀) Control

- For projects with construction sites of five (5) acres or more for non-residential developments, in order to provide a greater degree of PM₁₀ reductions, above that required by Regulation VIII, the following measures shall be implemented:
 - Water exposed soil with adequate frequency for continued moist soil.
 - Replace ground cover in disturbed areas as quickly as possible.
 - Use automatic sprinkler system installed on all soil piles.
 - Limit vehicle speed for all construction vehicles to 15 miles per hour on any unpaved surface at the construction site.
 - Develop a trip reduction plan to achieve a 1.5 average vehicle ridership for construction employees.
 - Implement a shuttle service to and from retail services and food establishments during lunch hours.

Timing/Implementation:

Prior to the issuance of a grading permit for construction.

Prior to issuance of a demolition permit for decommissioning.

Enforcement/Monitoring:

Imperial County Planning and Development Services Department (ICPDSD) and ICAPCD

MM AQ-2: Construction Equipment Control Measures

Standard Mitigation Measures for Exhaust Equipment Emissions Control

Standard mitigation measures for exhaust equipment emissions control include:

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

Enhanced Mitigation Measures for Construction Equipment

To provide a greater degree of reduction of PM emissions from construction combustion equipment, the following enhanced measures shall be implemented.

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

Timing/Implementation: Prior to the issuance of a grading permit for construction.

Prior to issuance of a demolition permit for decommissioning.

Enforcement/Monitoring: ICPDSD and ICAPCD.

MM AQ-3 Prepare and Implement an Operational Dust Control Plan

Prior to issuance of a Certificate of Occupancy, the Applicant shall submit and obtain an ODCP to the ICAPCD and the ICPDSD for review and approval.

The ODCP will describe all dust control measures that will be implemented during Project operations to reduce fugitive dust emissions.

ICAPCD shall conduct an initial site visit to confirm the elements of the ODCP before it can be finalized. After this, annual site visits shall be conducted by ICAPCD to ensure all elements of the ODCP remain in place.

Timing/Implementation: *Prior to the issuance of a Certificate of Occupancy and yearly during Project operations.*

Enforcement/Monitoring: *ICPDSD and ICAPCD.*

Level of Significance After Mitigation

Impacts would be less than significant after mitigation.

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4.4. Biological Resources

This section addresses potential biological resources impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project, as applicable.

Information used in preparing this section and in the evaluation of potential biological resources impacts was derived from the *Vikings Solar Energy Storage Project Biological Resources Assessment* (SWCA, 2022d) and *Aquatic Resources Delineation Report* (SWCA, 2022e), both prepared by SWCA Environmental Consultants and provided as Appendices G-1 and G-2, respectively. For the Biological Resource Assessment, SWCA's biologists conducted a reconnaissance flora and fauna survey within the Biological Survey Area, which consisted of the entirety of Assessor's Parcel Numbers (APNs) 050-070-018, -019 and -021 to identify the potential for occurrence of sensitive species, vegetation communities, or habitats that could support sensitive wildlife species. The survey was conducted on foot throughout the Biological Survey Area on December 1 and 2, 2020. The *Aquatic Resources Delineation Report* was conducted within the Biological Survey Area on December 1 through December 3, 2020, to determine potential jurisdictional resources regulated by the United States Army Corps of Engineers (USACE), the California Regional Water Quality Control Board (RWQCB), or the California Department of Fish & Wildlife (CDFW).

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments were received on biological and natural resources.

Issues Scoped out as part of the Initial Study

The Imperial County Planning and Development Services Department (ICPDSD) determined in the Initial Study (IS) located in Appendix A-2, that the following environmental issue area resulted in "No Impact" and was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding this issue.

- 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 not located within an area that is subject to a Habitat Conservation Plan, Natural

Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.4.1. Environmental Setting

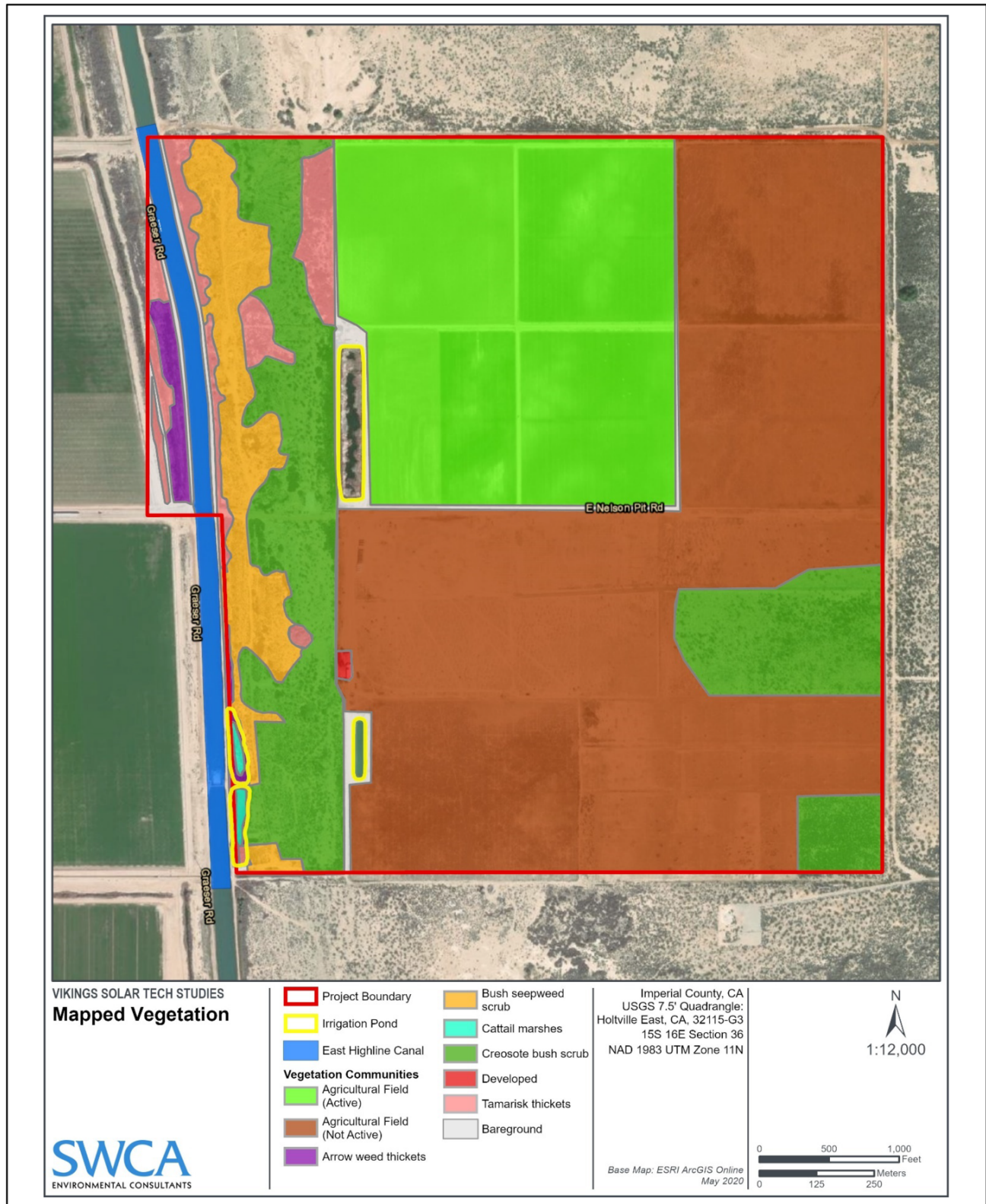
Vegetation Communities

The majority of the Project site, including the northern and northwestern portions, is under active cultivation. The southern areas are fallow agricultural lands, characterized by expanses of disturbed sandy soils with mostly non-native plants, such as Mediterranean grass and Saharan mustard (*Brassica tournefortii*). Typical native plant species encountered were creosote bush, white bursage (*Ambrosia dumosa*), burrobrush (*Ambrosia [Hymenoclea] salsola*) and widely scattered California fan palm (*Washingtonia filifera*). Pockets of natural vegetation are scattered about the southern and western areas, with creosote bush and white bursage scrub occurring in generally sparse relative cover. The generally sparse understory includes mostly non-native annual grasses such as Mediterranean grass and cheatgrass (*Bromus tectorum*). A total of nine vegetation communities or habitat types occur within the Project site including agricultural field (active); agricultural field (not active), arrow weed thickets, brush seepweed scrub, cattail marshes, creosote brush scrub, tamarisk tickets, developed, and bare ground (Figure 4.4-1, Vegetation Communities). Aquatic resources areas immediately adjacent to the Project site support native and non-native plant communities, including Sandbar Willow (*Salix exigua*) Shrubland Alliance and Saltbush Scrub/Shadscale Scrub, the latter containing plants in the saltbush genus *Atriplex*. Other common native plants include arrowweed (*Pluchea spp.*), broadleaf cattail (*Typha latifolia*), fragrant flatsedge (*Cyperus odoratus*), and common red (*Phragmites australis*). Non-native and invasive saltcedar and Athel tamarisk (*Tamarix aphylla*) are common.

General Fauna

Few species of wildlife were observed or detected during the December 2020 field survey, due to the lack of well-developed natural habitats on-site. The only reptile seen were a few side-blotched lizards (*Uta stansburiana*). Birds seen included mourning dove (*Zenaida macroura*), killdeer (*Charadrius vociferus*), and American coot (*Fulica americana*), along with fly-over sightings of red-tailed hawk (*Buteo jamaicensis*) and common raven (*Corvus corax*). One western burrowing owl (*Athene cunicularia*) was sighted; this species is discussed separately below. Table 4.4-1 lists wildlife detected on the subject property.

Wildlife common to the Colorado Desert are expected to utilize areas of the subject property where suitable habitat occurs, such as areas with at least moderate vegetation and near aquatic resources. Reptiles (lizards and snakes) including western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*) and sidewinder (*Crotalus cerastes*) and birds such as killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), white-winged dove (*Zenaida asiatica*), Gambel's quail (*Callipepla gambelii*), and raptors such as red-tailed hawk are likely to occur on-site.



Source: SWCA 2021

Vegetation Communities
Vikings Solar Energy Generation and Storage Project
Figure 4.4-1

TABLE 4.4-1: WILDLIFE OBSERVED WITHIN THE PROJECT SITE

Reptiles/Amphibians	
side-blotched lizard	<i>Uta stansburiana</i>
Birds	
burrowing owl*	<i>Athene cunicularia</i>
red-tailed hawk	<i>Buteo jamaicensis</i>
Gambel’s quail	<i>Callipepla gambelii</i>
killdeer	<i>Charadrius vociferus</i>
Northern harrier	<i>Circus hudsonius</i>
common raven	<i>Corvus corax</i>
American kestrel	<i>Falco sparverius</i>
American coot	<i>Fulica americana</i>
belted kingfisher	<i>Megaceryle alcyon</i>
mourning dove	<i>Zenaida macroura</i>
Mammals	
coyote	<i>Canis latrans</i>
domestic dog	<i>Canis lupus familiaris</i>

Notes: *State Species of Special Concern.

All birds have protection under the Migratory Bird Treaty Act

Source: SWCA, 2022d.

Nesting habitat is limited to ground- and shrub-nesting birds, as tree habitat is not present except for in the widely scattered California fan palms. Mammals such as black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*) may also be present.

TABLE 4.4-2: PLANT SPECIES OBSERVED WITHIN THE PROJECT SITE

Common Name	Scientific Name
DICOTS – Flowering Plants	
Sunflower Family	Asteraceae
white bursage	<i>Ambrosia dumosa</i>
burrobush	<i>Ambrosia [Hymenoclea] salsola</i>
Australian saltbush	<i>Atriplex semibaccata*</i>
desertbroom baccharis	<i>Baccharis sarothroides</i>
desert baccharis	<i>Baccharis sergiloides</i>
alkali goldenbush	<i>Isocoma acradenia</i>
prickly lettuce	<i>Lactuca serriola*</i>
saltmarsh fleabane	<i>Pluchea odorata</i>
arow weed	<i>Pluchea sericea</i>
common sow thistle	<i>Sonchus oleraceus</i>
Goosefoot Family	Chenopodiaceae
four-wing saltbush	<i>Atriplex canescens</i>
big saltbush	<i>Atriplex lentiformis</i>
Russian thistle, tumbleweed	<i>Salsola tragus*</i>

TABLE 4.4-2: PLANT SPECIES OBSERVED WITHIN THE PROJECT SITE

Common Name	Scientific Name
bush seepweed	<i>Suaeda nigra</i>
Spurge Family	<i>Euphorbiaceae</i>
smallseed sandmat	<i>Euphorbia polycarpa</i>
Plantain Family	<i>Plantaginacea</i>
desert plantain	<i>Plantago ovata</i>
Willow Family	<i>Salicaceae</i>
Salix exigua	<i>Narrow-leaf willow</i>
Nightshade Family	<i>Solanaceae</i>
Jimson weed	<i>Datura wrightii</i>
Tamarix Family	<i>Asteraceae</i>
athel tamarisk	<i>Tamarix aphylla</i> *
saltcedar	<i>Tamarix ramosissima</i> *
Caltrop Family	<i>Zygophyllaceae</i>
creosote bush	<i>Larrea tridentata</i>
MONOCOTS - Grasses and Allies	
Palm Family	<i>Arecaceae</i>
non-native palm	<i>Phoenix sp.</i> *
California fan palm	<i>Washingtonia filifera</i>
Sedge Family	<i>Cyperaceae</i>
fragrant flatsedge	<i>Cyperus odoratus</i>
Grass Family	<i>Poaceae</i>
common wild oats	<i>Avena fatua</i> *
giant reed	<i>Arundo donax</i> *
cheatgrass	<i>Bromus tectorum</i> *
big galleta	<i>Hilaria rigida</i>
common reed	<i>Phragmites australis</i>
Mediterranean grass	<i>Schismus barbatus</i> *
Cattail Family	<i>Typhaceae</i>
broadleaf cattail	<i>Typha latifolia</i>

Source: SWCA, 2022d.

Wildlife Movement Corridors and Habitat Linkages

Wildlife corridors and habitat linkages are features that promote habitat connectivity. Wildlife corridors are typically discrete linear features within a landscape that are constrained by development or other non-habitat areas. Habitat linkages are networks of corridors through and between larger natural open space that facilitate movement of wildlife, thus providing long-term resilience of ecosystems against the detrimental effects of habitat fragmentation. Regional connection between high-quality open space habitats is critical to ongoing interchange of genetic material between populations, wildlife movement to escape natural disasters (fires, floods), colonization and expansion of populations, and plant propagation.

There are no federal, state, or local parks or designated wildlife corridors or conservation areas on or adjacent to the subject property.

Sensitive Biological Resources

Sensitive Natural Communities

Native vegetation cover types are not present in most of the actively used agricultural fields; however, creosote bush (*Larrea tridentata*) (upland [UPL]) is present as the predominant species in fallow agricultural fields. Upland vegetation in the Project site includes creosote bush, alkali goldenbush (*Isocoma acradenia*) (faculative upland [FACU]), common Mediterranean grass (*Schismus barbatus*) [UPL], and sparsely scattered California fan palm (*Washingtonia filifera*) (faculative [FAC]). Riparian vegetation within and along the margins of drainages consists of broadleaf cattail (*Typha latifolia*) (obligate [OBL]), arrowweed (*Pluchea sericea*) (faculative wetland [FACW]), giant reed (*Arundo donax*) [FACW], and salt cedar (*Tamarix sp.*) [FAC]. Wetland plant indicator codes were determined using The National Wetland Plant List: 2016 Wetland Ratings (SWCA, 2022d).

Special Status Plant Species

Special-status flora include taxa listed as endangered or threatened under the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), or both. This term “special-status” also includes plant species listed by the state as rare and those species listed by the California Native Plant Society (CNPS) with a Rare Plant Rank (RPR) of 1 or 2 on the most current CDFW “Special Vascular Plants, Bryophytes, and Lichens List” (SWCA, 2022d).

The literature search identified nine special-status plant species within the nine (9) quadrangle search area. Appendix D-1 of Appendix G-1 lists the potential for occurrence for each special-status species within the Project area. The potential for special-status species to occur within the Project site is considered “low” to “unlikely”, based on habitat conditions within the Project site.

No special-status plant species were identified during the December 2020 field survey.

Special Status Animal Species

Special-status fauna include species or subspecies listed as endangered, threatened, or candidate for listing as endangered or threatened under the federal ESA, the CESA, or both. All wildlife species designated by the CDFW as Fully Protected, Species of Special Concern, or Watch List species, as well as other wildlife included in the most current CDFW “Special Animals” list, are also included (SWCA, 2022d).

Fifteen special-status species of fauna were reported in the literature as occurring within the nine-quadrangle search area, with the subject property in the center. One special-status wildlife species was found on-site during the December 2020 survey, a western burrowing owl (non-nesting).

One mammal, the Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), is considered to be unlikely to occur on the Project site, and to have a moderate potential for occurrence near the Project site (discussed in detail below). This finding is based solely on habitat conditions found during the December 2020 field survey, previous records, habitat conditions on and immediately adjacent to the Project site.

Burrowing Owl

Burrowing owl (*Athene cunicularia*), also called western burrowing owl, is a CDFW Special-Status Species that occupies open areas of the desert and high desert and is frequently encountered in Imperial County. This small owl occurs in a wide range of mostly open habitats in California, including grasslands, shrub-steppe, deserts, pastures, and agricultural areas.

One burrowing owl was observed at an active burrow in the southeastern portion of APN -050--070--018. The burrow consists of an old concrete agricultural standpipe. Burrowing owls are known to utilize a range of artificial and natural burrows. The individual owl found during this field survey is a wintering individual, possibly a transient. Suitable habitat for burrowing owl includes short vegetation and, in the breeding season, the presence of small mammal burrows. The California range of this species extends from Redding south to San Diego, east through the Mojave Desert, and west to San Francisco and Monterey. The key characteristics of suitable habitat are moderately low and sparse vegetation, a prey base of small mammals during nesting, and burrows or similar sites for shelter. This species occurs throughout Imperial County, where it is present during both the breeding and non-breeding seasons, as recorded in the California Natural Diversity Database (CNDDDB).

Yuma Hispid Cotton Rat

Yuma hispid cotton rat is a CDFW Special Status Species. Little is known about this subspecies of cotton rat (SWCA, 2022d). This small rodent occurs in wetlands and adjacent uplands where it requires dense herbaceous plants for cover and feeding. It feeds on plant material, seeds, and occasionally insects, and nests either above ground or underground in burrows.

The proposed development areas of the Project site do not contain suitable habitat for this cotton rat. Suitable habitat appears to be present in some of the vegetated aquatic features immediately adjacent to the site.

Nesting Birds and Raptors

The field survey occurred outside of the nesting season (February 1 to August 31) and no nesting bird activity was detected. However, there is potential nesting habitat within the shrubs and low vegetation in the southern third of the Project site (outside areas of active agricultural land uses). Higher quality nesting habitat is present immediately adjacent to, but outside of the site, in the riparian habitats associated with aquatic features.

Jurisdictional Waters and Wetlands

Prior to the field efforts, relevant literature and materials were reviewed to preliminarily identify areas that may fall under agency jurisdiction. The following resources were reviewed or used prior to the field surveys:

- *Wetlands Delineation Manual* (U.S. Army Corps of Engineers [USACE] 1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008)
- National Wetlands Inventory Wetland Geodatabase (USFWS 2021a)
- The National Wetland Plant List: 2016 Wetland Ratings (Lichvar et al. 2016)
- California Soil Resource Lab’s Soil Web Google Earth interface (Natural Resources Conservation Service [NRCS] 2021)
- National Hydrography Dataset (USGS 2021)

U.S. Army Corps of Engineers Non-Wetland Waters of the U.S.

The East Highline Canal has significant nexus to the Salton Sea—a traditionally navigable water—and was, therefore, determined to be non-wetland waters of the U.S. (WoUS). The Project site contains 8.453 acres (5,350 linear feet) of non-wetland WoUS (Table 4.4-3; Figure 4.4-2).

TABLE 4.4-3: MAPPED JURISDICTION WITHIN THE PROJECT SITE

Feature ID	Wetland Waters of the U.S. (wWoUS)		Non-wetland Waters of the U.S. (WoUS)		Non-wetland Waters of the State (WoS)		CDFW Jurisdictional Streambed	
	Acres	Linear Feet	Acres	Linear Feet	Acres	Linear Feet	Acres	Linear Feet
East Highline Canal	0	0	8.453	5,350	0	0	0	0
Holtville Main Drain	0.884	840	0	0	0	0	0	0
East Highline Lateral - 11	0.355	480	0	0	0.611	4,210	1.147	1,480
East Highline Lateral - 12	0	0	0	0	0.049	230	0	0

TABLE 4.4-3: MAPPED JURISDICTION WITHIN THE PROJECT SITE

Feature ID	Wetland Waters of the U.S. (wWoUS)		Non-wetland Waters of the U.S. (WoUS)		Non-wetland Waters of the State (WoS)		CDFW Jurisdictional Streambed	
	Acres	Linear Feet	Acres	Linear Feet	Acres	Linear Feet	Acres	Linear Feet
Irrigation Pond 01	0.856	570	0	0	0	0	0	0
Irrigation Pond 02	0.777	530	0	0	0	0	0	0
Irrigation Pond 03	0	0	0	0	0	0	0.836	440
Irrigation Pond 04	0	0	0	0	0	0	4.525	1,100
TOTAL	2.872	2,420	8.453	5,350	0.660	4,440	6.508	3,020

Source: SWCA, 2022d.

U.S. Army Corps of Engineers Wetland Waters of the U.S.

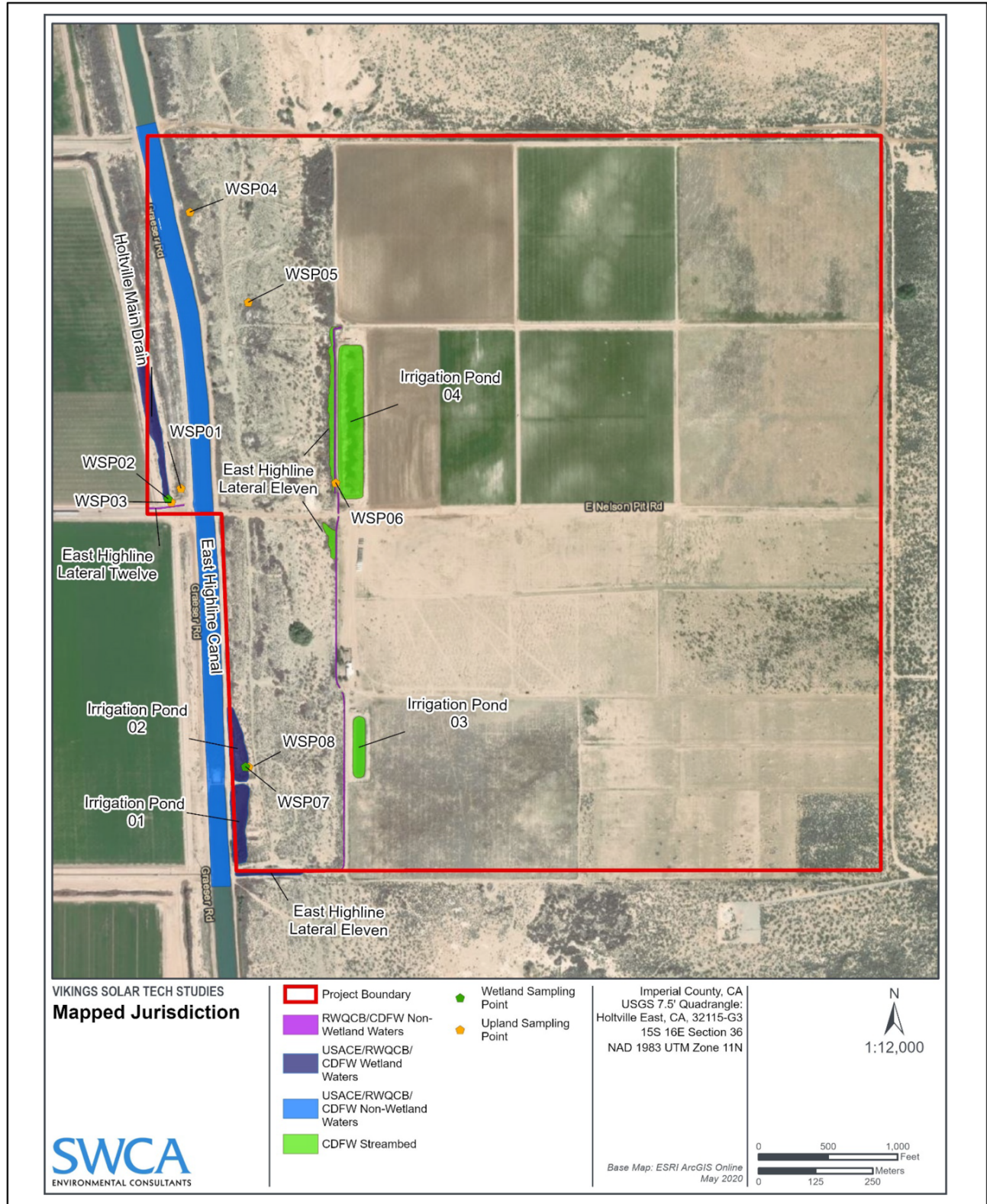
Irrigation Pond 01 and Irrigation Pond 02, as well as the Holtville Main Drain, were determined to be wetland waters and are adjacent to the East Highline Canal. Therefore, these features were determined to be wetland waters of the U.S. (wWoUS). Additionally, an inundated portion of the East Highline Lateral Eleven was assumed to be wetland and is also adjacent to the East Highline Canal. Therefore, these features were determined to be wWoUS. The Project site contains 2.872 acres (2,420 linear feet) of wWoUS (see Table 4.4-3).

Regional Water Quality Control Board Non-Wetland Waters of the State

Both East Highline Lateral 11 and East Highline Lateral 12 are concrete lined and receive flow from the East Highline Canal; however, these features terminate into irrigation systems for nearby croplands and were, therefore, determined to be non-wetland Waters of the State (WoS). The Project site collectively contains 0.660 acre (4,440 linear feet) of non-wetland WoS (see Table 4.4-3).

California Department of Fish and Wildlife Jurisdiction

The Project site includes CDFW jurisdictional streambeds that include the USACE and RWQCB's jurisdiction described above with additional areas where the limits of riparian vegetation extend beyond the ordinary high-water mark. The Project site contains 6.508 acres (3,020 linear feet) of CDFW jurisdictional streambed.



Source: SWCA 2021

Mapped Jurisdictional Resources
Vikings Solar Energy Generation and Storage Project
Figure 4.4-2

4.4.2. Regulatory Setting

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

Federal Protection for Sensitive Wildlife Species and Habitats

Migratory Bird Treaty Act. The *Migratory Bird Treaty Act* (MBTA) (16 U.S.C. 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by the U.S. Fish and Wildlife Service (USFWS). This act prohibits the killing of any migratory birds. 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.

Federal Water Pollution Control Act (Clean Water Act). The *Clean Water Act* (CWA) provides a structure for regulating discharges into WoUS. The U.S. Environmental Protection Agency (USEPA) is given the authority to implement pollution control programs. Section 404 of the CWA regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other U.S. waters. The USACE is the federal agency authorized to issue 404 Permits for certain activities conducted in wetlands or other U.S. waters. Section 401 of the CWA grants each state the right to ensure that the State's interests are protected on any federally permitted activity occurring in or adjacent to Waters of the State. In California, the RWQCB is the agency mandated to ensure protection of the State's waters. For a Preferred Action that requires an USACE CWA 404 permit and has the potential to impact WoS, the RWQCB will regulate the Project and associated activities through a Water Quality Certification determination.

California State Protection for Sensitive Wildlife Species and Habitats

California Endangered Species Act (CESA). The CESA of 1984 (CESA) provides a framework for the listing and protection of wildlife species determined to be threatened or endangered in California.

California Fish and Game Code 3503.5. Raptors (birds of prey) and active raptor nests are protected by the California Fish and Game Code 3503.5. This code prohibits the "taking" of any birds of prey or their nests or eggs unless authorized.

California Fish and Game Code 3513. Protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame birds.

California Fish and Game Code, Section 1600, as amended. Section 1602 of the California Fish and Game Code requires an entity to notify CDFW regarding any proposed activity within a stream or river channel. This includes activities which may substantially divert or obstruct the natural flow

of, or substantially change or use any material from the bed, channel, or bank of, any river, stream or lake. CDFW may determine that the proposed activity will not substantially adversely affect an existing fish or wildlife resource. If not, the proposed activity may not be undertaken until the entity and CDFW enter into an agreement. The agreement would include reasonable measures necessary to protect the existing fish or wildlife resource.

Native Plant Protection Act. The *Native Plant Protection Act (California Fish and Game Code Section. 1900-1913)* (NPPA) prohibits the taking, possessing, or sale within the state of any plant listed by CDFW as rare, threatened, or endangered.

Porter-Cologne Water Quality Control Act, as amended. The *Porter-Cologne Water Quality Control Act* grants the State Water Resources Control Board (SWRCB) and the RWQCBs power to protect water quality and is the primary vehicle for implementation of California’s responsibilities under the federal CWA. Any person proposing a discharge waste within any region must file a report of waste discharge with the appropriate board.

Local

County of Imperial General Plan

Relevant County of Imperial General Plan policies related to biological resources are provided below. Table 4.3-4 summarizes the Project’s consistency with the County’s General Plan policies.

While this EIR analyzes the Project’s consistency with the General Plan pursuant to State California of Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.4-4: CONSISTENCY WITH APPLICABLE GENERAL PLAN BIOLOGICAL AND NATURAL RESOURCE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<p>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.</p> <p>Objective 1.1: Encourage uses and activities that are compatible with the fragile desert environment and foster conservation.</p> <p>Objective 1.4: Ensure the conservation and management of the County's natural and cultural resources.</p>	Yes	<p>The proposed Project conserves environmental resources by avoiding, minimizing, and/or mitigating environmental impacts that may occur within the Project site and will comply with the Mitigation Monitoring and Reporting Program (MMRP) included in this EIR.</p>

TABLE 4.4-4: CONSISTENCY WITH APPLICABLE GENERAL PLAN BIOLOGICAL AND NATURAL RESOURCE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
<p>Goal 2: The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability.</p> <p>Objective 2.1: Designate critical habitats for Federally and State-listed species.</p> <p>Objective 2.2: Develop management programs, including preservation of habitat for flat-tailed horned lizard, desert pupfish, and burrowing owl.</p> <p>Objective 2.3: Support investigation of long-term climate change effects on biological resources.</p> <p>Objective 2.4: Use the CEQA and National Environmental Policy Act (NEPA) process to identify, conserve and restore sensitive vegetation and wildlife resources.</p> <p>Objective 2.6: Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.</p>	<p>Yes</p>	<p>The proposed Project integrates programmatic strategies in order to promote the conservation of critical habitats to manage their integrity, function, productivity and long-term viability.</p>
<p>Open Space and Recreation</p> <p>Conservation Policy: The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County.</p> <p>Program: Allow only compatible land uses and consistent zoning adjacent to protected areas.</p> <p>Program: Notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat.</p>	<p>Yes</p>	<p><i>A Biological Resources Assessment</i> (Appendix G-1) was prepared which identifies biological resources on and near the Project site, their significance, potential impacts and mitigation measures, as needed.</p> <p>No protected areas are located on site, or adjacent to Project site.</p> <p>As part of the CEQA compliance process, copies of the Notice of Preparation (NOP) and Draft EIR has been provided to the USFWS and the CDFW.</p>
Water Element		
<p>Goal 2: Long-term viability of the Salton Sea, Colorado River, and other surface waters in the County will be protected for sustaining wildlife and a broad range of ecological communities.</p> <p>Objective 2.3 Preservation of riparian and ruderal habitats as important biological filters as breeding and foraging habitats for native and migratory birds and animals.</p>	<p>Yes, with Mitigation</p>	<p>As discussed in Section 4.9 of the Draft EIR (Hydrology and Water Quality), with implementation of mitigation measures (MM) HWQ-1 and HWQ-2, potential impacts to surface waters would be reduced to below a level of significance.</p> <p>No riparian or ruderal habitats would be impacted by the Project.</p>

TABLE 4.4-4: CONSISTENCY WITH APPLICABLE GENERAL PLAN BIOLOGICAL AND NATURAL RESOURCE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
<p>Protection of Surface Waters Policy: Preservation of riparian and ruderal habitats as important biological filters, and as breeding and foraging habitats for native and migratory birds and animals.</p>	<p>Yes, with Mitigation</p>	<p>As discussed in Section 4.9 of the Draft EIR (Hydrology and Water Quality), with implementation of mitigation measures MM HWQ-1 and HWQ-2, potential impacts to surface waters would be reduced to below a level of significance.</p> <p>No riparian or ruderal habitats would be impacted by the Project.</p>
<p>Coordinated Water Management Policy: Encourage and provide inter-agency and inter-jurisdictional coordination and cooperation for the management and wise use of water resources for contact and noncontact recreation, groundwater recharge, hydroelectric energy production, and wildlife habitat as well as for domestic and irrigation use.</p>	<p>Yes</p>	<p>The Draft EIR will be reviewed by all agencies with jurisdiction over water resources and wildlife habitat and agricultural production. This satisfies the inter-agency and inter-jurisdictional coordination of water resources.</p>
Renewable Energy and Transmission Element		
<p>Goal 1: Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.</p> <p>Objective 1.2: Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.</p> <p>Objective 1.4: Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate.</p> <p>Objective 1.5: Require appropriate mitigation and monitoring for environmental issues associated with developing renewable energy facilities.</p> <p>Objective 1.6: Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.</p>	<p>Yes</p>	<p>Potential impacts to agricultural resources, natural (e.g., biological) resources and cultural/tribal resource related to the construction, operation, maintenance and decommissioning of the Project have been identified in this Draft EIR (See Sections 4.2, 4.4, 4.5 and 4.16).</p> <p>Mitigation measures have been incorporated into the proposed Project to reduce all impacts to below a level of significance.</p>

Sources: County of Imperial, General Plan Water Element, 1997; Renewable Energy and Transmission Element, 2015c; and Conservation and Open Space Element, 2016

4.4.3. Analysis of Project Effects and Significance

Guidelines for Determination of Significance

Except as provided in Public Resources Code (PRC) Section 21099, a project would be considered to have a significant impact if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Analysis

Impact 4.4-1: Would the Project have a substantial effect on candidate, sensitive, or special status species identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The proposed Project has the potential to adversely affect burrowing owls, also called western burrowing owl, a CDFW Special-Status Species. During the reconnaissance survey, a single burrowing owl was observed at an active burrow in the southeastern portion of APN 050-070-018-000. The burrow consists of an old concrete agricultural standpipe. Burrowing owls are known to utilize a range of artificial and natural burrows. The individual owl found during this field survey could winter, breed, or forage within or adjacent to the project area. There is potential that there would be direct and/or indirect impacts to this species if found to be present during construction. Ground disturbance from heavy equipment, development of the solar arrays, associated facilities, access roads, transmission lines, and battery storage components is considered a direct impact. Implementation of Mitigation Measure (MM) BR-1 would reduce impacts to below a level of significance.

Impact 4.4-2: Would the Project have a substantial adverse effect on riparian habitat or other sensitive natural community.

The Project layout has been designed to avoid all drainages, wetlands, and riparian habitats in the immediate vicinity. Therefore, there would be no direct impacts to jurisdictional waters or riparian habitats as a result of the implementation of the Project. Indirect impacts to drainages may result from erosion and stormwater flows from the Project site into drainages below the Project elevation. However, the Project proponent will be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) which will include best management practices (BMPs) to avoid and/or control site runoff, sedimentation and erosion. These measures should be sufficient to prevent impacts to aquatic resources.

Impact 4.4-3: Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The Project layout has been designed to avoid all drainages, wetlands, and riparian habitats in the immediate vicinity. Therefore, there would be no direct impacts to jurisdictional waters or riparian habitats as a result of the implementation of the Project. Indirect impacts to drainages may result from erosion and stormwater flows from the Project site into drainages below the Project elevation. However, the Project proponent will be required to prepare a SWPPP which will include BMPs to avoid and/or control site runoff, sedimentation and erosion. These measures should be sufficient to prevent impacts to aquatic resources.

Impact 4.4 -4: Would the Project substantially interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project site is located in an area with active agriculture and existing developed/disturbed areas. The existing agricultural uses of the solar energy facility provide limited connectivity for terrestrial species based on the continued disturbance from cultivation practices. Under the proposed use, the mechanized disturbance would decrease once the solar panels are in place. There are no federal, state, or local parks or designated wildlife corridors or conservation areas on or adjacent to the subject property. The Project is not expected to impact these larger canals and drains or the vegetation composition within them. Thus, there are no anticipated impacts on wildlife movement or nursery sites, and no additional mitigation would be required. Therefore, implementation of the Project would result in a less than significant impact on wildlife movement and nursery sites. Thus, the impact would be less than significant.

Impact 4.4-5: Would the Project conflict with local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance?

The Project consists of the construction, operation, and maintenance of the solar energy facility, battery storage and associated electrical transmission lines. Development of the solar facilities is subject to the County's zoning ordinance.

Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A2-RE and GS-RE zones subject to approval of a Conditional Use Permit (CUP) from Imperial County (A2-RE): *Major facilities relating to the generation and transmission of electrical energy, provided such facilities are not, under State or Federal law, to be approved exclusively by an agency or agencies of the State and/or Federal governments and provided that such facilities shall be approved subsequent to coordination and review with the Imperial Irrigation District for electrical matters.* (GS-RE): *Major facilities relating to the generation and transmission of electrical energy provides such facilities are not under State or Federal law, to approved exclusively by an agency, or agencies of the State or Federal government, and provided such facilities shall be approved subsequent to coordination review of the Imperial Irrigation District for electrical matters. Such uses shall include but be limited to the following: Electrical generation plants (less than 50 mw) Facilities for the transmission of electrical energy (100-200 kV) Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV).* Both are subject to approval of a CUP. As demonstrated in Table 4.4-1, with implementation of CUPs, and because the Project site is located in a disturbed, agricultural region, the Project would be consistent with Imperial County General Plan biological resources policies. Therefore, implementation of the proposed Project would not result in a significant impact associated the Project's potential to conflict with local policies protecting biological resources.

Impact 4.4-6: 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 not located within an area that is subject to a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur.

4.4.4. Mitigation Measures

The following mitigation measures (MMs) would reduce impacts to below a level of significance.

MM BR-1: Burrowing Owl Survey Pre-Construction Surveys

No more than 14 days prior to the commencement of initial ground-disturbing activities (vegetation clearance, grading), pre-construction surveys for burrowing

owls shall be conducted. Surveys shall be conducted by a qualified biologist(s) (i.e., a wildlife biologist with previous burrowing owl survey experience), approved by Imperial County.

Surveys for burrowing owls shall be conducted in conformance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation. Surveys shall be completed within all areas proposed for ground disturbance and vegetation clearing/trimming and within 200 meters (656 feet) of the construction zone to identify occupied breeding or wintering burrowing owl burrows. Surveys shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any burrows with fresh burrowing owl sign or presence of burrowing owls.

If no burrowing owls are detected, no further mitigation is necessary.

Non-breeding Season (September 1 – January 31):

- **Occupied Burrows:** If burrowing owls are detected on site during the non-breeding season (generally September 1 through January 31), a 50-foot buffer zone shall be maintained around the occupied burrow(s).
- **Unoccupied Burrows:** Once a burrow has been determined by a qualified wildlife biologist to be unoccupied by burrowing owls, the biologist shall excavate the burrow using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 100 feet of the active burrow and monitored for at least 48 hours after installation.

Breeding Season (February 1 – August 31):

- The following avoidance measures shall be implemented for all burrows identified during surveys:
- Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls present on-site after February 1 shall be assumed to be nesting unless evidence indicates otherwise.
- A 100-foot buffer shall be maintained between Project activities and nesting burrowing owls. No activity or entry by personnel or equipment will be allowed within the buffer area.

- Physical (temporary fencing) and visual (hay bales or similar) barriers shall be installed to delineate the buffer zone. Installation of the exclusionary material will be completed by construction personnel under the supervision of a qualified biologist prior to initiation of construction activities.
- The buffer shall be maintained until August 31 or until the young owls are foraging independently or the nest is no longer active, based upon monitoring evidence.
- If there is danger that owls will be injured or killed as a result of construction activity, the birds may be passively relocated but only during the non-breeding season; relocation shall require coordination with and approval from the CDFW prior to relocation activities. Relocation of owls during the non-breeding season will be performed by a qualified biologist in coordination with the CDFW.
- Any damaged or collapsed active burrowing owl burrows will be replaced with artificial burrows in adjacent habitat at a 2:1 ratio.

Copies of the burrowing owl survey results shall be submitted to the County of Imperial Planning and Development Services Department (ICPDSD) and the CDFW.

Timing/Implementation: *No more than 14 days prior to ground-disturbing activities. If burrowing owls are detected, monitoring shall continue during construction.*

Enforcement/Monitoring: *ICPDSD and CDFW*

Level of Significance After Mitigation

With the implementation of Mitigation Measure MM BR-1, impacts to burrowing owls would be less than significant because this measure requires the performance of professionally accepted and legally compliant procedures for the avoidance; preservation and/or and restoration; and monitoring of western burrowing owl.

MM BR-2: Nesting Bird Surveys

If activities associated with vegetation removal, construction, or grading are planned during the bird nesting/breeding season (generally February 1 through August 31; January 1 for raptors), a qualified biologist shall conduct pre-construction surveys for active nests. Preconstruction nesting bird surveys should be conducted weekly beginning 14 days prior to initiation of ground-disturbing activities, with the last survey conducted no more than three (3) days prior to the start of clearance/construction work. If ground-disturbing activities are delayed, additional

preconstruction surveys should be conducted so that no more than 3 days have elapsed between the survey and ground-disturbing activities.

Active nests found within 100 feet of the construction zone shall be delineated with highly visible construction fencing or other exclusionary material that would inhibit entry by personnel or equipment into the buffer zone. Installation of the exclusionary material will be completed by construction personnel under the supervision of a qualified biologist prior to initiation of construction activities. The buffer zone shall remain intact and maintained while the nest is active (i.e., occupied or being constructed by at least one adult bird) and until young birds have fledged and no continued use of the nest is observed, as determined by a qualified biologist. The barrier shall be removed by construction personnel at the direction of the biologist.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *CDFW*

Level of Significance After Mitigation

With the implementation of Mitigation Measure MM BR-2, impacts to nesting birds would be less than significant with mitigation incorporated.

4.5. Cultural Resources

This section addresses potential cultural resources impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project, as applicable.

Information used in preparing this section and in the evaluation of potential cultural resources impacts was derived from the *Vikings Solar Energy Storage Project Cultural Resources Technical Report* prepared by SWCA Environmental Consultants which is provided as Appendix H-1 this Draft Environmental Impact Report (EIR) (SWCA, 2022f).

Scoping Issues Addressed

During the scoping period for the Project, a scoping meeting was conducted, and written comments were received from public agencies. The following issue related to Cultural Resources was raised by the Native American Heritage Commission (NAHC) and is addressed in this section:

- NAHC provided recommendations for the preparation of cultural resource assessments.

4.5.1. Environmental Setting

The Project site is characterized by agricultural and rural/undeveloped land uses, located within an alluvial plain. The Project site consists of three parcels consisting of agricultural fields and a mixture of riparian and high desert vegetation, including creosote and arrowweed.

The Project site is located within the Colorado River subregion of the Desert Archaeological Region, one of eight arbitrary organizational divisions of the state. This subregion includes the Colorado and Mojave Deserts in the southeastern corner of the state east of the Peninsular and Traverse Ranges and south of the Sierra Nevada and Great Basin provinces. The subregion includes the Salton Trough, all of Imperial County, and most of Riverside, southern San Bernardino, and eastern San Diego Counties.

Cultural Periods and Patterns

Seven successive periods, each with distinctive cultural patterns, may be defined for the Colorado Desert, extending back in time over a period of more than 12,000 years. They include: (1) Paleoindian (c.a. 10,000-6,000 B.C.); (2) Early Archaic/Pinto (6,000-2,000 B.C.); (3) Late Archaic/Gypsum (2,000 B.C. - A.D. 500); (4) Late Prehistoric / Patayan Period (A.D. 500-Historic Contact); (5) Spanish (1769–1822); (6) Mexican (1822–1848); and (7) American (1848–present).

These periods are discussed in more detail in the *Vikings Solar Energy Storage Project Cultural Resources Technical Report* (SWCA, 2022f) which is included as Appendix H-1.

Ethnography

The Project site is most closely associated with the Kumeyaay, although other groups, such as the Quechan, are known to have visited the region to access the abundant resources associated with Lake Cahuilla or its associated rivers, or passed through the area during travel between the coast and the lower Colorado River. These groups are discussed in more detail in the *Vikings Solar Energy Storage Project Cultural Resources Technical Report* (SWCA, 2022f) which is included as Appendix H-1.

Existing Cultural Resources

Methods

CHRIS Records Search

A confidential search of the California Historical Resources Information System (CHRIS) records at the South Coastal Information Center (SCIC) was conducted November 11, 2020. The search included any previously recorded archaeological resources (i.e., excluding historic buildings) within the Project site and surrounding 0.5-mile area. The purpose of the CHRIS records search was to identify any previously recorded cultural resources and previously conducted cultural resources studies in the Project vicinity. Results of the cultural resources records search indicate that 34 cultural resource studies have been conducted in and within 0.5 miles of the Project vicinity.

The CHRIS record search also identified a total of 50 previously recorded cultural within a 0.5-mile radius of the Project area, three (3) of which are located within the Project site itself (P-13-008333, P-13-003213, and P-13-000304). A full description of each previously recorded resource is discussed in more detail in the *Vikings Solar Energy Storage Project Cultural Resources Technical Report* (SWCA, 2022f) which is provided in Appendix H-1 of this EIR. As shown in Table 4.5-1, none of the previously recorded resources are considered eligible for listing in the California Register of Historic Places (CRHR).

TABLE 4.5-1: PREVIOUSLY RECORDED RESOURCES WITHIN THE PROJECT SITE

Primary Number	Period	Resource Description	NRHP/CRHR Status	Historical Significance (CRHR Eligibility Recommendation)
P-13-000304	Prehistoric	Temporary campsite	Unknown. Site may/may not have been previously evaluated for eligibility for NRHP or CRHR.	Site was destroyed. Not evaluated for eligibility for listing on CRHR.

TABLE 4.5-1: PREVIOUSLY RECORDED RESOURCES WITHIN THE PROJECT SITE

Primary Number	Period	Resource Description	NRHP/CRHR Status	Historical Significance (CRHR Eligibility Recommendation)
P-13-003213	Historic	Wagon trail	Unknown. Site may/may not have been previously evaluated for eligibility for NRHP or CRHR.	Site was destroyed. Not evaluated for eligibility for listing on CRHR.
P-13-008333	Historic	East Highline Canal	Previously Recommended Eligible. Under Criteria A/1 and C/3 with a status code of 3D (contributing element of a CRHR-eligible district).	Previously Recommended Eligible. Under Criteria A/1 and C/3 with a status code of 3D (contributing element of a CRHR-eligible district).

Source: SWCA, 2022f; Appendix H-1.

Archival Research and Sensitivity Analysis

Concurrent with the confidential CHRIS records search, available property-specific historical and ethnographic documents were reviewed to identify information relevant to the Project site. Research focused on a variety of primary and secondary materials related to the history and development of the Project vicinity, including historical maps, historical aerial and ground photographs, ethnographic reports, geologic maps, and technical reports filed at the SCIC pertaining to the Project site.

Native American Contact Program

The NAHC was contacted via email in December 2020 and in May 2021, requesting a Sacred Lands File search for cultural resources in the Project vicinity. The NAHC's email response to both requests indicated that no known resources occur within the Project site.

Intensive Pedestrian Survey

An intensive-level archaeological and built environment survey of the 604-acre Project area was conducted between December 15 and December 20, 2020. The intensive-level survey consisted of systematic surface inspection of all areas with transects walked at 15-meter intervals or less to ensure that any surface-exposed artifacts and sites could be identified. The ground surface was examined for the presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris, or stone milling tools); historic-era artifacts (e.g., metal, glass, or ceramics); sediment discoloration that might indicate the presence of a cultural midden; roads and trails; and depressions and other features that might indicate the former presence of structures or buildings (e.g., post holes or foundations).

A reconnaissance-level survey was undertaken of any areas deemed inaccessible (e.g., steep slopes or private property, etc.); professional judgment was used to assess whether areas were safe for pedestrian survey. In areas that were inaccessible, the reconnaissance survey consisted of inspecting

the area from a safe distance, looking for indications that cultural resources were present. The Project site was photographed and resource data were recorded with a handheld tablet with a submeter-accurate global positioning system antenna.

Five (5) historic-era archaeological sites and one historic-era isolated find were identified during the pedestrian survey. A full description of each resource is discussed in more detail in the *Vikings Solar Energy Storage Project Cultural Resources Technical Report* (SWCA, 2022f) which is provided in Appendix H-1 of this EIR. As shown in Table 4.5-2, none of the resources found during the pedestrian survey are considered eligible for listing in the CRHR.

TABLE 4.5-2: NEWLY IDENTIFIED RESOURCES WITHIN THE PROJECT SITE

Primary Number	Period	Resource Description	Historical Significance (CRHR Eligibility Recommendation)
SWCA-64085-S-001	Historic-era	Refuse scatter consisting mainly of cans and glass bottle fragments, with modern refuse throughout the site.	Ineligible. The resource does not meet Criteria 1-4 for listing in the CRHR. Does not meet criteria for a unique archaeological resource.
SWCA-64085-S-002	Historic-era	Refuse scatter consisting mainly of cans and glass bottle fragments, with modern refuse scattered throughout the site.	Ineligible. The resource does not meet Criteria 1-4 for listing in the CRHR. Does not meet criteria for a unique archaeological resource.
SWCA-64085-S-003	Historic-era	Refuse scatter consisting mainly of cans and glass bottle fragments, with modern refuse noted throughout the site.	Ineligible. The resource does not meet Criteria 1-4 for listing in the CRHR. Does not meet criteria for a unique archaeological resource.
SWCA-64085-S-004	Historic-era	Refuse scatter consisting mainly of cans and glass bottle fragments with modern refuse noted throughout the site.	Ineligible. The resource does not meet Criteria 1-4 for listing in the CRHR. Does not meet criteria for a unique archaeological resource.
SWCA-64085-S-005	Historic-era	Refuse scatter consisting primarily of cans and glass bottle fragments.	Ineligible. The resource does not meet Criteria 1-4 for listing in the CRHR. Does not meet criteria for a unique archaeological resource.
SWCA-64085-ISO-001	Historic-era Isolate	Two church key–opened cans.	Ineligible. Isolates are categorically considered ineligible for listing in the CRHR. Does not meet criteria for a unique archaeological resource.

Source: SWCA, 2022f; Appendix H-1.

4.5.2. Regulatory Setting

Federal

National Historic Preservation Act

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

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

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

State

California Register of Historic Places (CRHR)

Under the provisions of the California Environmental Quality Act (CEQA), including the CEQA Statutes (Public Resources Code [PRC] §§ 21083.2 and 21084.1), the CEQA Guidelines (Title 14 California Code of Regulations [CCR], § 15064.5), and PRC § 5024.1 (Title 14 CCR § 4850 et seq.), properties expected to be directly or indirectly affected by a proposed project must be evaluated for CRHR eligibility (PRC § 5024.1).

The purpose of the CRHR is to maintain listings of the state's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from material impairment and substantial adverse change. The CRHR was designed to be used by state and local agencies, private groups, and citizens to identify existing cultural resources within the state and to indicate which of those resources should be protected, to the extent prudent and feasible, from substantial adverse change.

The term historical resources includes:

- a resource listed in, or determined to be eligible for listing on the CRHR;

- a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CCR § 15064.5[a]).

A cultural resource is considered “historically significant” under CEQA if the resource meets one or more of the criteria for listing on the CRHR. A resource is considered significant if it:

Criterion 1: is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;

Criterion 2: is associated with the lives of persons important in our past;

Criterion 3: 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

Criterion 4: has yielded, or may be likely to yield, information important in prehistory or history.

The criteria for listing properties in the CRHR were expressly developed in accordance with previously established criteria developed for listing in the NRHP. The California Office of Historic Preservation regards “any physical evidence of human activities over 45 years old” as meriting recordation and evaluation.

In addition to meeting one or more of the above criteria, historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be able to convey the reasons for their significance. Such integrity is evaluated in regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

Under CEQA, if an archeological site is not a historical resource but meets the definition of a “unique archeological resource” as defined in PRC § 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined as follows:

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

Resources that neither meet any of these criteria for listing in the CRHR nor qualify as a “unique archaeological resource” under CEQA PRC § 21083.2 are viewed as not significant. Under CEQA, “A nonunique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects” (PRC § 21083.2[h]).

Impacts that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. Impacts to historical resources from a proposed project are thus considered significant if the project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature within the setting of the resource, which contributes to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

Assembly Bill 52

California Assembly Bill-52 of 2014 (AB-52) was enacted on July 1, 2015, and expands CEQA by defining a new resource category, “tribal cultural resources.” AB-52 establishes that “A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (PRC Section 21084.2). It further states that the lead agency avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources:

1. “Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe” and meets either of the following criteria: Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC section 5020.1(k), or
2. A cultural 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.

AB-52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB-52 requires that lead agencies “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the formal consultation process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

Native American Historic Resource Protection Act

PRC Sections 5097 et seq. codify the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. Section 5097.9 states that no public agency or private party on public property shall “interfere with the free expression or exercise of Native American Religion.” The code further states that:

“No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine... except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, except for parklands larger than 100 acres.”

California Health and Safety Code, Section 7050 and 7052

California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Native American Heritage Commission

PRC Section 5097.91 established the NAHC, the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Local

Imperial County General Plan

The County of Imperial General Plan (General Plan) provides goals, objectives, and policies for the identification and protection of significant cultural resources (Table 4.5-3). Specifically, the Conservation and Open Space Element of the General Plan calls for the protection of cultural resources and scientific sites and contains requirements for cultural resources that involve the identification and documentation of significant historic and prehistoric resources and the preservation of representative and worthy examples. The Conservation and Open Space Element

also recognizes the value of historic and prehistoric resources and the need to assess current and proposed land uses for impacts upon these resources.

TABLE 4.5-3: CONSISTENCY WITH APPLICABLE GENERAL PLAN TRIBAL CULTURAL RESOURCES GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<p>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</p>	<p>Yes, with mitigation</p>	<p>A Cultural Resources Technical Report (Appendix H-1) has been conducted for the proposed Project and potential impacts have been avoided or minimized. The Project is in compliance with this goal through incorporation of mitigation measures (MM) CR-1 through MM CR-4.</p>
<p>Conservation of Environmental Resources for Future Generations, Goal 1: Objective 1.4: Ensure the conservation and management of the County's natural and cultural resources.</p>	<p>Yes, with mitigation</p>	<p>The proposed Project conserves environmental resources by avoiding, minimizing, and/or mitigating environmental impacts to natural and cultural resources and will comply with the Project's Mitigation Monitoring and Reporting Program (MMRP).</p>
<p>Preservation of Cultural Resources, Goal 3: Objective 3.1: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.</p>	<p>Yes, with mitigation</p>	<p>The proposed Project would not impact any known significant prehistoric, historic, or tribal cultural resources. The proposed Project includes MM CR-1 through MM CR-4, which will avoid and/or mitigate potential impacts to unknown cultural and tribal cultural resources.</p>
<p>Objective 3.3: Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.</p>	<p>Yes</p>	<p>Local Native American Tribes have been engaged in the protection of tribal cultural resources through the consultation process required under AB-52. Consultation letters were distributed to local Native American tribes offering them of an opportunity to consult with the County on the Project, to determine whether or not Tribal Cultural Resources are present within the Project area, and if so, to determine the most appropriate way to avoid or mitigate impacts.</p> <p>The County's compliance with the requirements of AB-52 is documented in Section 4.16 of this EIR, Tribal Cultural Resources and included in Appendix H-2.</p>
<p>Cultural Resources Conservation Policy: Identify and document significant historic and prehistoric resources, and provide for the preservation of representative and worthy examples; and recognize the value of historic and prehistoric resources, and assess current</p>	<p>Yes</p>	<p>Cultural resources investigations have been conducted for the proposed Project.</p>

TABLE 4.5-3: CONSISTENCY WITH APPLICABLE GENERAL PLAN TRIBAL CULTURAL RESOURCES GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
and proposed land uses for impacts upon these resources.		
<p>Cultural Resources Conservation Program: The County will use the CEQA process to conserve cultural resources and conform to Senate Bill 18 (SB-18) “Consultation with Tribal Governments” and Assembly Bill 52 “Consultation with Tribal Governments.” Public awareness of cultural heritage will be stressed. All information and artifacts recovered in this process will be stored in an appropriate institution and made available for public exhibit and scientific review.</p>	Yes	A Cultural Resources Investigation has been conducted for the proposed Project. The County’s compliance with the requirements of AB-52 are documented in Section 4.16 of this EIR, Tribal Cultural Resources.
Renewable Energy and Transmission Element		
<p>Goal 1: Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.</p> <p>Objective 1.2: Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.</p> <p>Objective 1.4: Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate.</p>	Yes	See response to Goal No. 3.

Source: County of Imperial, General Plan Renewable Energy and Transmission Element, 2015c; and Conservation and Open Space Element, 2016.

4.5.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

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

A project would be considered to have a significant impact if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines §15064.5?
3. Disturb any human remains, including those interred outside of formal cemeteries?

Analysis

Impact 4.5-1: Would the Project result in a change in the significance of an historical resource?

To be considered historically significant, a resource must meet one of four criteria for listing outlined in the CRHR (CEQA Guidelines 15064.3 (a)(3)). In addition to meeting one of the criteria outlined in the 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.

A buried site sensitivity assessment suggests that the potential for buried archaeological resources within the Project site appears to be low, particularly in light of the decades of agricultural activity across most of the site. However, there is always a possibility that currently unknown resources could be identified during ground-disturbing activities. If such resources are encountered during construction and those resources meet the eligibility criteria of the CRHR, the impact would cause a substantial adverse change in the significance of a historical or archaeological resource. This would be a potentially significant impact to cultural resources. With implementation of Mitigation Measures (MMs) CR-1, MM CR-2 and MM CR-3 impacts would be less than significant.

The East Highline Canal (Site P-13-008333/CA-IMP-785) had previously been recommended as eligible for the NRHP listing under Criterion A. No other sites have been identified as being eligible. The Project does not include any ground disturbing activities near this site and will be avoided by the Project. A 10-meter buffer from the current site boundaries will be established, noted on the grading plans, and an archaeological monitor be present during all site preparation and construction activities that may take place near or within that buffer.

Impact 4.5-2: Would the Project Disturb archaeological resources and remains?

Pursuant to CEQA Guidelines §15064.5(c)(1) and (2), an archaeological resource includes an archaeological site that qualifies as a significant historical resource as described for Impact 4.5-1. If an archaeological site does not meet any of the criteria outlined in the provisions under Impact 4.4-1, 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:

- Contains information needed to answer important scientific research questions that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- 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.

Site P-13-008333/CA-IMP-785 the East Highline Canal had previously been recommended as eligible for the NRHP listing under Criterion A. No other sites have been identified as being eligible. The Project does not include any ground disturbing activities near this site and will be avoided by the Project. A 10-meter buffer from the current site boundaries will be established and an archaeological monitor be present during all preparation and construction activities that may take place near or within that buffer.

Ground disturbing activities associated with the proposed Project during construction would have the potential to cause substantial adverse changes to resources that escaped detection on the survey and/or buried prehistoric and historic resources due to the moderately high potential of the Project area. If such resources are encountered during construction and those resources meet the eligibility criteria of the CRHR, the impact would cause a substantial adverse change in the significance of a historical or archaeological resource. This would be a potentially significant impact to cultural resources. With implementation of MMs CR-1, CR-2 and CR-3 impacts would be less than significant.

Impact 4.3-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?

Site Preparation and Construction

During the construction and phases of the proposed Project, grading, excavation and trenching will be required. While no potential human remains have been identified in the Project site, subsurface activities always have some potential to impact previously unknown remains. This potential impact is considered a significant impact. MM CR-4 will ensure that the potential impacts to previously unknown human remains do not rise to the level of significance pursuant to CEQA. Implementation

of MM CR-4 will reduce the potential impact associated with inadvertent discovery of human remains to a level less than significant.

Operations

The operation of the Project would not disturb previously undisturbed ground and so would have no adverse impacts to historic resources.

Decommissioning/Reclamation

4.5.4. Mitigation Measures

MM CR-1: Cultural Resources Construction Monitor

Prior to the issuance of a Grading Permit, the Applicant shall provide evidence to the Imperial County Planning and Development Services Department (ICPDSD) stating that a County-approved Qualified Archaeologist and a Native American Monitor from the Kumeyaay Tribe have been retained at the Applicant's expense to implement a construction monitoring program. Both the Qualified Archaeologist and the Native American Monitor shall be present during all excavation or other earth-moving activities within the Project site. The Applicant shall immediately notify the ICPDSD and the Kumeyaay Tribal representative, if any undocumented and/or buried prehistoric or historic resource is uncovered. All construction must stop in the vicinity of the find until the find can be evaluated for its eligibility for listing in the CRHR.

The cultural resources monitor shall have the authority to halt construction activity in the immediate vicinity of the encountered historic resource (designated as any area within 50 feet of the newly uncovered cultural resource) for a sufficient interval of time to allow avoidance or recovery of the encountered historic resources and shall also have the authority to redirect construction equipment in the event that any cultural resource is inadvertently encountered. All cultural resources are assumed to be eligible for the CRHR until determined otherwise by the monitor. Work will not resume in the area of the discovery until authorized by the monitor. Should any prehistoric or historic-era Native American artifacts be encountered, additional consultation with NAHC-listed Native American tribal groups shall be conducted.

The recommendations of the archaeologist related to the discovery shall be complied with prior to resuming construction.

Prior to the release of the Certificate of Occupancy, a Monitoring Report and/or Evaluation Report, which describes the results, analysis and conclusions of the cultural resource mitigation monitoring efforts (such as, but not limited to, the

Research Design and Data Recovery Program) shall be submitted by the Qualified Archaeologist, along with the County-approved Native American Monitor's notes and comments, to ICPDSD for approval.

Timing/Implementation: *Prior to grading permit issuance, during grading and excavation activities, and upon completion of monitoring activities.*

Enforcement/Monitoring: *ICPDSD*

Level of Significance After Mitigation

Impacts to cultural resources during construction would be less than significant after mitigation.

MM CR-2: Establishment of Environmentally Sensitive Areas

A qualified archaeologist, as approved by the County, will prepare an archaeological testing and evaluation plan prior to conducting any field work. If an archaeological site is determined significant under CEQA, avoidance is recommended by establishing Environmentally Sensitive Areas (ESAs). ESAs shall encompass the site boundary plus a 200-foot buffer around the site. ESAs should be staked and/or flagged in a conspicuous manner. Spot checking by a qualified archaeologist and a Native American Monitor from the Kumeyaay Tribe shall be completed throughout construction to ensure ESAs are not entered. If it is necessary for the Project to encroach on any ESA, full time monitoring by a qualified archaeologist, who is approved by the County, will be required to ensure there are no impacts to the archaeological site. If avoidance is not an option, then a data recovery program should be undertaken.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *ICPDSD*

Level of Significance After Mitigation

Impacts would be less than significant after mitigation.

MM CR-3: Data Recovery Program

The Project was designed to avoid and preserve archaeological resources in place where possible. Where avoidance and preservation are not possible, data recovery through excavation is the most feasible mitigation. Prior to excavation, a data recovery plan must be prepared that makes provision for adequately recovering the scientifically consequential information from and about the historical resource. Data

recovery includes the documentation, recordation, and removal of the archeological deposit from a project site in a manner consistent with professional (and regulatory) standards; and the subsequent inventorying, cataloguing, analysis, identification, dating, interpretation of the artifacts and “ecofacts” & the production of a report of findings.

Timing/Implementation: *During construction.*

Enforcement/Monitoring: *ICPDSD*

Level of Significance After Mitigation

Impacts would be less than significant after mitigation.

MM CR-4: Unanticipated Discovery – Human Remains

In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery will be halted or diverted and the Imperial County Coroner will be notified (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the NAHC within 24-hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American (Section 5097.98 of the PRC). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB-2641).

If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB-2641).

Timing/Implementation: *During construction.*

Enforcement/Monitoring: *ICPDSD*

Level of Significance After Mitigation

Impacts would be less than significant after mitigation.

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4.6 ENERGY

This section describes the existing energy systems in the vicinity of the Project site and identifies the potential physical environmental impacts that would result from the inefficient, wasteful, and unnecessary consumption of energy from the proposed Project.

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments related to energy systems were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department (ICPDSD) determined in the Initial Study/Notice of Preparation (IS/NOP), located in Appendix A-1 and A-2, that the following environmental issue areas resulted in no impact and no further review was required. Please refer to Appendix A-1 of this Draft environmental impact report (EIR) for a copy of the NOP and Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding this issue.

- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?
Implementation of the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and no impacts would occur under this criterion.

4.6.1 Environmental Setting

The Imperial Valley area is located within the south-central part of Imperial County and is bound by Mexico on the south, the Algodones Sand Hills on the east, the Salton Sea on the north and San Diego County on the northwest, and the alluvial fans bordering the Coyote Mountains and the Yuha Desert to the southwest. The Imperial Irrigation District (IID) supplies water and power to most users in the Imperial Valley. Operations are divided between a water division responsible for distribution and collection of water, and a power division responsible for generation and distribution of electrical power. Natural gas service in the area is provided by the Southern California Gas Company.

The Project site is primarily undeveloped and utilized for agricultural production. Therefore, the site's current energy demand is minimal. The IID would provide electricity service to the Project site (i.e., during non-generating hours for the facility). IID meets its annual resource requirements through a mix of the IID-owned generation and a number of purchase power contracts that can take the form of must-take contracts and call options. The IID's generation resources range from hydroelectric resources on the All-American Canal System to San Juan Unit 3, a coal plant in New Mexico, to the Palo Verdes Nuclear Generation Station near Phoenix. The IID also owns thermal generation facilities within its service territory, fueled by natural gas or diesel. The goal of

conserving energy implies the wise and efficient use of energy. The means of achieving this goal includes decreasing overall per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy sources.

4.6.2 Regulatory Setting

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the U.S. Environmental Protection Agency's [USEPA] EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Code of Regulations (CCR) sets forth energy standards for buildings. Further, the State provides rebates/tax credits for installation of renewable energy systems and offers the Flex Your Power program, which promotes conservation in multiple areas. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and to the use of renewable energy sources.

Federal

Energy Policy and Conservation Act, and CAFE Standards

The *Energy Policy and Conservation Act of 1975* established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the country. The USEPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the USEPA city and highway fuel economy test results. Based on information generated under the CAFE program, the DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

Energy Policy Act of 1992 and 2005

The *Energy Policy Act of 1992* (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. The EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in the EPAct. Federal tax deductions are allowed for businesses and individuals to

cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The *Energy Independence and Security Act of 2007* is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

State

Warren-Alquist Act

The 1975 *Warren-Alquist Act* established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The Act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission (CPUC) regulates privately-owned utilities in the energy, rail, telecommunications, and water fields.

State of California Energy Action Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the California Energy Action Plan (2008 update). The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

Assembly Bill-2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003). Further, in response to the CEC's 2003 and 2005 Integrated Energy Policy Reports, Governor Davis directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

AB-2076 also included a performance-based goal to reduce the state-wide petroleum demand to 15 percent below 2003 demand levels by the year 2020.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required the CEC to:

“conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety” (Public Resources Code Section [PRC] 25301(a)).

This work culminated in the Integrated Energy Policy Report (IEPR).

The CEC adopts an IEPR every two years and an update every other year. The 2019 IEPR is the most recent IEPR, which was adopted February 20, 2020. The 2019 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the State's energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California's nuclear power plants.

Senate Bill 1078: California Renewables Portfolio Standard Program

Senate Bill 1078 (SB-1078) (Chapter 516, Statutes of 2002) establishes a renewable portfolio standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including

investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward by SB-1078 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least one percent each year. The outcome of this legislation will impact regional transportation powered by electricity. As of 2020, the State has reported that 33.09 percent of electricity is sourced from certified renewable sources (CEC, 2022).

Senate Bill X1-2: California Renewable Energy Resources Act

SB-X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB-X1-2 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB-X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB-X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond.

Senate Bill 100: California Renewables Portfolio Standard Program

Senate Bill 100 (SB-100) requires that all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, supply 44 percent of retail sales from renewable resources by December 31, 2024, 50 percent by December 31, 2026, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. The law requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB-350) requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Energy Action Plan

The first Energy Action Plan (EAP) emerged in 2003 from a crisis atmosphere in California's energy markets. The State's three major energy policy agencies (CEC, CPUC, and the Consumer Power and Conservation Financing Authority [established under deregulation and now defunct]) came together to develop one high-level, coherent approach to meeting California's electricity and natural

gas needs. It was the first time that energy policy agencies formally collaborated to define a common vision and set of strategies to address California's future energy needs and emphasize the importance of the impacts of energy policy on the California environment.

In the October 2005 EAP II, CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research and development activities. CEC recently adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB-1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a state plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with the CARB and in consultation with other State, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

California Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. The CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. In 2016, the CEC updated the California Energy Code again, effective January 1, 2017. The CEC estimates that the 2016 California Energy Code is 28 percent more efficient than 2013 California Energy Code for residential construction and is 5 percent more efficient for non-residential construction.

The 2019 California Energy Code was adopted by the CEC on May 9, 2018, and will apply to projects constructed after January 1, 2020. The 2019 California Energy Code is designed to move the State closer to its zero-net energy goals for new residential development. It does so by requiring all new residences to install enough renewable energy to offset all the electricity needs of each residential unit (CCR, Title 24, Part 6, Section 150.1(c)4). The CEC estimates that the combination of mandatory on-site renewable energy and prescriptively required energy efficiency standards will result in a 53 percent reduction in new residential construction as compared to the 2016 California

Energy Code. Non-residential buildings are anticipated to reduce energy consumption by 30 percent as compared to the 2016 California Energy Code primarily through prescriptive requirements for high-efficiency lighting (CEC, 2018). The Energy Code is enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in the California Energy Code.

Assembly Bill 32, Senate Bill 32, and Climate Change Scoping Plan and Update

In December 2008, the CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons of carbon dioxide-equivalent (MMT CO₂e) emissions, or approximately 21.7 percent from the State's projected 2020 emission level of 545 MMT CO₂e under a business-as-usual scenario (this is a reduction of 47 MMT CO₂e, or almost 10 percent, from 2008 emissions). In May 2014, the CARB released and has since adopted the First Update to the Climate Change Scoping Plan to identify the next steps in reaching AB-32 goals and evaluate progress that has been made between 2000 and 2012 (CARB, 2014). According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 (CARB, 2014). The update also reports the trends in GHG emissions from various emissions sectors (e.g., transportation, building energy, agriculture).

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 Section 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. Achievement of these goals will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by the CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB, 2017). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). In 2015, electricity generation accounted for 11 percent of the State's GHG emissions. California plans to significantly reduce GHG emissions from the energy through the development of renewable electricity generation in the form of solar, wind, geothermal, hydraulic, and biomass generation. As of 2021, the investor-owned utilities have executed renewable

electricity contracts necessary to meet 2021 renewable portfolio standard (RPS) requirements and are forecasted to have excess renewable procurement through 2027 (CPUC, 2021) and will continue to increase statewide renewable energy to 50 percent by 2030, as directed by SB-350. Additionally, the State will further its climate goals through improving the energy efficiency of residential and non-residential buildings by continual updates (i.e., every 3 years) to the California Energy Code, which contains mandatory and prescriptive energy efficiency standards for all new construction.

More details about the statewide GHG reduction goals and 2017 Scoping Plan measures are provided in the regulatory setting of Section 4.8, “Greenhouse Gas Emissions.”

Senate Bill 375

Senate Bill 375 (SB-375), signed by the Governor in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB-375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO’s Regional Transportation Plan (RTP). CARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035. Implementation of SB-375 will have the co-benefit of reducing California’s dependency of fossil fuels and making land use development and transportation systems more energy efficient.

The Southern California Association of Governments (SCAG) serves as the MPO for Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. The Project site is located within Imperial County. SCAG adopted its 2020-2045 RRTP/SCS in 2020. The final recommended reduction targets established for the SCAG are to achieve an 8 percent per-capita reduction compared to 2012 emissions from cars and trucks by 2020 and a 13 percent per-capita reduction by 2035.

Executive Order B-30-15

On April 20, 2015, Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB-32, discussed above). California’s new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2° Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Advanced Clean Cars Program

The CARB adopted the first Low-Emission Vehicle (LEV) regulations in 1990, requiring automobile manufacturers to introduce progressively cleaner light- and medium-duty vehicles with more durable emission controls from the 1994 through 2003 model years. By adopting these regulations, the CARB established the most stringent criteria pollutant exhaust regulations ever for light- and medium-duty vehicles. The regulations, now referred to as the LEV I regulations, included three primary elements: 1) tiers of exhaust emission standards for increasingly more stringent categories of low-emission vehicles, 2) a mechanism requiring each auto manufacturer to phase-in a progressively cleaner mix of vehicles from year to year with the option of credit banking and trading, and 3) a requirement that a specified percentage of passenger cars and light-duty trucks be zero-emission vehicles (ZEVs) with no exhaust or evaporative emissions.

Building on LEV I, the second generation LEV II regulations continued to reduce criteria pollutant emissions from new light- and medium-duty vehicles starting with the 2004 model year. In 2004, the CARB approved the landmark Pavley regulations to require automakers to control greenhouse gas emissions from new vehicles for the 2009 through 2016 model years. These were the first regulations in the nation to control greenhouse gas emissions from motor vehicles. Upon adoption of federal greenhouse gas standards by the USEPA that preserved the benefits of the Pavley regulations, the Pavley regulations were revised to accept compliance with the federal standards as compliance with California's standards in the 2012 through 2016 model years. This is referred to as the "deemed to comply" option. In 2012, the CARB adopted the LEV III regulations as part of the Advanced Clean Cars rulemaking package that also includes the state's ZEV regulation. The LEV III regulations include increasingly stringent emission standards for criteria pollutants and greenhouse gases for new passenger vehicles through the 2025 model year (CARB, 2021).

Local

Southern California Association of Government's (SCAG) Connect SOCAL 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

The 2020-2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions), tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

County of Imperial General Plan

The Project site is under the County of Imperial jurisdiction and subject to the County Development code and General Plan guidelines. The County General Plan Renewable Energy and Transmission

and Land Use Elements (both revised on October 6, 2015) includes specific goals, policies and standards for renewable energy and specifically solar projects (Table 4.6-1).

TABLE 4.6-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN ENERGY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Renewable Energy and Transmission Element		
Goal 1: Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.	Yes	The proposed Project supports the safe and orderly development of renewable energy (solar energy).
Objective 1.2: Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.	Yes	See response to Goal 1.
Goal 2: Encourage development of electrical transmission lines along routes which minimize potential environmental effects.	Yes	The proposed gentie would be located within the Project site, and would connect with IID’s existing KN&KS transmission line, thereby minimizing off-site disturbance and environmental impacts.
Objective 2.1: To the extent practicable, maximize utilization of IID’s transmission capacity in existing easements or rights-of-way. Encourage the location of all major transmission lines within designated corridors, easements, and rights-of-way.	Yes	See response to Goal 2.
Objective 2.2: Where practicable and cost-effective, design transmission lines to minimize impacts on agricultural, natural, and cultural resources, urban areas, military operation areas, and recreational activities.	Yes	The Project generation tie in line would be located in a parcel that is currently not in agricultural use.
Goal 3: Support development of renewable energy resources that will contribute to and enhance the economic vitality of Imperial County.	Yes	Development of solar PV generation facilities are allowed through the County Renewable Energy Zoning Overlay that encompasses each parcel.
Objective 3.3: Encourage the development of services and industries associated with renewable energy facilities.	Yes	The proposed Project would utilize local construction companies and workers for development of the facility.
Goal 8: Develop overlay zones that will facilitate the development of renewable energy resources while preserving and protecting agricultural, natural, and cultural resources. Development of overlay zones shall include coordination with Federal, State, County, Tribal governments, educational entities, the public and local industries.	Yes	See response to Objective 8.1 below.

TABLE 4.6-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN ENERGY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Objective 8.1. Allow for County review with appropriate development and performance standards for development of local resources within the overlay zones.	Yes	The proposed Project is sited within in an existing Renewable Energy Overlay Zone.
Land Use Element		
Goal 3. Achieve balanced economic and residential growth while preserving the unique natural, scenic, and agricultural resources of Imperial County.	Yes	See response to Objective 3.1.5 below.
Objective 3.15. Support the safe and orderly development of renewable energy in conformance with the goal and objectives of the Renewable Energy and Transmission Element.	Yes	The proposed Project is consistent with the goals and objectives of the Renewable Energy and Transmission Element.

Source: Imperial County, General Plan Land Use Element, 2015b; and Renewable Energy and Transmission Element, 2015c.

4.6.3 Analysis of Project Effects and Significance

Methodology

This analysis addresses the Project's potential energy usage, including electricity, natural gas, and transportation fuel. Energy consumption during both construction and operation is assessed. Specific analysis methodologies are discussed below. The assessment presented herein is based in part on the Project's carbon dioxide emissions contained in the *Air Quality Technical Report Vikings Solar Energy Storage Project Imperial County, California* which is provided as Appendix F this EIR.

Construction/Decommissioning

Electricity

Electricity is not expected to be consumed in large quantity during Project construction, as construction equipment and vehicles are typically diesel- or gas - powered, not electric. Electricity for construction would be provided by IID and a hookup would be installed at the Project site; however, electricity usage from such connection is anticipated to be minimal (i.e., mostly for security lighting). Therefore, electricity associated with construction- or decommissioning-related activities was not calculated.

Natural Gas

Natural gas is not expected to be consumed in large quantity during Project district construction (i.e., no natural gas-powered equipment or vehicles). Therefore, natural gas associated with construction activities was not calculated.

Diesel and Gasoline

Regarding transportation related fuel consumption during construction, it is assumed that only diesel fuel would be used in off road construction equipment and for haul trucks used during delivery of solar panels to the Project site. On road vehicles for construction workers are assumed to be solely powered by gasoline. The diesel and gasoline fuel consumptions were calculated using the capital CO₂ emissions contained in the *Air Quality Technical Report Vikings Solar Energy Storage Project Imperial County, California* which is provided as Appendix F of this EIR and EPA's default emission rates of 19.4 pounds of CO₂ per gallon of gasoline and 22.2 pounds of CO₂ per gallon of diesel (EPA, 2005).

Operations

Electricity

Electricity is that expected to be consumed in large quantities during Project operations. Electricity for operation would be provided by IID at the same hookup installed during construction on the Project site; however, electricity usage from such connections is anticipated to be minimal (mostly for lighting and air conditioning). Therefore, electricity usage associated with operation activities is anticipated to be minimal.

Natural Gas

Natural gas is not expected to be consumed in large quantity during Project operation (i.e., no natural gas-powered equipment or vehicles). Therefore, natural gas usage associated with operation activities is anticipated to be minimal.

Diesel and Gasoline

Operational energy usage includes worker trips for facility maintenance including the occasional washing of solar panels. The diesel and gasoline fuel consumptions were calculated using the capital CO₂ emissions contained in the *Air Quality Technical Report Vikings Solar Energy Storage Project Imperial County, California* located in Appendix F of this EIR and EPA's default emission rates of 19.4 pounds of CO₂ per gallon of gasoline and 22.2 pounds of CO₂ per gallon of diesel (EPA, 2005).

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

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

Analysis

Impact 4.6-1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction and Decommissioning

Electricity and natural gas are not expected to be consumed in large quantities during construction or decommissioning-related activities, as construction equipment and vehicles are not powered by electricity or natural gas. Based on these considerations, the Project would have a less than significant impact on electricity and natural gas consumption.

Construction of the project would result in fuel consumption from the use of construction tools and equipment, haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. Project construction is expected to consume a total of approximately 15,490 gallons of diesel fuel from construction equipment and vendor hauling and water trips at associated and approximately 13,540 gallons of gasoline from construction worker vehicle trips. Construction activities and corresponding fuel energy consumption would be temporary and localized as the use of diesel fuel in heavy equipment would not be a typical condition of the Project.

While construction and decommissioning activities would be temporary in nature, energy consumed during the activities would be irreversible. This analysis assumes that the energy consumption associated with decommissioning activities would be similar to energy consumption for construction activities. Implementation of mitigation measure MM AQ-2, which requires the use of energy efficient and alternatively fueled construction equipment, would ensure that unnecessary fuel consumption during Project construction and decommissioning would not result in the wasteful inefficient or unnecessary consumption of transportation fuels. Impacts would be maintained below a level of significance.

Operations

Electricity required during operations would be greatly offset by the electricity produced by the solar facility as discussed in the *Air Quality Technical Report Vikings Solar Energy Storage Project Imperial County, California* (Appendix F), operation of renewable energy facilities would offset

greenhouse gas emissions by replacing energy generated by fossil fuel power plants. The Project would generate approximately 379,991 MWh/year, totaling approximately 11.4 GWh over a 30-year life space that would be added to the power grid and be used in place of electricity generated by fossil fuel sources. Based on these considerations, the Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Impacts under this criterion would be less than significant.

Natural Gas

Natural gas is not expected to be consumed during operation related activities; therefore, the proposed Project would have no impact on natural gas consumption.

Diesel and Gasoline

During operations, it is estimated that the maintenance-related vehicle trips to the Project site would consume approximately 20 gallons of gasoline and 20 gallons of diesel fuel annually. This consumption represents less than 0.0001 percent of all gasoline and diesel sold within Imperial County in 2020 (CEC, 2020). Based on these considerations, operation of the proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Impacts under this criterion would be less than significant.

Impact 4.6-2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction equipment would comply with federal, state, and regional requirements where applicable. With respect to truck fleet operations the USEPA and the National Highway Traffic Safety Administration (NHTSA) have adopted fuel efficiency standards for medium- and heavy-duty trucks. The Phase 1 heavy-duty truck standards apply to vehicles from model years 2014 through 2018 and will result in a reduction in fuel consumption from 6 to 23% over the 2010 baseline, depending on the vehicle type. The USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which covered model years 2021 through 2027 and required the phase-in of a 5 to 25% reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type. The energy modeling for trucks does not take into account specific fuel reduction from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standard; However, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks overtime as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB's regulations regarding heavy duty truck idling limits of five minutes at a location and the phase in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption for more fuel-efficient engines. While these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in

the efficient use of construction related energy. Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency during construction. Short-term impacts under this criterion would be impact would be less than significant.

Operations

As discussed above, the 2017 *Climate Change Scoping Plan* outlined the main strategies California will implement to achieve a 40% reduction in greenhouse gas emissions by the year 2030 (compared to 1990 emission levels). One such strategy is to reduce GHG emissions produced during electricity generation. As described in Section 4.8, Greenhouse Gas Emission, the proposed Project would displace region-wide and statewide emissions of GHGs over its expected lifetime. This reduction in GHG emissions is a direct result of increasing the share of renewable energy available to investor-owned utilities required under SB-78, SB-X1-2, and SB-100.

Overall, because the main objectives of the Project are to assist the state in meeting its obligations under California's RPS Program and assist California in meeting the GHG emissions reduction goal of 40 percent below 1990 levels by 2030, the Project would be consistent with the applicable recommended actions of CARB's 2017 Climate Change Scoping Plan, as well as applicable federal, state and local policies. Specifically, the project would assist the State and regulated utility providers to generate a greater portion of energy from renewable sources consistent with the 2030 RPS. Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency during operations and long-term impacts would be less than significant.

4.6.4 Mitigation Measures

No additional mitigation would be required.

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4.7 Geology and Soils

This section addresses potential geology, soil and paleontological resource impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project, as applicable.

Information used in preparing this section and in the evaluation of potential impacts to geology, soils, and paleontological resources was derived from of the following sources:

- *Geotechnical Report for the Vikings Solar Project*, prepared by Landmark Consultants, Inc. (Landmark Consultants, 2021: Appendix I),
- *Phase I Environmental Site Assessment* prepared by G.S. Lyon Consultants, Inc. (GS Lyon, 2021, Appendix J); and,
- *Paleontological Resources Assessment* prepared by SWCA (SWCA, 2022g, Appendix L).

Scoping Issues Addressed

During the scoping period for the proposed Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments related to geology and soils, or paleontological resources, were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department (ICPDSD) determined in the Initial Study (IS), located in Appendix A-2, that the following environmental issue area resulted in no impact and was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding this issue.

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. The Project requires minimal operations and maintenance activities and would not require the presence of full-time employees. Thus, no septic tanks or wastewater repositories would be required. No impacts are expected.

4.7.1 Environmental Setting

Geologic Setting

Regional Geology

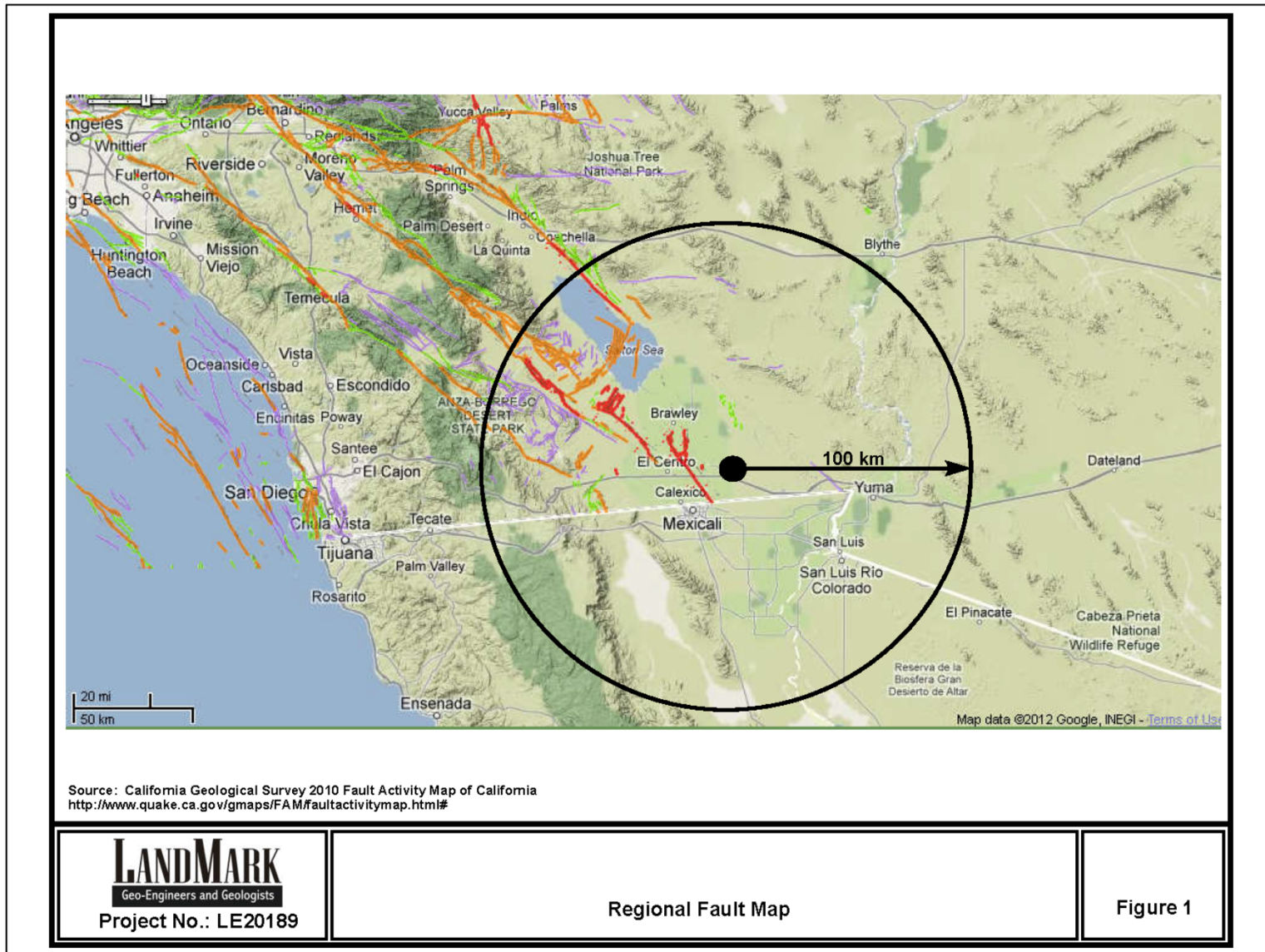
The Project site is located in the East Mesa portion of the Salton Trough physiographic province. The Salton Trough is a topographic and geologic structural depression resulting from large scale regional faulting. The trough is bounded on the northeast by the San Andreas Fault and Chocolate Mountains and the southwest by the Peninsular Range and faults of the San Jacinto Fault Zone. The Salton Trough represents the northward extension of the Gulf of California, containing both marine and non-marine sediments deposited since the Miocene Epoch. Tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of seismicity. Figure 4.7-1 shows the location of the site in relation to regional faults and physiographic features (Landmark Consultants, 2021).

The East Mesa lies east of the Imperial Valley, which is underlain by lacustrine deposits consisting of interbedded lenticular and tabular silt, sand, and clay, and west of the Algodones Sand Dunes. The East Mesa is underlain by deep sand deposits derived from eolian deposition along the eastern margin of the Imperial Valley. The Late Pleistocene to Holocene lake deposits of the Imperial Valley are probably less than 100 feet thick and derived from periodic flooding of the Colorado River which intermittently formed Lake Cahuilla. Older deposits consist of Miocene to Pleistocene non-marine and marine sediments deposited during intrusions of the Gulf of California. Basement rock consisting of Mesozoic granite and Paleozoic metamorphic rocks are estimated to exist at depths between 15,000 - 20,000 feet) (Landmark Consultants, 2021).

Seismic and Geologic Hazards

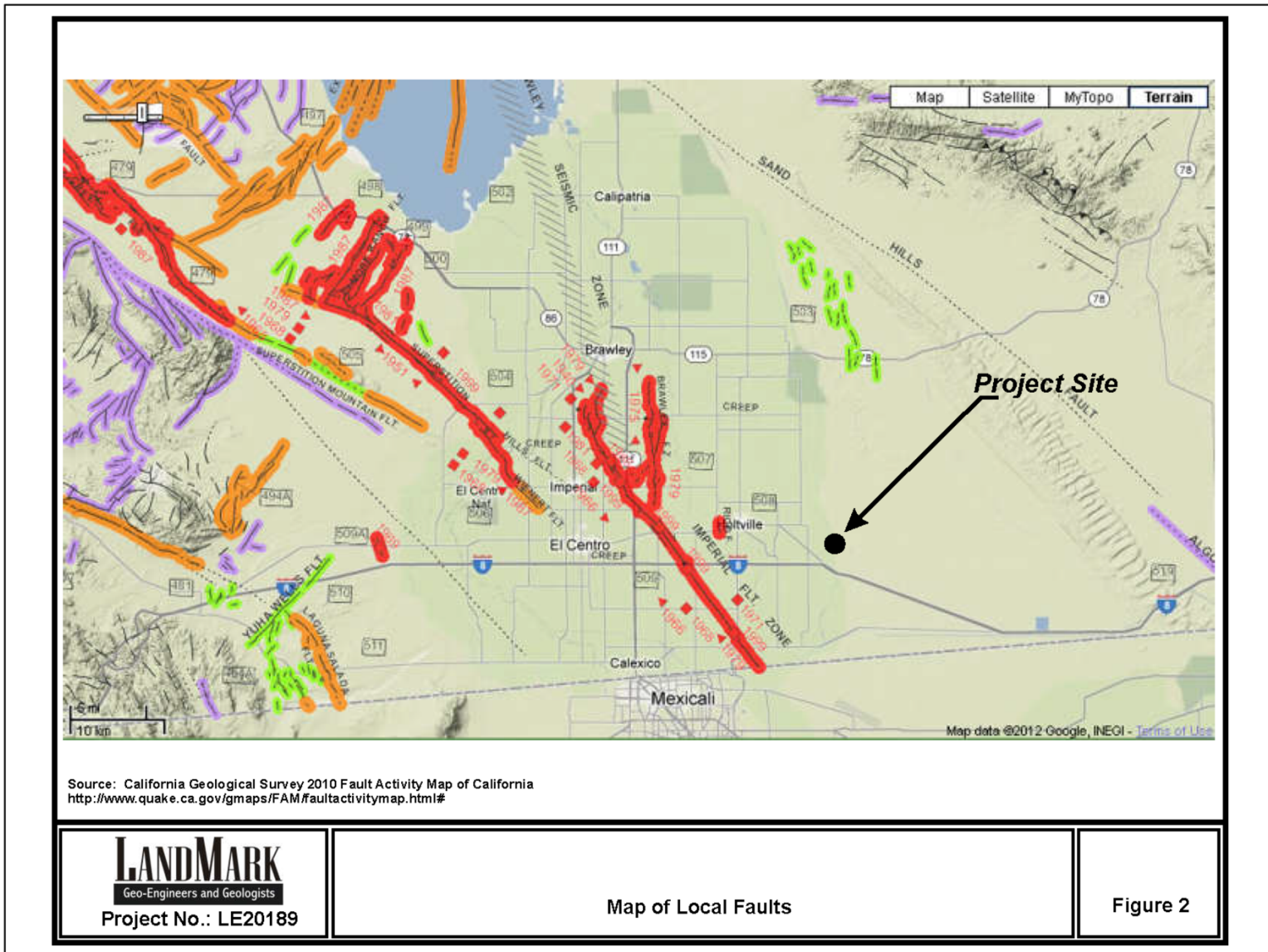
Faulting

The Project site is located in the seismically active Imperial Valley of southern California with numerous mapped faults traversing the region including the San Andreas, San Jacinto, and Elsinore Fault Zones in southern California. The Imperial Fault represents a transition from the more continuous San Andreas Fault to a more nearly echelon pattern characteristic of the faults under the Gulf of California. A fault map illustrating known active faults relative to the site is presented on Figure 4.7-2. The criterion for fault classification adopted by the California Geological Survey defines Earthquake Fault Zones along Holocene-active or pre-Holocene faults. Earthquake Fault Zones are regulatory zones that address the hazard of surface fault rupture. A Holocene-active fault is one that has ruptured during Holocene time (within the last 11,700 years). A pre-Holocene fault is a fault that has not ruptured in the last 11,700 years.



Source: Landmark Consultants, Inc. 2021

Regional Fault Map
Vikings Solar Energy Generation Project
Figure 4.7-1



Source: Landmark Consultants, Inc. 2021

Local Faults Map
Vikings Solar Energy Generation Project
Figure 4.7-2

Pre-Holocene faults may still be capable of surface rupture in the future but are not regulated by the Alquist Priolo act.

The nearest zoned fault is the Rico Fault located approximately 7.1 miles west of the Project site and the Imperial fault located approximately 7.9 miles west to southwest of the Project site. The primary seismic hazard at the Project site is the potential for strong ground shaking during earthquakes along the Rico, Imperial and Brawley Faults (Landmark Consultants, 2021).

Ground Acceleration

The Project site is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. Ground motions are dependent primarily on the earthquake magnitude and distance to the seismogenic (rupture) zone. Acceleration magnitudes also are dependent upon attenuation by rock and soil deposits, direction of rupture and type of fault; therefore, ground motions may vary considerably in the same general area. The Project site has been classified as Site Class D (Where the soil properties are not known in sufficient detail to determine the site class) and has a S1 (spectral response acceleration at 1.0 sec) value of 0.6, which would require a site-specific ground motion hazard analysis. However, American Society of Civil Engineers 7-16 Section 11.4.8 provides three exceptions which permit the use of conservative values of design parameters for certain conditions for Site Class D and E sites in lieu of a site-specific hazard analysis. Exception 2, discussed below, would apply to the Project Site.

Exception 2: Structures on Site Class D sites with S1 greater than or equal to 0.2, provided the value of the seismic response coefficient C_s is determined by Equations 12.8-2 for values of $T \leq 1.5T_S$ and taken as equal to 1.5 times the value computed in accordance with either Equation 12.8-3 for $T_L \geq T > 1.5T_S$ or Equation 12.8-4 for $T > T_L$. (Landmark Consultants, 2021).

Surface Rupture. The California Geological Survey (CGS) (2016) has established Earthquake Fault Zones in accordance with the 1972 Alquist-Priolo Earthquake Fault Zone Act. The Earthquake Fault Zones consists of boundary zones surrounding well defined, active faults or fault segments. The Project site does not lie within an Alquist-Priolo Earthquake Fault Zone; therefore, surface fault rupture is considered to be low at the Project site. However, because of the high tectonic activity and deep alluvium of the region, the potential for surface rupture on undiscovered or new faults that may underlie the site cannot be discounted (Landmark Consultants, 2021).

Liquefaction. Although the Imperial Valley has not yet been evaluated for seismic hazards by the CGS seismic hazards zonation program, liquefaction is well documented in the Imperial Valley after strong seismic events (Landmark Consultants, 2021).

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to

reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations (Landmark Consultants, 2021).

Four conditions are generally required for liquefaction to occur:

1. The soil must be saturated (relatively shallow groundwater);
2. The soil must be loosely packed (low to medium relative density);
3. The soil must be relatively cohesionless (not clayey); and
4. Ground shaking of sufficient intensity must occur to function as a trigger mechanism.

All of these conditions exist to some degree at the Project site (Landmark Consultants, 2021).

Other Potential Geologic Hazards

Landsliding. The hazard of landsliding is unlikely due to the regional planar topography. No ancient landslides are shown on geologic maps of the region and no indications of landslides were observed during the site investigation (Landmark Consultants, 2021).

Volcanic hazards. The Project site is not located in proximity to any known volcanically active area and the risk of volcanic hazards is considered very low (Landmark Consultants, 2021).

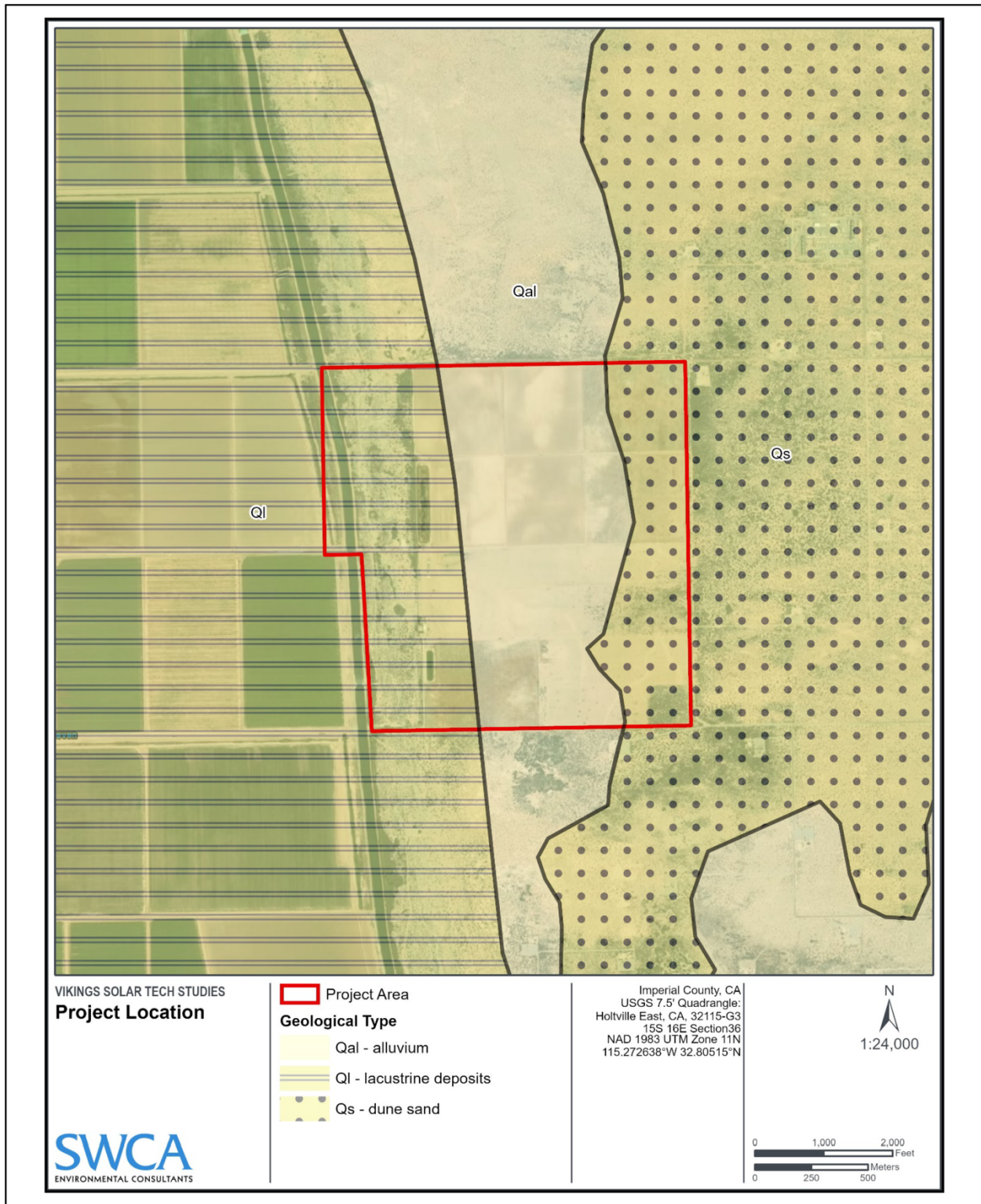
Tsunamis and seiches. The Project site is not located near any large bodies of water, so the threat of tsunami, seiches, or other seismically-induced flooding is unlikely (Landmark Consultants, 2021).

Flooding. The Project site is located in FEMA Flood Zone X, an area determined to be outside the 0.2% annual chance floodplain (FIRM Panels 06025C1775). The Project site is also along the East Highline Canal which has potential to overflow into the channelized parcels along the east canal bank (Landmark Consultants, 2021).

Expansive soil. The near surface soils in the Project site are sands which are considered non expansive (Landmark Consultants, 2021).

Paleontological Setting

The surficial geology of the Project area consists of younger alluvial sediments (Qal), lacustrine sediments (Ql), and dune deposits (Qs) (Figure 4.7-3). These units and their paleontological potential are discussed below and shown in Table 4.7-1. Middle Holocene and older sediments in the subsurface of the Project area are known to preserve fossil resources in the Salton Trough and Imperial County. The records of the Los Angeles County Natural History Museum (LACM) indicate they have several fossil localities represented in their collection from this Project vicinity.



Source: SWCA 2021

Geologic Units Underlying Project Site
Vikings Solar Energy Generation and Storage Project
Figure 4.7-3

TABLE 4.7-1: GEOLOGIC UNITS UNDERLYING THE PROJECT AREA

Formation	Abbreviation	Paleontological Potential	Presence in the Project Area
Alluvium	Qal	Low to High, increasing with depth	Surface-central Project area
Lacustrine Deposits	Ql	Low to High, increasing with depth	Surface-western Project area Subsurface – throughout Project area
Dune Sand	Qs	Low to High, increasing with depth	Surface-eastern Project area

Source: SWCA, 2022g.

The closest of these is from Holtville, approximately 5.5 miles to the west of the Project site, where two invertebrate localities have been recorded. Other fossil localities in Pleistocene-aged sediments in the vicinity of the Project area include Mt. Signal, the Yuha basin, the Anza-Borrego Desert, and south of Salton City (Table 4.7-2).

TABLE 4.7-2: LACM FOSSIL LOCALITIES NEAREST THE APE

Locality Number	Location	Formation	Age	Taxa
LACM IP 4774, 4780	Holtville (more specific data not available)	Unknown formation	Pleistocene	Invertebrates
LACM VP 1719	Mt. Signal; Imperial County	Unknown Formation (gravel pit)	Pleistocene	Horse (Equidae)
LACM VP 1718	Yuha Basin	Palm Spring Formation (sandstone concretion)	Pleistocene	Horse (Equidae)
LACM VP 6733, 5850	Superstition Hills, Anza-Borrego Desert	Brawley Formation (Coarse dark brown sandstone)	Pleistocene	Camel family (Lamini); other unidentified vertebrates
LACM VP 1726	16 miles south of Salton City, 1 block west of Highway 99	Unknown formation	Pleistocene	Ground sloth (Megalonyx)
LACM VP 4098-4100	Yuha Basin	Unknown formation	Pleistocene	Cat (Felis); Camel family (Camelidae); Carnivore (Carnivora); horse (Equus)

Notes: LACM: Natural History Museum of Los Angeles County; APE: Area of Potential Effect.

Source: SWCA, 2022g.

Study Area Paleontology

No previously recorded paleontological resources have been identified within the Project site, the proximity of numerous fossil localities in the vicinity of the Project site indicates the younger alluvium, lacustrine deposits, and dune sands present in the Project site have low to high paleontological potential, increasing with depth. While the exact depth at which the transition from low to high potential occurs is not known in the Project site, the review of scientific literature presented here indicates it may be as shallow as 1.5 meters (5 feet) below ground surface (bgs).

4.7.2 Regulatory Setting

Geologic resources and geotechnical hazards are governed by local jurisdictions. The conservation elements and seismic safety elements of city and county general plans contain policies for the protection of geologic features and avoidance of hazards. The California Environmental Quality Act (CEQA) is the major environmental statute that guides the design and construction of projects on non-federal lands in California. This statute sets forth a specific process of environmental impact analysis and public review. In addition, the project proponent must comply with other applicable State and local statutes, regulations and policies. Relevant and potentially relevant statutes, regulations and policies are discussed below.

State

Geology

California Building Code

The California Building Code (CBC) (2019), as contained in Title 24 California Code of Regulations (CCR) Part 2, has been adopted by the California Building Standards Commission and other agencies within the State of California, including Imperial County. This Code implements the requirements contained in the 2018 International Building Code and consists of 12 parts that contain administrative regulations of the California Building Standards Commission. Local agencies must ensure that development in their jurisdictions complies with guidelines contained in the CBC. Cities and counties can, however, amend the CBC to adopt more stringent building standards beyond those provided because of unique climatic, geological, or topographical conditions.

Alquist-Priolo Earthquake Fault Zoning Act

The *Alquist-Priolo Earthquake Fault Zoning Act of 1972* regulates development near active faults, with the specific intention of mitigating the hazard of surface fault rupture on buildings intended for human occupancy. In accordance with this law, the CGS maps active faults and designates Earthquake Fault Zones along mapped faults. This Act groups faults into categories of active (historic or Holocene-age faults), potentially active (Quaternary-age faults), and inactive (pre-Quaternary age faults).

Local government agencies are mandated by this Act to require site-specific geologic investigations for proposed projects contained within a designated Alquist-Priolo Earthquake Fault Zone area. Such investigations typically include subsurface trenching to determine the presence, or lack of faulting.

Under this Act, the California State Geologist identifies areas in the state that are at risk from surface fault rupture. The main purpose of this Act is to prevent construction of buildings used for human occupancy where traces of active faults are evident on the earth's surface. Fault rupture generally occurs within 50 feet of an active fault line and is limited to the immediate area of the fault zone where the fault breaks along the surface. Such a rupture could potentially displace and/or deform the ground surface. The Project site does not lie within an Alquist-Priolo Earthquake Fault Zone.

Seismic Hazards Mapping Act of 1990

In accordance with Public Resources Code (PRC), Chapter 7.8, Division 2, the CGS, the State Geologist compiled maps identifying Seismic Hazard Zones. The *Seismic Hazards Mapping Act of 1990* addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. The purpose of this Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes.

Cities, counties, and state agencies are directed to use and incorporate site-specific geotechnical hazard investigations and seismic hazard zone maps developed by CGS in their land use planning, as part of their permit approval process. This Act provides a mechanism to identify when provisions beyond standard building codes are necessary to ensure safe development and to reduce future losses.

Paleontology

California Code of Regulations (CCR), Title 14, Division 3, Chapter 1, Sections 4307-4309

These code sections prohibit the removal and destruction of geological features and any object of archaeological or historical interest or value. Section 4309 provides that the Department of Parks and Recreation may grant a permit to remove, treat, disturb, or destroy plants or animals or geological, historical, archaeological, or paleontological materials.

California Environmental Quality Act (CEQA)

CEQA affords paleontological resources explicit protection, specifically in item V(c) of CEQA Guidelines Appendix G, the Environmental Checklist Form, which addresses the potential for adverse impacts to “unique paleontological resource[s] or site[s] or ... unique geological feature[s].” This provision covers fossils of significant importance—remains of species or genera new to

science, as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth.

In addition, CEQA provides that generally, a resource shall be considered “historically significant” if it has yielded or may be likely to yield information important in prehistory (PRC Section 15064.5[a][3][D]). Paleontological resources would fall within this category. Sections 5097.5 and 30244 of PRC Chapter 1.7 also define unauthorized removal of fossil resources as a misdemeanor and require mitigation of disturbed sites.

Paleontological resources are classified as nonrenewable scientific resources and are protected by state statute (PRC Section 5097.5). However, neither state nor local agencies have specific jurisdiction over paleontological resources, but all must evaluate potential impacts and provide applicable mitigation measures. State and local agencies do not require a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earthmoving on state or private land in a project site.

Local

Imperial County General Plan Seismic and Public Safety Element

The Imperial County General Plan includes a “Seismic and Public Safety Element.” The Seismic and Public Safety Element identifies potential natural and human-induced hazards and provides policy to avoid or minimize the risk associated with hazards. Potential hazards must be addressed in the land use planning process to avoid the unfolding of dangerous situations. The policies and implementation measures in the General Plan applicable to the Project are outlined below (Table 4.7-3).

TABLE 4.7-3: CONSISTENCY WITH APPLICABLE GENERAL PLAN GEOLOGY, SOILS, AND SEISMICITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Seismic and Public Safety Element		
<p>Goal 1: Include public health and safety considerations in land use planning.</p> <p>Objective 1.1: Ensure that data on geological hazards is incorporated into the land use review process, and future development process.</p> <p>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.</p>	Yes	<p>Division 15 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, construction of buildings intended for human occupancy which are located across the trace of an active fault are prohibited. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a person to undue hazard created by the construction.</p>

TABLE 4.7-3: CONSISTENCY WITH APPLICABLE GENERAL PLAN GEOLOGY, SOILS, AND SEISMICITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
<p>Objective 1.7: Require developers to provide information related to geologic and seismic hazards when siting a proposed project.</p>		<p>Since the Project site is located in a seismically active area, the Project is required to be designed in accordance with the CBC. It should be noted that the Project would be remotely operated and would not require any habitable structures on site. In considering these factors in conjunction with mitigation requirements outlined in the impact analysis, the risks associated with seismic hazards would be minimized.</p> <p>A design-level geotechnical investigation was conducted to evaluate the potential for site specific hazards associated with seismic activity.</p>
<p>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.</p> <p>Objective 2.2: Reduce risk and damage due to seismic hazards by appropriate regulation.</p> <p>Objective 2.5: Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.</p> <p>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.</p>	<p>Yes</p>	<p>See above.</p>
<p>Renewable Energy and Transmission Element</p>		
<p>Goal 7: Actively minimize the potential for land subsidence to occur as a result of renewable energy operations.</p>	<p>Yes, with mitigation</p>	<p>Subsidence has been identified as a potential significant impact from development of the proposed Project. However, with the implementation of Mitigation Measure (MM) GEO-2, potential impacts associated with liquefaction would be reduced to a less than significant level.</p>

TABLE 4.7-3: CONSISTENCY WITH APPLICABLE GENERAL PLAN GEOLOGY, SOILS, AND SEISMICITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Objective 7.1: Require that all renewable energy facilities, where deemed appropriate, include design features that will prevent subsidence and other surface conditions from impacting existing land uses.	Yes, with mitigation	See response to Goal 7 above.
Objective 7.3: Require renewable energy facility permittees to establish and monitor subsidence detection networks in areas affected by permitted project activities.	Yes, with mitigation	See response to Goal 7 above.
Objective 7.4: Require monitoring programs for determining the possibility or extent of induced subsidence.	Yes, with mitigation	See response to Goal 7 above.
Agricultural Element		
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.	Yes	See response to Objective 1.11.
Objective 1.11: Control and prevent soil erosion when possible.	Yes	The Project applicant would be required to implement on-site erosion control measures in accordance with County standards, which require the preparation, review, and approval of a grading plan by the County Engineer. Given these considerations and the fact that the encountered soil types have a low erosion potential, the Project’s long-term impact in terms of soil erosion and loss of topsoil would be less than significant.
Land Use Element		
Goal 9: Identify and preserve significant natural, cultural, and community character resources and the County's air and water quality.	Yes	See response to Objective 9.1 below.
Objective 9.1: Preserve as open space those lands containing watersheds, aquifer recharge areas, floodplains, important natural resources, sensitive vegetation, wildlife habitats, historic and prehistoric sites, or lands which are subject to seismic	Yes	With the implementation of the MM GEO-1, potential impacts associated with strong seismic ground shaking would be reduced to a less than significant level with the implementation of recommendations in the geotechnical report (Appendix I).

TABLE 4.7-3: CONSISTENCY WITH APPLICABLE GENERAL PLAN GEOLOGY, SOILS, AND SEISMICITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
hazards and establish compatible minimum lot sizes.		

Source: County of Imperial, General Plan Seismic and Public Safety Element, n.d., Agricultural Element, 2015a; Land Use Element, 2015b; and Renewable Energy and Transmission Element, 2015c.

While this Draft EIR analyzes the Project’s consistency with the County of Imperial General Plan pursuant to CEQA Guidelines, Section 15125(d), the Imperial County Planning Commission ultimately determines consistency with the General Plan.

4.7.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?
2. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking?
3. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving seismic-related ground failure, including liquefaction?
4. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving landslides?
5. Result in substantial soil erosion or the loss of topsoil?
6. 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?
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?
8. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Analysis

Impact 4.7-1: Would the Project result in substantial adverse effects from the rupture of a known earthquake fault?

The Project site is located in southern California, an area known to be geologically active and which is subject to seismic events. The Project site does not lie within a currently delineated State of California, Alquist-Priolo Earthquake Fault Zone. Well-delineated fault lines cross through this region as shown on CGS maps; however, the nearest zoned fault is the Rico fault located approximately 7.1 miles west of the Project site and the Imperial fault located approximately 7.9 miles west to southwest of the Project site. Since the Project site does not lie within an Alquist-Priolo Earthquake Fault Zone; therefore, surface fault rupture is considered to be low at the Project site. However, because of the high tectonic activity and deep alluvium of the region, the potential for surface rupture cannot be precluded on undiscovered or new faults that may underlie the Project site. Thus, this impact would be potentially significant unless mitigation is proposed.

Impact 4.7-2: Would the Project result in substantial adverse effects from strong seismic ground shaking?

The Project site is considered likely to be subjected to moderate to strong ground motion during earthquakes along the Rico, Imperial and Brawley Faults. Ground motions are dependent primarily on the earthquake magnitude and distance to the seismogenic (rupture) zone. Acceleration magnitudes also are dependent upon attenuation by rock and soil deposits, direction of rupture and type of fault; therefore, ground motions may vary considerably in the same general area.

In the event of an earthquake along one of these fault sources, seismic hazards related to ground motion could occur in susceptible areas within the Project site. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. The primary seismic hazard at the Project site is the potential for strong ground shaking during earthquakes. The Project is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region.

Even with the integration of building standards, ground shaking within the Project site could cause some structural damage to the facility structures or, at least, cause unsecured objects to fall. During a stronger seismic event, ground shaking could expose employees to injury from structural damage or collapse of electrical distribution facilities. Given the potentially hazardous nature of the Project facilities (e.g., danger from electrocution), the potential impact of ground motion during an earthquake is considered a significant impact, as proposed structures, such as transmission lines and substation could be damaged.

Impact 4.7-3: Would the project result in substantial adverse effects from seismic-related ground shaking including liquefaction?

The risk of liquefaction induced settlement is low at the electrical substation area. Liquefaction may occur in isolated silt and sand layers encountered at depths of 15 to 42 feet below ground surface. Potential liquefaction induced settlements of ½ inch have been estimated for the substation area. There is a very low risk of ground rupture and/or sand boil formation should liquefaction occur. In accordance with California Special Publication 117, differential settlement is estimated at be two-thirds of the total potential settlement. Accordingly, there is a potential for ⅓ inch of liquefaction induced differential settlement at the Project site. The differential settlement based on seismic settlements is estimated at 1 inch over a distance of 100 feet (Landmark Consultants, 2021). Because of the depth of the liquefiable layer, the 15-foot-thick non-liquefiable layer may act as a bridge over the liquefiable layer resulting in a fairly uniform ground surface settlement; therefore, wide area subsidence of the soil overburden would be the expected effect of liquefaction rather than bearing capacity failure of the proposed structures.

The potential impact of liquefaction is during a seismic-related ground shaking is considered a significant impact, as the substation area could be damaged.

Impact 4.7-4: Would the Project result in substantial adverse effects from landslides?

Due to the flat topography of the site the potential for a landslide is very low. There would be no impact.

Impact 4.7-5: 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. Unvegetated soils are much more likely to erode from precipitation than vegetated areas because plants act to disperse, infiltrate, and retain water. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters. Construction could produce sediment-laden stormwater runoff (nonpoint source pollution), a major contributor to the degradation of water quality. If precautions are not taken to contain contaminants, construction related erosion impacts are considered a significant impact.

The Project is not expected to result in substantial soil erosion or the loss of topsoil over the long-term. Ground cover will be planted between the arrays for the life-span of the solar facility is operations. The ground cover would reduce the amount of soil surface exposed to erosion. A vegetation cover reduces erosion potential by 1) shielding the soil surface from the direct erosive impact of raindrops; 2) improving the soil's water storage porosity and capacity so more water can infiltrate into the ground; 3) slowing the runoff and allowing the sediment to drop out or deposit; and 4) physically holding the soil in place with plant roots.

Further, the Project applicant would be required to implement on-site erosion control measures in accordance with County standards, which require the preparation, review, and approval of a grading plan by the County Engineer. Given these considerations and the fact that the encountered soil types have a low erosion potential, the Project's long-term impact in terms of soil erosion and loss of topsoil would be less than significant.

Impact 4.7-6: 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?

Potential impacts associated with liquefaction and subsidence are discussed in Impact 4.7-3 and landslides in Impact 4.7-4.

Small ground fissure or sand boil formation are unlikely because of the thickness of the overlying unliquefiable soil. Sand boils are conical piles of sand derived from the upward flow of groundwater caused by excess porewater pressures created during strong ground shaking. Sand boils are not inherently damaging by themselves, but are an indication that liquefaction occurred at depth. Liquefaction induced lateral spreading is not expected to occur at the Project site due to the planar topography.

If the liquefiable layer lies at a depth greater than about twice the height of a free face, lateral spread is not likely to develop. No slopes or free faces occur at the Project site except for the shallow retention basin, which depths are substantially above the first liquefiable layer (Landmark Consultants, 2021).

Impact 4.7-7: Would the Project result in the potential for substantial risks to life or property due to expansive soils?

The near surface soils in the Project site are sands which are considered non expansive (Landmark Consultants, 2021), thus there would be no impact.

Impact 4.7-8: Would the Project directly or indirectly destroy a unique paleontological resource, site or unique geologic feature?

To evaluate the proposed Project's potential impacts on significant paleontological resources, a paleontological records search was conducted at the San Diego Natural History Museum (SDNHM) to determine if any documented fossil collection localities occur within the study area or immediate surrounding area. This involved examination of the SDNHM paleontological database for any records of known fossil collection localities within a 5-mile radius of the study area. A paleontological field survey of the study area was conducted. The purpose of the field survey was to confirm the published geologic mapping, to field check the results of the literature and record searches, and to determine the paleontological potential of the strata present within the study area.

As discussed previously, SDNHM records indicate that no vertebrate fossil localities have been documented within the study area and no fossils were found during the pedestrian survey. Given that the depth of vibratory pile driving for PV tracer posts, as well as grading, and trenching for underground electrical lines for the project is approximately 4 feet bgs, the project is unlikely to encounter fossils during construction. Implementation of mitigation measures PAL-1 and PAL-2 would ensure that such fossils are assessed for significance and, if significant, salvaged and curated with an accredited repository. Thus, impacts to fossil resources would be reduced to a less-than-significant level.

4.7.4 Mitigation Measures

The following Mitigation Measures would reduce impacts to below a level of significance.

MM GEO-1 Implement Required Measures as described in the Geotechnical Report.

Prior to approval of final engineering and grading plans for the Project, the County shall verify that all recommendations contained in the *Geotechnical Report for the Viking Solar Facility* prepared by Landmark Consultants, Inc. (January 2021) have been incorporated into all final engineering and grading plans. The County's soil engineer and engineering geologist shall review grading plans prior to finalization to verify compliance with the recommendations of the report. All future grading and construction of the Project site shall comply with the geotechnical recommendations contained in the geotechnical report.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *ICPDSD*

Level of Significance after Mitigation

With the implementation of the Mitigation Measure GEO-1, potential impacts associated with the rupture of a known earthquake fault and strong seismic ground shaking would be reduced to a less than significant level because recommendations in the geotechnical report.

MM GEO-2: Foundations and Settlements

Shallow spread footings and continuous wall footings are suitable to support the battery storage containers provided they are founded on a layer of properly prepared and compacted soil as described in Section 4.7-1. The foundations may be designed using an allowable soil bearing pressure of 2,000 pounds per square foot (psf). The allowable soil pressure may be increased by 20% for each foot of embedment depth in excess of 18 inches and by one-third for short term loads induced by winds or

seismic events. The maximum allowable soil pressure at increased embedment depths shall not exceed 3,000 psf.

Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure (pcf) of 300 pcf to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral loading.

All exterior footings should be embedded a minimum of 18 inches below the building support pad or lowest adjacent final grade, whichever is deeper. Minimum embedment depth of interior footings should be at least 12 inches into the building support pad to account for variable environmental conditions.

Interior and exterior embedment depths listed herein are minimum depths and greater depths/widths may be required by the structural engineer/designer and should be sufficient to limit differential movement to $L/480$ for center lift and $L/720$ for edge lift to comply with the current standards. Continuous wall footings should have a minimum width of 12 inches. Spread footings should have a minimum dimension of 24 inches and should be structurally tied to perimeter footings or grade beams. Concrete reinforcement and sizing for all footings should be provided by the structural engineer.

As an alternative to shallow spread foundations, flat plate structural mats may be used.

Flat Plate Structural Mats: Structural mats may be designed for a modulus of subgrade reaction of 175 pounds per cubic inch (pci) when placed on compacted native soil and 200 pci when placed on 6 inches of Class 2 aggregate base. The structure support pad shall be moisture conditioned and re-compacted as specified in geotechnical report. Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 300 pcf to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral loading.

Settlements: Foundation movement under the estimated loadings and site conditions are estimated to not exceed 1 inch with differential movement of about two-thirds of

total movement for the loading assumptions stated above when the subgrade preparation guidelines given above are followed.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *ICPDSD*

Level of Significance After Mitigation

With the implementation of the Mitigation Measure GEO-2, potential impacts associated with liquefaction would be reduced to a less than significant level.

MM PAL-1 Worker’s Environmental Awareness Program (WEAP).

The Project Paleontologist will develop a Worker’s Environmental Awareness Program (WEAP) to train the construction crew on the legal requirements for preserving fossil resources as well as procedures to follow in the event of a fossil discovery. This training program will be given to the crew before ground-disturbing work commences and will include handouts to be given to new workers as needed.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *ICPDSD*

MM PAL-2 Unanticipated Fossil Discovery.

In the event of a fossil discovery by a member of the construction crew, all work will cease in a 15-meter (50-foot) radius of the find while the Project Paleontologist assesses the significance of the fossil and documents its discovery. Should the fossil be determined significant, it will be salvaged following the procedures and guidelines of the Society of Vertebrate Paleontology (2010). Recovered fossils will be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility. The most likely repository is the LACM. A repository will be identified and a curatorial arrangement will be signed prior to collection of the fossils.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *ICPDSD*

Level of Significance after Mitigation

With the implementation of the Mitigation Measures PAL-1 and PAL-2, potential impacts to unanticipated discovery of paleontological resources would be reduced to a less than significant level because recommendations in the geotechnical report.

4.8 Greenhouse Gas Emissions

This section addresses potential impacts on greenhouse gases (GHGs) that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions in the Project vicinity, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the Project, as applicable.

The analysis in this section is based on the *Air Quality Technical Report Vikings Solar Energy Storage Project Imperial County, California* prepared by SWCA (SWCA, 2022c). The report and its attachments are included as Appendix F.

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments were received related to greenhouse gas emissions or climate change.

4.8.1 Environmental Setting

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. There is a general scientific consensus that global climate change is occurring, caused in whole or in part by increased emissions of GHGs that keep the Earth's surface warm by trapping heat in the Earth's atmosphere, in much the same way as glass traps heat in a greenhouse. The Earth's climate is changing because human activities, primarily the combustion of fossil fuels, are altering the chemical composition of the atmosphere through the buildup of GHGs. GHGs are released by the combustion of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect (SWCA, 2022c).

Carbon Dioxide (CO₂)

In the atmosphere, carbon generally exists in its oxidized form, as carbon dioxide (CO₂). Natural sources of CO₂ include the respiration (breathing) of humans, animals and plants, volcanic outgassing, decomposition of organic matter and evaporation from the oceans. Anthropogenic sources of CO₂ include the combustion of fossil fuels and wood, waste incineration, mineral production and deforestation. Anthropogenic sources of CO₂ amount to over 30 billion tons per year, globally. Natural sources release substantially larger amounts of CO₂. Nevertheless, natural removal processes, such as photosynthesis by land and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO₂, and, consequently, the gas is building up in the atmosphere (SWCA, 2022c).

Methane (CH₄)

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated methane (CH₄) emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH₄ in California (SWCA, 2022c).

Nitrous Oxide (N₂O)

Nitrous Oxide (N₂O) is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N₂O is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion produce N₂O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N₂O emissions in California (SWCA, 2022c).

Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur Hexafluoride (SF₆)

Hydrofluorocarbons (HFCs) are primarily used as substitutes for ozone depleting substances regulated under the Montreal Protocol (1987), an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion. PFCs and SF₆ are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no primary aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of Perfluorocarbons (PFCs) (SWCA, 2022c).

The magnitude of the impact on global warming differs among the GHGs. The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential (GWP), expressed as a function of how much warming would be caused by the same mass of CO₂. Thus, GHG emissions are typically measured in terms of pounds or tons of CO₂ equivalents (CO₂e). HFCs, PFCs, and Sulfur Hexafluoride (SF₆) have a greater “global warming potential” than CO₂. In other words, these other GHGs have a greater contribution to global warming than CO₂ on a per-mass basis. However, CO₂ has the greatest impact on global warming because of the relatively large quantities of CO₂ emitted into the atmosphere (SWCA, 2022c).

4.8.2 Regulatory Setting

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

Federal

At the federal level there is currently no overarching law related to climate change or the reduction of GHGs. The U.S. Environmental Protection Agency (USEPA) is developing regulations under the Clean Air Act (CAA) to be adopted in the near future, pursuant to the USEPA's authority under the CAA. Foremost amongst recent developments have been the settlement agreements between the USEPA, 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. USEPA*; and USEPA's "Endangerment Finding," "Cause or Contribute Finding," and "Mandatory Reporting Rule." On Sept. 20, 2013, the USEPA issued a proposal to limit carbon pollution from new power plants. The USEPA 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 is has yet been adopted. In *Coalition for Responsible Regulation, Inc., et al. v. USEPA*, the United States Court of Appeals upheld the USEPA's authority to regulate GHG emissions under CAA. Furthermore, Under the authority of the CAA, the USEPA is beginning to regulate GHG emissions starting with large stationary sources. In 2010, the USEPA 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 (SWCA, 2022c).

State

Executive Order (EO) S-3-05

In 2005, former Governor Schwarzenegger issued EO S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 states that by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent of 1990 levels. In response to EO S-3-05, The California Environmental Protection Agency created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report"). The 2006 CAT Report recommended various strategies that the state could pursue to reduce GHG emissions. These strategies could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture (SWCA, 2022c).

Assembly Bill 32 (AB-32) and California Air Resources Board (CARB) Scoping Plan

To further the goals established in EO S-3-05, the Legislature passed Assembly Bill (AB)-32, the California Global Warming Solutions Act of 2006. AB-32 requires California to reduce its GHG emissions to 1990 levels by 2020. Under AB-32, the CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve

the GHG emissions reduction mandate of AB-32. Under AB-32, the CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. The CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB-32 authorized the CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, the CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted (SWCA, 2022c).

In 2007, the CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons carbon dioxide equivalent [MMT CO₂e]). The CARB's adoption of this limit is in accordance with Health and Safety Code, Section 38550 (SWCA, 2022c).

Further, in 2008, the CARB adopted the *Scoping Plan* in accordance with Health and Safety Code, Section 38561. The *Scoping Plan* establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The *Scoping Plan* evaluates opportunities for sector-specific reductions, integrates all the CARB and CAT early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the *Scoping Plan* include the following:

1. Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33%;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions;
4. Establishing targets for transportation related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB-32 implementation.

In the *Scoping Plan*, the CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020) absent GHG reducing laws and

regulations (referred to as business as usual [BAU]). To calculate this percentage reduction, the CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. In the *2011 Final Supplement to the AB-32 Scoping Plan Functional Equivalent Document*, the CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, the CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (RPS) (12% to 20%), the CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the BAU conditions (SWCA, 2022c).

In 2014, the CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (First Update; CARB 2014). The stated purpose of the First Update was to “highlight California’s success to date in reducing its GHG emissions and to lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050.” The *First Update* found that California was on track to meet the 2020 emissions reduction mandate established by AB-32 and noted that California could reduce emissions further by 2030 to levels needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals (SWCA, 2022c).

In conjunction with the *First Update*, the CARB identified six key focus areas comprising major components of the state’s economy to evaluate and describe the larger transformative actions that will be needed to meet the state’s more expansive emission reduction needs by 2050. Those six areas were:

- | | |
|--------------------|-------------------------------|
| (1) energy, | (4) water |
| (2) transportation | (5) waste management, and |
| (3) agriculture | (6) natural and working lands |

The *First Update* identified key recommended actions for each sector that would facilitate achievement of EO S-3-05’s 2050 reduction goal (SWCA, 2022c).

Based on the CARB’s research efforts presented in the *First Update*, it has a “strong sense of the mix of technologies needed to reduce emissions through 2050”. Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the *First Update*, the CARB recalculated the state’s 1990 emissions level using more recent GWPs identified by the

Intergovernmental Panel on Climate Change. Using the recalculated 1990 emissions level (431 MMT CO₂e) and the revised 2020-emissions-level projection identified in the 2011 Final Supplement, the CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the BAU conditions (SWCA, 2022c).

In January 2017, the CARB released, *The 2017 Climate Change Scoping Plan Update*, for public review and comment. This update proposes the CARB's strategy for achieving the state's 2030 GHG target as established in SB 32, including continuing the Cap-and-Trade Program through 2030, and includes a new approach to reduce GHGs from refineries by 20%. The *Second Update* incorporates approaches to cutting short-lived climate pollutants under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by the CARB in March 2017), acknowledges the need for reducing emissions in agriculture, and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon. During development of the *Second Update*, the CARB held a number of public workshops in the Natural and Working Lands, Agriculture, Energy, and Transportation sectors to inform development of the *2030 Scoping Plan Update*. The *Second Update* has not been considered by the CARB's Governing Board at the time this analysis was prepared (SWCA, 2022c).

Executive Order S-01-07

EO S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard for transportation fuels be established for California to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 (SWCA, 2022c).

Assembly Bill 939 (AB-939) and Senate Bill 1374 (SB-1374)

AB-939 requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. SB-1374 requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills (SWCA, 2022c).

Senate Bill 1368 (SB-1368)

SB-1368 is the companion Bill of AB-32 and was adopted September 2006. SB-1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007, and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation stated that all electricity provided to the State, including imported electricity, must be generated by plants that meet the standards set by the CPUC and the California Energy Commission (CEC) (SWCA, 2022c).

Senate Bill 97 (SB-97)

SB-97 was adopted August 2007 and acknowledges that climate change is an environmental issue that requires analysis under the California Environmental Quality Act (CEQA) (SWCA, 2022c). SB-97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to the CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010. Pursuant to the requirements of SB-97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed sections of the CEQA Guidelines and incorporated GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010, and are summarized below:

- Climate action plans and other greenhouse gas 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 greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that 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 OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, the OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- 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 greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- The OPR is 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 OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. The OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and XI-2 and Executive Orders S-14-08 and S-21-09

SB-1078 required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB-107 changed the target date to 2010. EO S-14-08 was signed on November 2008 and expanded the State's RPS to 33 percent renewable energy by 2020. EO S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. SB-XI-2 codifies the 33 percent renewable energy requirement by 2020 (SWCA, 2022c).

California Code of Regulations Title 24, Part 6

California Code of Regulations (CCR) Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions. The CEC adopted 2008 Standards on April 23, 2008, and the Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. The 2013 commercial standards are estimated to be 30 percent more efficient than the 2008 standards; 2013 residential standards are at least 25 percent more efficient. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions (SWCA, 2022c).

Senate Bill 375 (SB-375)

SB-375 was adopted in September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB-375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs *Regional Transportation Plan* (RTP). The CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. The CARB is also charged with reviewing each MPO's sustainable community's strategy or alternate planning strategy for consistency with its assigned targets (SWCA, 2022c).

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, CEQA incentivizes, through streamlining and other

provisions, qualified projects that are consistent with an approved SCS or APS and categorized as “transit priority projects.”

Senate Bill X7-7 (SB-X7-7)

SB-X7-7, enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB-X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. Additionally, SB-X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage (SWCA, 2022c).

California Green Building Standards

Title 24, Part 6. Title 24 of the CCR was established in 1978 and serves to enhance and regulate California’s building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed (and revised if necessary) every few years by the Building Standards Commission and the CEC (California Public Resources Code [PRC], Section 25402(b)(1)). The regulations receive input from members of industry, as well as the public, with the goal of “reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy” (PRC, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (PRC, Section 25402(d)) and cost effectiveness (PRC, Sections 25402(b)(2) and (b)(3)). These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment (SWCA, 2022c).

The 2019 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2020. In general, single-family homes built to the 2019 standards are anticipated to use approximately 7% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2016 standards. Once rooftop solar electricity is factored in, homes built under the 2019 code will use 53% less energy than those under the 2016 standard and nonresidential buildings built to the 2019 standards will use an estimated 30% less energy than those built to the 2016 standards (CEC, 2018).

Title 24, Part 11. In addition to the CEC’s efforts, in 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as “CALGreen,” and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of

sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings and schools and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings;
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California DWR' Model Water Efficient Landscape Ordinance;
- Diversion of 65% of construction and demolition waste from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations; and
- Low-pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle board.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements, stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs (24 CCR Part 11).

The CPUC, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include the following: (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030. As most recently defined by the CEC in its 2015 *Integrated Energy Policy Report*, a ZNE code building is "one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building" using the CEC's Time Dependent Valuation metric.

Title 20. Title 20 of the CCR requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning

heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Executive Order B-30-15 (EO B-30-15)

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB-32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to the CARB's *Scoping Plan* to express the 2030 target in terms of million metric tons carbon dioxide equivalent (MMT CO₂e). EO B-30-15 also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target (SWCA, 2022c).

Senate Bill 32 and Assembly Bill 197 (SB-32 and AB-197)

SB-32 and AB-197 (enacted in 2016) are companion bills that set new statewide GHG reduction targets, make changes to CARB's membership, increase legislative oversight of CARB's climate change-based activities, and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB-32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB-197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB-197 added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the *Scoping Plan* (SWCA, 2022c).

Local

The ICAPCD has not adopted thresholds of significance for projects' GHG emissions. However, projects in the Imperial County use the South Coast Air Quality Management District (SCAQMD's) Interim Thresholds as follows:

- Industrial projects: 10,000 metric ton (MT) per year emissions of carbon monoxide equivalent (CO₂e)
- Residential, commercial and mixed-use projects: 3,000 MT CO₂e per year

The proposed Project is considered a commercial development; as such, this analysis, compares the direct and indirect emissions from the project with the 3,000 MT threshold level (SWCA, 2022c).

General Plan Consistency

The Imperial County General Plan contains goals, objectives, policies and/or programs to conserve the natural environment of Imperial County, including air quality and GHGs. The Imperial County General Plan does not contain any goals, objectives, policies or programs that directly pertain to GHGs at the project-level.

4.8.3 Analysis of Project Effects and Significance Determination

Methodology

The proposed Project would result in both short-term and long-term emissions of air pollutants associated with construction and operations. 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 (SWCA, 2022c).

Construction and operational emissions were estimated using the latest version of California Emissions Estimator Model (CalEEMod), version 2020.4.0. The CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operation of a variety of land use projects. The model utilizes widely accepted federal and state models for emission estimates and default data from sources such as USEPA AP-42 emission factors, the CARB vehicle emission models, and studies from California agencies such as the CEC. The model quantifies direct emissions from construction and operations, as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use (SWCA, 2022c).

The model was developed in collaboration with the air districts in California. Default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions (SWCA, 2022c).

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

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

Analysis

Impact 4.8-1: Would development of the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The Project-related direct and indirect emissions of GHGs were estimated using methods similar to those used for the quantification of criteria air pollutants. The estimated emissions are summarized in Table 4.8-1.

TABLE 4.8-1: GHG EMISSIONS SUMMARY

Emissions Source	GHG Emissions (Metric Tons CO₂e/year)
Construction Equipment & Vehicle Emissions	1,263.4
Operations Emissions	98.6
Construction Emissions – Amortized ⁽¹⁾	63.1
Operational Emissions – Facility site ⁽²⁾	98.6
Subtotal	161.7
Displaced Emissions (from Project Operation) ⁽³⁾⁽⁴⁾	<u>- 220,394</u>
TOTAL ANNUAL EMISSIONS	- 220,232
Significance Threshold ⁽⁵⁾	3,000
<i>Threshold Exceeded?</i>	<i>No</i>

Notes:

1. Total construction emissions amortized over Project life of 20 years.
2. Includes direct and indirect emissions of Project operation and maintenance, not including the indirect displaced GHG emissions.
3. Estimation of emissions avoided due to displacement of fossil fuel powered electricity generation.
4. The CalEEMod value of carbon intensity factor for Imperial Irrigation District (IID) is used to estimate displaced GHG emissions.
5. In the absence of ICAPCD threshold for GHG emissions, the SCAQMD threshold of 3,000 MT/year for commercial projects is used.
6. Calculations, assumptions and model outputs are provided in Appendix F.

Source: SWCA, 2022c.

Although the Project is anticipated to have a 30-year life, in order to provide a conservative analysis, total GHG emissions from all phases of construction were amortized over 20-years and added to the annual operational emissions of GHGs. The Project would offset GHG emissions through renewable energy generation and thereby result in environmental benefits by lessening the impacts of global climate change, as such, the annual displaced GHG emissions were estimated to include all direct and indirect emissions associated with implementation of the Project. Project decommissioning emissions were not calculated as the equipment and fuel types that would exist 20 or more years in the future are unknown. Also as described in section 4.3, Air Quality, it is anticipated that the decommissioning emissions would be lower than the construction emissions.

As Table 4.8-1 shows, the proposed Project's annual indirect GHG emissions from the displacement of fossil fuel fired electricity generation is significantly higher than the Project's annualized direct and indirect emissions sources, as such, the overall effect of the proposed Project is to reduce GHG emissions. Therefore, the proposed Project would have a beneficial GHG emissions impact.

Impact 4.8-2: Would the Project conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

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

The Project would be consistent with the AB-32 *Scoping Plan* strategies to increase the total amount of renewable energy sources. Additionally, the Project would be consistent with the CARB's emission reduction strategy presented in the Scoping Plans. The *2008 Scoping Plan* specifically addresses critical measures directed at emission sources that are included in the cap-and-trade program that are designed to achieve cost-effective emissions reductions while accelerating the necessary transition to the low-carbon economy. The proposed Project implementation would also help California meet its Renewable Portfolio Standard (RPS) requirements by creating new renewable energy resources.

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

4.8.4 Mitigation Measures

No mitigation is required.

4.9. Hazards and Hazardous Materials

This section addresses potential impacts from hazards and hazardous material may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project, as applicable.

The analysis presented in this section is based, in part, on the *Phase I Environmental Site Assessment* prepared by G.S. Lyon Consultants Inc. (GS Lyon, 2021). This report is provided as Appendix J of this EIR.

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. The following comment was received on hazardous materials and waste from the Department of Toxic Substances Control (DTSC) Imperial Certified Unified Program Agencies (CUPA).

- If the facility will generate hazardous waste, or have hazardous materials, an underground storage tank, or an aboveground storage tank they will need to generate a California Environmental Reporting System (CERS) account and be-in the CUPA program.

Issues Scoped out as part of the Initial Study

The Imperial County Planning and Development Services Department (ICPDSD) determined in the Initial Study/Notice of Preparation (IS/NOP), located in Appendix A-1, that the following environmental issue areas resulted in no impact or less-than-significant impact, and were scoped out of requiring further review in this draft EIR. Please refer to Appendix A-1 of this DEIR for a copy of the NOP/IS and additional information regarding these issue areas

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nearest school (Holtville Middle School) is located approximately 5.5 miles west of the Project site.
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area. The Project site is not in the vicinity of a private airport.

4.9.1 Environmental Setting

The subject property is comprised of 3 parcels consisting of approximately 480 acres of agricultural use land (east parcel) and 125 acres of undeveloped desert land (two western parcels). The 480-acre

agricultural use land is separated by East Nelson Pit Road, the north portion is currently in agricultural production while the southern portion is fallowed. The two western parcels are undeveloped desert land that abut and cross the Imperial Irrigation District's (IID's) East Highline Canal. The subject property is located within a mixed agricultural, desert, and geothermal resource area east of Holtville, California. Adjacent properties consist of agricultural use lands west of the East Highline Canal and vacant desert land to the north. Vacant desert land and geothermal wells and power plants are located to the east and south (G.S. Lyon Associates, 2021).

According to a review of historical aerial photos, the western portion of the Project site (Parcel 018) has been developed for agricultural use since the early 1950's. As of 1953, the western portion of the subject site remained undeveloped except for a small structure located north of Nelson Pit Road adjacent to the East Highline Canal. The 1976 aerial photograph shows the subject site as being predominantly an agricultural field. A raw water pond and a rural residence and farm shop have been constructed on the west side of the agricultural fields. The 1957 and 1979 topographic maps show a structure at the location of the rural residence and also a structure in the northwest corner of the subject property. A "mine" is also shown on the south side of Nelson Pit Road where soil was surface mined.

During the Project site reconnaissance, power lines with pole mounted transformers located within the Project site for the residence and irrigation pump locations were observed. A farm residence and shop re located along the western boundary of Parcel 018 just south of East Nelson Pit Road. Outside of the shop empty above ground tanks and a 55-gallon drum of used oil were observed. The inside of the shop and residence were not open for access during the visit. Multiple pole mounted transformers adjacent to concrete standpipes scattered around the property were observed. The standpipes have electrical water pumps. The water pumps near the reservoirs are still in operation. The southern fallowed portion of Parcel 018 has underground transit gravity flow pipelines used to distribute water around the field. Old tires, household debris and concrete debris piles are found in the western portion of the subject site.

Phase I Environmental Site Assessment

A *Phase I Environmental Site Assessment* was prepared by G.S. Lyon Consultants Inc. (2021), which is included as Appendix J of this EIR. The analysis contained in this section is based, in part on the findings of this document. The *Phase I Environmental Site Assessment* consisted of a review and summary of publicly available federal, state, and local regulatory databases and historical resources. This report addresses existing environmental conditions at the site. The *Phase I Environmental Site Assessment* included a review of historic aerial photographs, historic topographic maps, historic Sanborn Fire Insurance maps, governmental regulatory databases, other regulatory and agency databases, and historic telephone and city directories was performed to evaluate potentially adverse environmental conditions resulting from previous ownership and uses of the subject property.

Based upon the results of the *Phase I Environmental Site Assessment*, the following findings and opinions are provided.

The property has been in agricultural use and/or vacant since the late 1940's. Residues of currently available pesticides and currently banned pesticides such as Dichlorodiphenyltrichloroethane (DDT)/Dichlorodiphenyldichloroethylene (DDE) may be present in near surface soils in limited concentrations. The concentrations of these pesticides found on other Imperial Valley agricultural sites are typically less than 25% of the current regulatory threshold limits and, at those levels, are not considered a significant environmental hazard. The presence and concentration of near surface pesticides at this subject property can be accurately characterized only by site specific sampling and testing.

A recognized environmental condition (REC) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; (3) under conditions that pose a material threat of a future release to the environment; or (4) under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term REC includes hazardous substances and petroleum products even under conditions that might be in compliance with laws. The term is not intended to include "de minimis" conditions as defined later in this section report (G.S. Lyon, 2021).

- This assessment has revealed the following RECs for the Project site:
 1. There is a potential of buried asbestos concrete (transite) pipe existing onsite for irrigation water distribution piping. The pipe material is only considered "friable" when disturbed.
 2. Old tires, household debris and concrete debris piles are found in the western portion of the subject site.
 3. Concrete saddles for a large above ground storage tank (AST) were noted south of the existing residence on the subject site. The tank had been removed.
 4. A 55-gallon drum containing what appeared to be waste oil was noted in the area of the concrete saddles. The drum was on a wooden pallet and had leaked onto the soil.
 5. A large above ground steel storage tank placed on concrete saddles with no secondary spill containment structure showed some evidence of leakage of hydrocarbons.
 6. There is a potential for asbestos and/or lead containing materials existing at the farm residence due to the age of the structures.

A *de minimis* condition is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* conditions

are not recognized environmental conditions nor controlled recognized environmental conditions. This *Phase I Environmental Site Assessment* has revealed the following "de minimis" RECs in connection with the property:

- Pesticide residues (low concentrations) typical to agricultural crop applications are present in the near surface soils.
- Pole-mounted sealed electrical transformers owned and maintained by the IID exist on this subject property. All IID transformers containing Polychlorinated Biphenyls (PCB's) have been replaced. If the transformers begin to leak, the IID should be notified and the transformers replaced.
- A small spill of pelleted fertilizer was observed in the equipment storage area.

A *historical recognized environmental condition* (HREC) refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). This *Phase I Environmental Site Assessment* has revealed no evidence of *historical recognized environmental conditions* in connection with the subject property (G.S. Lyon, 2021).

Airspace

The Holtville Airport is approximately 1.6 miles north of the Project site.

4.9.2 Regulatory Setting

A variety of federal, state, and local laws, regulations, and/or policies pertain to protection of public safety from hazardous materials and waste (including radioactive waste), wildfire, and disease vectors. These are described below.

Federal

United States Environmental Protection Agency (USEPA)

The USEPA provides leadership in the nation's environmental science, research, education, and assessment efforts. The USEPA works closely with other federal agencies, state and local governments, and Indian tribes to develop and enforce regulations under existing environmental laws. The USEPA is responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits, and monitoring and enforcing compliance. Prior to August 1992, the principal agency of the federal level regulating the generation, transport, and disposal of hazardous waste was the USEPA under the

authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992 however, the California DTSC was authorized to implement the State's hazardous waste management for the USEPA.

Resource Conservation and Recovery Act (RCRA)

The RCRA of 1976 was enacted to create a management system to regulate waste from "cradle-to-grave." The USEPA states that RCRA's goals are to protect the public from harm caused by waste disposal, to encourage reuse, reduction, and recycling, and clean up spilled or improperly stored wastes. Waste management involves the collection, transportation, processing, recycling or disposal of waste materials. In response to the 1984 Hazardous and Solid Waste Amendments to the RCRA, the USEPA revised the *Criteria for Classification of Solid Waste Disposal Facilities and Practices* set forth in 40 Code of Federal Regulations (CFR) Part 257 and Part 258. Subtitle D of the RCRA addresses non-hazardous solid wastes, as well as certain hazardous wastes which are exempted from the Subtitle C regulations such as: hazardous wastes from households and from conditionally exempt small quantity generators. Subtitle D also includes national technical criteria (regulations) which include specific requirements for location, operation, design (liner, leachate collection, run-off controls, etc.), groundwater monitoring, corrective action, closure and post-closure care, and financial assurance responsibility. Subtitle D also fulfills USEPA's mandate under Section 405(d) of the Clean Water Act (CWA), regulations governing the use and disposal of sewage sludge.

Occupational Safety and Health Administration

The United States Occupational Safety and Health Administration (OSHA) is an agency of the United States Department of Labor. It was created by the Congress of the United States under the Occupational Safety and Health Act of 1970. Its mission is to prevent work-related injuries, illnesses, and occupational fatality by issuing and enforcing rules called standards for workplace safety and health. Pursuant to the Occupational Safety and Health Act, OSHA has adopted numerous regulations pertaining to worker safety. OSHA regulations are contained in Title 29 CFR. These regulations set standards for safe workplaces and work practices. OSHA also has authority to regulate employee exposures from radiation sources not regulated by the Nuclear Regulatory Commission.

State

Safety and Health Regulations – California Occupational Safety and Health Administration

Workers who handle or come in contact with hazardous materials or potentially hazardous wastes or other workplace hazards are subject to worker safety requirements to protect employees. In both instances, site safety plans are mandatory as required by federal and state OSHA requirements. Such site safety plans typically include provisions for safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency response and

fire prevention plan preparation. The California Occupational Safety and Health Administration (Cal/OSHA) is the State agency responsible for assuring worker safety in the handling and use of chemicals in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing state workplace safety regulations. Because the State of California has a federally approved OSHA program, it is required to, and has, adopted regulations that are at least as stringent as those found in Title 29 CFR.

Cal/OSHA regulations concerning the use of hazardous materials in the workplace, as detailed in Title 8 California Code of Regulations (CCR), include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets be available to employees and that employee information and training programs be documented.

Hazardous Materials Release Response Plans and Inventory Act of 1985

The *Hazardous Materials Release Response Plans and Inventory Act*, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a hazardous materials business plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

Assembly Bill 2948 (Tanner) – County Hazardous Waste Management Plans

In 1988, the State Assembly passed AB-2948 in response to the growing concern regarding hazardous waste management in California. AB-2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within its jurisdiction. The *Imperial County Hazardous Materials Area Plan* addresses the use, storage, and transportation of hazardous materials, as well as the generation and transportation of hazardous wastes and is discussed in more detail below.

Hazardous Waste Control Act

The *Hazardous Waste Control Act* created the state hazardous waste management program, which is similar to, but more stringent than, the federal RCRA program. The Act is implemented by regulations contained in Title 22 CCR, *California Hazardous Waste Control Law*, which describes

the following required aspects for the proper management of hazardous waste: identification and classification; generation and transport; design and permitting of recycling, treatment, storage, and disposal facilities; treatment standards; operation of facilities and staff training; and closure of facilities and liability requirements.

Department of Toxic Substance Control (DTSC)

The management of hazardous materials and waste within the State of California falls within the jurisdiction of the California Environmental Protection Agency (CalEPA) and the DTSC. DTSC regulates hazardous waste, cleans existing contamination, and looks for ways to reduce hazardous waste produced in California. DTSC's authority to regulate hazardous waste in California stems from USEPA authorization to carry out the federal RCRA of 1976. Additional authority is given to DTSC by the California Health and Safety Code. DTSC also oversees the implementation of the hazardous waste generator and on-site treatment program, which is one of six environmental programs implemented at the local level within the Certified Unified Program. There are 72 CUPAs, which are generally part of the local fire department or environmental health department, that have authority to enforce regulations, conduct inspections, administer penalties, and hold hearings. On January 1, 2005, the DTSC was authorized by the CalEPA as the Imperial County CUPA (DTSC 2020).

Government Code Section 65962.5 (Cortese List)

The provisions in Government Code section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA). Because this statute was enacted over twenty years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information to be included in the Cortese List does not exist. Government Code section 65962.5 was originally enacted in 1985, and per subsection (g), the effective date of the changes called for under the amendments to this section was January 1, 1992. While Government Code Section 65962.5 makes reference to the preparation of a "list," many changes have occurred related to web-based information access since 1992 and this information is now largely available on the Internet sites of the responsible organizations. Those requesting a copy of the Cortese "list" are now referred directly to the appropriate information resources contained on the Internet web sites of the boards or departments that are referenced in the statute.

California Highway Patrol (CHP)

The California Highway Patrol (CHP) is an agency of the State of California with patrol jurisdiction over all California highways. The CHP performs inspections of hazardous materials carriers and enforces hazardous materials transport regulations. The CHP under the Title 13 CCR, Chapter 6, Hazardous Materials, and the CFR Title 49 regulates transport of hazardous materials. When a

hazardous material/waste spill originates on a highway, the CHP is responsible for direction of cleanup and enforcement.

California Department of Transportation (Caltrans)

The California Department of Transportation (Caltrans), the CHP and the Imperial County Department of Public Works (DPW) regulate transportation of hazardous materials. Drivers must have a hazardous materials endorsement to operate a commercial vehicle carrying hazardous materials. During the transporting of materials, a route map must be maintained that indicates safe routing and safe stopping places along the route.

California Office of Environmental Health Hazard Assessment (OEHHA)

The California Office of Environmental Health Hazard Assessment's (OEHHA) mission is to protect and enhance public health and the environment by scientific evaluation of risks posed by hazardous substances. While OEHHA does not promulgate environmental regulations directly, it is responsible for developing and providing risk managers in state and local government agencies with toxicological and medical information relevant to decisions involving public health. State agency users of such information include all Boards and departments within Cal-EPA, as well as the California Department of Public Health, the Department of Food and Agriculture, the Office of Emergency Services (OES), the Department of Fish and Wildlife (CDFW), and the Department of Justice. OEHHA also works with Federal agencies, the scientific community, industry and the general public on issues of environmental as well as public health. Examples of current OEHHA functions and responsibilities include:

- Developing health-protective exposure standards for different media (air, water, land) to recommend to regulatory agencies, including ambient air quality standards for the California Air Resources Board (CARB) and drinking water chemical contaminant standards for the Department of Health Services.
- Carrying out special investigations of potential environmental causes of illness, diseases and deaths. Current and recent activities include investigation of the health effects of air pollutants, pesticides, and other chemical exposures.
- Continuing public health oversight of environmental regulatory programs within CalEPA.
- Making recommendations to the CDFW and the State Water Resources Control Board (SWRCB) with respect to sport and commercial fishing in areas where fish may be contaminated.
- Assessing health risks to the public from air pollution, pesticide and other chemical contamination of food, seafood, drinking water, and consumer products.

- Providing guidance to local health departments, environmental departments, and other agencies with specific public health problems, including appropriate actions to take in emergencies that may involve chemicals.
- Implementing the provisions of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

These responsibilities are fulfilled by a highly trained professional staff of about 110 individuals. Of these staff, 64 hold doctoral degrees, seven are physicians, and 21 hold master's degrees in public health or science.

Local

County of Imperial Solid Waste Local Enforcement Agency (LEA)

As discussed above, at the state level, the management of solid waste is governed by the regulations established by CalRecycle, which delegates local permitting, enforcement, and inspection responsibilities to the Local Enforcement Agency (LEA). The County of Imperial Solid Waste LEA is responsible for enforcement of federal, state, and local laws and regulations within the jurisdiction of the County of Imperial to protect public health safety and the environment by ensuring safe and proper solid waste management practices.

Imperial County General Plan

The purpose of the Imperial County General Plan is to guide growth throughout the County. Urban development is directed to areas where public infrastructure can be readily extended to areas with limited health and safety hazards. Likewise, development should avoid natural, cultural, and economic resources.

The General Plan includes ten elements: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; Renewable Energy and Transmission; Water; Parks and Recreation. These elements satisfy the California Government Code requirements for general plan elements. Each element includes goals, objectives, and implementing policies and programs.

Relevant County of Imperial General Plan policies applicable to the Project are outlined in Table 4.9-1. In January 2021, the Imperial County Board of Supervisors voted to incorporate the updated Multi-Jurisdictional Hazard Mitigation Plan (discussed in more detail below) into the County's Seismic and Public Safety Element as an appendix.

Imperial County-Mexicali Emergency Response Plan

The Binational Prevention and Emergency Response Plan between Imperial County, California, and the city of Mexicali, Baja California, was established as part of a joint contingency plan (JCP)

between the United States of America (U.S.) and Mexico. The JCP was signed in 1999 and provided a foundation for collaboration for the border area and the basis for preparedness, mitigation, response, and prevention of hazardous substances along the inland international boundary. A memorandum of understanding (MOU) was developed to reinforce the jurisdictional cooperation between the two nations. The MOU with the corresponding emergency preparedness and response plan was developed with the support of the USEPA (County of Imperial, 2005).

Imperial County Multi-Jurisdictional Hazard Mitigation Plan Update (MHMP)

The Imperial County Multi-Jurisdictional Hazard Mitigation Plan (MHMP) Update was developed in partnership with the County of Imperial, the City of Brawley, the City of Calexico, the City of Calipatria, the City of El Centro, the City of Holtville, the City of Imperial, the City of Westmorland, the IID, and the Imperial County Office of Education. This document is a comprehensive update to the updated MHMP from 2014. The purpose of the MHMP is to reduce death, injury, and disaster losses from both natural and human-caused disasters in Imperial County through outlining goals, strategies, and actions regarding hazard mitigation (County of Imperial, 2015).

Imperial County Hazardous Materials Area Plan

The Imperial County Hazardous Materials Area Plan addresses the use, storage, and transportation of hazardous materials, as well as the generation and transportation of hazardous wastes. The Hazardous Materials Area Plan identified the federal, State, and local agencies responsible for incidents involving the release or threatened release of hazardous materials. The primary responsibility and authority lie with the Incident Commander, who activates the responses consistent with the plan. The Hazardous Materials Area Plan also identifies the existing mutual aid agreements with Yuma County (Arizona) and the California Department of Forestry and Fire Protection (CALFIRE). Existing plans and documents that have also been taken into account include the Imperial County Emergency Operations Plan, the MHMP, the Imperial Valley Hazardous Emergency Assistance Team Joint Powers Agreement, and the U.S. – Mexico Environmental Program (November 2016).

Imperial County Office of Emergency Services (OES) – Emergency Operations Plan (EOP)

The Imperial County OES provides emergency management services for Imperial County including the seven cities/towns in the county as well as special districts. The OES coordinates emergency operations and develops plans for emergency preparedness, response, recovery and mitigation to natural/man-made disasters, and technological disasters. The Imperial County Fire Department (ICFD) is the local OES and is the lead agency for the Imperial County Operational Area (OA), in which the ICFD develops emergency management plans, conducts public education, establishes Emergency Operations Center operations, and participates in interagency coordination (County of Imperial, 2016). The OES serves as a liaison between the state and local government political subdivisions (California Emergency Services Act, Chapter 7, Division 1, Title 2). Imperial County has developed an OA Emergency Operations Plan (EOP) which describes coordinated guidance and

procedures to prepare for and respond to emergency risks. The EOP is consistent with the requirements of the Standardized Emergency Management System (SEMS), which is required by California Government Code Section 8607(a). All local government agencies are required to use SEMS when responding to multi-jurisdictional or multi-agency emergencies to be eligible for state reimbursement of response-related personnel costs. The EOP is also consistent with the requirements of the U.S. Department of Homeland Security National Incident Management System, which is a national standardized methodology to incident management and response.

County of Imperial Fire Prevention and Explosives Ordinance

Imperial County has a Fire Prevention and Explosives Ordinance (Section 53101-53300), which provides regulations related to fire or explosion risks. The ordinance includes regulations related to the storage of flammable materials and radioactive materials; fireworks permits; and abatement standards for weeds and other vegetation.

Imperial County Airport Land Use Compatibility Plan (ALUCP)

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.

TABLE 4.9-1: CONSISTENCY WITH GENERAL PLAN HAZARDOUS MATERIALS AND PUBLIC HEALTH GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Seismic and Public Safety Element		
<p>Goal 1: Include public health and safety considerations in land use planning. Objective 1.8: Reduce fire hazards by the design of new developments.</p>	Yes	<p>The development of the Project site will be required to comply with California and County building codes, and seismic standards. Avoidable seismic risks will be avoided. The Vikings Solar Energy Generation and Storage Project would implement measures, commensurate with risks, to reduce injury, loss of life, destruction of property and disruption of service.</p>
<p>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. Objective 2.1: Ensure the adequacy of existing emergency preparedness and</p>	Yes	<p>The Vikings Solar Energy Generation and Storage Project is appropriately regulated with applicable provisions including the Alquist – Priolo Special Studies Zone Act, California Building Code and Title 9 Division 15 of the County Land Use Ordinance. Furthermore, the Vikings Solar Energy Generation and Storage Project would implement all site-specific</p>

TABLE 4.9-1: CONSISTENCY WITH GENERAL PLAN HAZARDOUS MATERIALS AND PUBLIC HEALTH GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
evacuation plans to deal with identified hazards and potential emergencies.		recommendations set-forth in the <i>Geotechnical Report</i> (Appendix I) prepared for the Project.
<p>Goal 3: Protect the public from exposure to hazardous materials and wastes.</p> <p>Objective 3.1: Discourage the transporting of hazardous materials/waste near or through residential areas and critical facilities.</p> <p>Objective 3.2: Minimize the possibility of hazardous materials/waste spills.</p> <p>Objective 3.4: Adopt and implement ordinances, policies, and guidelines that assure the safety of County ground and surface waters from toxic or hazardous materials and wastes.</p>	Yes	No hazardous materials would be used in construction of the Project and no hazardous wastes would be generated.
Water Element		
<p>Goal 4: The County will adopt and implement ordinances, policies, and guidelines that assure the safety of County ground and surface waters from toxic or hazardous materials and wastes.</p> <p>Objective 4.2: The provision of safe and efficient community wastewater treatment facilities which adequately service the present and future needs of residential, commercial, and industrial development within the IID service area.</p>	Yes	The Vikings Solar Energy Generation and Storage Project would abide by the ordinances, policies, and guidelines that reduce contamination and assure the safety of County ground and surface waters from toxic or hazardous materials and wastes.
<p>Protection of Water Resources from Hazardous Materials 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.</p> <p>Programs:</p> <ul style="list-style-type: none"> • 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. • 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 	Yes	The Vikings Solar Energy Generation and Storage Project would abide by the ordinances, policies, and guidelines that reduce contamination and assures the safety of County ground and surface waters from toxic or hazardous materials and wastes.

TABLE 4.9-1: CONSISTENCY WITH GENERAL PLAN HAZARDOUS MATERIALS AND PUBLIC HEALTH GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
<p>mitigation measures for any significant impacts.</p> <ul style="list-style-type: none"> • The County of Imperial shall coordinate with the California RWQCB and incorporated cities is to assure that discharge from community wastewater treatment plants meet or exceed applicable State and Federal standards. • The County of Imperial shall play an active role in assuring the advance planning necessary to provide community and/or industrial wastewater treatment facilities which keep pace with continued urbanization in the County. • The County of Imperial shall support the investigation of innovative methods of wastewater treatment which reduces discharge of contaminants into County surface waters, while enhancing the ruderal and riparian habitats of the County. • The County of Imperial shall direct staff of the County Health Department, Planning/Building Department, and other appropriate departments, as well as the County Agricultural Commissioner, to review existing ordinances, policies, and guidelines and determine their adequacy in protecting groundwater and surface water from contamination by hazardous materials and/or waste. • The Imperial County Health Department, as the LEA, shall continue monitoring operations at the various landfills across the County and shall periodically report on the impacts or potential impacts of these landfills on ground and surface water resources in the County. • The County of Imperial shall confer and coordinate with the California Department of Health, RWQCB, and the USEPA to assure that these agencies are taking active steps to protect and reclaim groundwater and surface waters from contamination. 		

TABLE 4.9-1: CONSISTENCY WITH GENERAL PLAN HAZARDOUS MATERIALS AND PUBLIC HEALTH GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<p>Objective 6.2: Ensure proper drainage and provide accommodation for storm runoff from urban and other developed areas in manners compatible with requirements to provide necessary agricultural drainage.</p>	Yes	<p>Under proposed conditions, the existing drainage characteristics of the Project site would remain substantially the same. To retain the total volume of a 3-inch precipitation covering the solar energy facility site with no reduction from infiltration, the proposed onsite roads will be built up to a finish grade elevation above the existing ground and act as berms to allow onsite ponding and make the project site a “retention basin.” Because of the implementation of infiltration, it is anticipated that the annual runoff from the Project site would decrease when compared to the existing condition. Therefore, the proposed Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the proposed Project is consistent with this objective.</p>
<p>Objective 6.3: Protect and improve water quality and quantity for all water bodies in Imperial County.</p>	Yes	<p>The Project would protect water quality during construction through compliance with National Pollutant Discharge Elimination System (NPDES) General Construction Permit, Stormwater Pollution Prevention Plan (SWPPP), and Best Management Practices (BMPs). Design features and BMPs have also been identified to address water quality for the Project. Water quantity would be maintained for the proposed Project by retaining the majority of the Project site with pervious surfaces. Although the proposed Project may not improve water quality and quantity, it would protect existing conditions and satisfy County requirements. Therefore, the proposed Project is consistent with this objective.</p>
<p>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.</p>	Yes	<p>The Project does not contain a residential component nor would it place housing or other structures within a 100-year flood hazard area.</p>

Source: County of Imperial, General Plan Seismic and Public Safety Element, n.d.; Water Element, 1997; and Conservation and Open Space Element, 2016.

Wildland Fire

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, n.d.). Additionally, according to the Draft Fire Hazard Severity Zone Map for Imperial County prepared by CALFIRE, the Project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (CALFIRE, 2007).

4.9.3 Analysis of Project Effects and Significance

The potential impacts associated with the Project are evaluated on a qualitative basis through a comparison of existing conditions within the Project site and the anticipated Project effects. The potential for impacts to hazards/hazardous materials would exist if the effect described under the criteria below occurs. The evaluation of Project impacts is based on the significance criteria adopted by Imperial County, which the County has determined to be appropriate criteria for this Draft EIR.

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. 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.
4. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.
5. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
6. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Analysis

Impact 4.9-1: Would the Project result in the creation of a significant public hazard from 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 necessitates 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; and
- 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 (BESS)

In conjunction with the construction of the solar facility, a battery energy storage system (BESS) will be constructed to store the energy generated by the solar panels. Transportation of hazardous materials relating to the BESS 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, if 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. Additionally, carbon (as graphite) is flammable and could pose a fire hazard. 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.

Impact 4.9-2: 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?

Recognized Environmental Conditions (REC)

Two RECs were identified within the Project site:

- The potential for buried asbestos concrete (transite) pipe existing onsite for irrigation water piping. The pipe material is only considered “friable” when disturbed. The piping material is not required to be removed, but if disturbed, requires proper handling with respiratory protection and if removed should be properly disposed by a qualified asbestos containing material (ACM) abatement contractor.
- Old tires, household debris and concrete debris piles are found in the western portion of the subject site. This debris should be cleaned up and properly disposed.

Historical Recognized Environmental Conditions (HREC)

No evidence of HERCs were identified in connection with the Project Site as part of the *Phase I Environmental Site Assessment*. According to the *Phase I Environmental Site Assessment*, orphan listings were not found (Section 4.1.1); however, according to peer review conducted by McIntyre Environmental of the environmental database report, a listing at Nelson Pit Road and East Highline Canal (trailer) was identified in the Clandestine Drug Labs database. Based on the description, the listing may be associated with the site or adjacent property. According to the Clandestine Drug Labs database, the listing corresponds to a location where an illegal drug lab was operated or drug lab equipment and/or materials were stored.

Environmental Concerns and De Minimis Conditions

The following *de minimis* conditions or RECs in connection with the subject property:

De minimis conditions

- Pesticide residues (low concentrations) typical to agricultural crop applications are present in the near surface soils.
- Pole-mounted sealed electrical transformers owned and maintained by the IID exist on this subject property. All IID transformers containing PCB's have been replaced. If the transformers begin to leak, the IID should be notified and the transformers replaced.
- A small spill of pelleted fertilizer was observed in the equipment storage area.

RECs

The following RECs should be addressed during site demolition and prior to construction activities occurring on the subject site.

- Asbestos concrete (transite) pipe. The piping material is not required to be removed, but if disturbed, requires proper handling with respiratory protection and if removed should be properly disposed by a qualified ACM abatement contractor.
- Old tires, household debris and concrete debris piles. This debris should be cleaned up and properly disposed.
- 55-gallon drum containing suspected waste oil. The oil drum and any affected soil should be cleaned up and properly disposed.
- Large above ground steel storage tank. The tank and any hydrocarbon affected soil below the tank should be removed and properly disposed.

Lead and Asbestos

There is a potential for ACM existing at the subject property due to the age of the buildings. Asbestos may also exist in the old transit waterlines and concrete standpipes. There is a potential for lead-based paint residues existing at the subject property due to the age of the buildings (G.S. Lyon, 2021).

The subject property is located in Zone 3 as shown on the USEPA Map of Radon Zones indicating a predicted average indoor radon screening level of less than 2 picocuries per liter of air (pCi/L); therefore, no further action is required. Radon gas is not believed to be a potential hazard at the subject property (G.S. Lyon, 2021).

Prior to demolition of the residence, it should be evaluated for asbestos and lead based paint and removal of such materials should be carried out by a licensed provider.

Battery Energy Storage System (BESS)

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. Other design features include monitoring and a fire suppression system. Lithium-ion batteries present a risk of fire primarily if overcharged. The risk of fire would be reduced if overcharging is monitored and prevented through several levels of safety in the diagnostic system. A fire suppression system agreed upon by Imperial County will be installed to extinguish possible ignition. In this context, impacts would be considered less than significant for this impact area.

Given the unknowns regarding hazardous materials at the Project site, there could be potentially significant impacts from hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment unless mitigation is incorporated.

Impact 4.9-3: 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?

According to the *Phase I Environmental Site Assessment* (G.S. Lyon Consultants, 2021) the Project site is not identified as a hazardous materials site pursuant to Government Code Section 65962.5. However, the four (4) RECs previously identified shall be cleaned up and properly disposed of in accordance with all federal, state and local regulations. Therefore, the Project would not result in a significant impact under this criterion.

Impact 4.9-4: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?

The Holtville Airport is approximately 1.6 miles north of the Project site. The Project site is located outside the influence zones of the ALUCP (Imperial County, 1996). On August 18, 2021, the Imperial County Airport Land Use Commission found the Project, inclusive of the 120-foot tall gentie line, to be compatibility with the 1996 ALUCP. Therefore, the Project would not result in a safety hazard for people residing or working in the area. A less than significant impact has been identified for this issue area.

Impact 4.9-5: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The *Imperial County Area Emergency Operations Plan* (2016) does not identify specific emergency roadway routes as part of their EOP. The City of El Centro General Plan, Safety Element, includes

a Safety Plan which identifies major access routes as I-8, State Route (SR) -111, SR-86, and SR-80. The Project site is located between two major access routes: I-8 and SR 78. The Project is not expected to impair the implementation of, or physically interfere with any adopted emergency response plans or emergency evacuation plans. In addition, local building codes would be followed to minimize flood, seismic, and fire hazard. Therefore, a less than significant impact has been identified for this issue area.

Impact 4.9-6: Would the Project expose people or structures 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, the potential for a major fire in the unincorporated areas of the County is generally low (County of Imperial, n.d.). This is considered a less than significant impact for this issue area.

4.9.4 Mitigation Measures

MM HAZ-1: Recognized Environmental Concerns

The recognized environmental concerns shall be cleaned up and properly disposed of in accordance with all federal, state and local regulations.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *ICPDSD and Imperial County DTSC CUPA*

MM HAZ-2 Hazardous Materials Management Plan

Any hazardous materials storage areas shall be designed with curbs or other containment measures, e.g., double-walled storage tanks, to contain spills and leaks. If on-site hazardous materials exceed fifty-five (55) gallons, a “Hazardous Material Management Plan” shall be prepared and approved by the County LEA and the Imperial County CUPA. A copy of the approved plan shall be submitted to ICPDSD prior to the issuance of the grading/building permit (Source: Imperial County Renewable Energy Ordinance, Title 9, Division 17, § 91702.00).

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *ICPDS, ICFD, and Imperial County DTSC
CUPA*

MM HAZ-3 Prepare Emergency Response Plan

The Permittee shall present to the Department an Emergency Response/Action Plan that has been approved by the ICFD/OES Department, and the LEA and any other agencies with jurisdiction (Source: Imperial County Renewable Energy Ordinance, Title 9, Division 17, § 91702.00).

The Emergency Response/Action Plan shall cover all possible emergencies, e.g., major fluid spills, earthquakes, fires, floods or other emergencies. At all times, there shall be at least one employee either on the facility premises or on-call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility of coordinating all emergency response measures. This Emergency Coordinator shall be thoroughly familiar with all aspects of the solar facility's Emergency Response/Action Plan, all operations and activities at the facility, location of all records within the facility and the facilities layout. This person shall have the authority to commit the resources needed to carry out the contingency plan. Adequate personnel and equipment shall be available to respond to emergencies and to ensure compliance with the conditions of the permit.

The Emergency Response/Action Plan shall be prepared in consultation with, but not be limited to, the ICFD/OES, County Environmental Health Services/Health Department, County Sheriff/Coroner's office, County DPW, ICPDSD, and other appropriate state and county agencies. The plan shall include a notification list of response agencies which shall be notified immediately upon the discovery of a reportable unauthorized discharge and the list shall include:

- ICFD/OES;
- ICPDSD;
- County Environmental Health Services/Health Department;
- County DPW; and
- CHP, as applicable.

All employees shall be trained by classroom and hands-on training on safety procedures, maintenance programs and emergency response protocols to ensure safety and reliability in the event of an unforeseen emergency situation.

The Permittee shall provide adequate safety devices to protect against the hazard of fire and explosion for activities that involve the use and storage of flammable, explosive or highly corrosive or reactive materials as well as provide adequate fire-fighting and fire suppression equipment and using devices standard within the

industry in compliance with all applicable state and local laws as determined by the ICFD/OES.

The Permittee shall implement all State and County-approved worker safety and fire protection plans and programs.

Any gates on-site shall have a “Knox” lock rapidly accessible by the ICFD/OES.

Appropriate first aid provisions for facility operations shall be made for emergency response during Project construction, operation, and maintenance activities with appropriate first aid training for Project employees.

During construction, a member of each working crew shall be trained in basic first aid and supplied with necessary medical equipment to respond to emergencies as provided for in the Emergency Response/Action Plan required above.

Permittee shall identify a responsible agent for emergency purposes, whose name, title, e-mail address and telephone number, which shall be provided to the County DPW, ICFD/OES, County Environmental Health Services/Health Department, County Sheriff/Coroner’s office, IID, and ICPDSD.

Timing/Implementation: *Prior to construction.*

Enforcement/Monitoring: *ICPDSD and Imperial County DTSC CUPA*

Significance after Mitigation

Implementation of Mitigation Measured HAZ-1, HAZ-2 and HAZ-3 would reduce hazards to less than significant.

4.10 Hydrology/Water Quality

This section addresses potential hydrology and water quality resource impacts that may result from construction of the Vikings Solar Energy Generation and Storage Facility Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project, as applicable.

Information used in preparing this section and in the evaluation of potential impacts to hydrology and water quality resources was derived from of the following sources:

- *Aquatics Resources Delineation Report* prepared by SWCA Environmental Consultants (SWCA, 2022e; Appendix G-2)
- *Geotechnical Report* prepared by Landmark Consultants, Inc. (Landmark Consultants, 2021; Appendix I)
- *Phase I Environmental Site Assessment* prepared by G.S. Lyon Consultants, Inc. (GS Lyon, 2021; Appendix J)
- *Water Supply Assessment* prepared by Dubose Design Group (Dubose, 2022; Appendix K)
- *Preliminary Drainage Study* prepared by RFE Engineering (RFE Engineering, 2021; Appendix N)

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments related to hydrology and water quality were received.

4.10.1. Environmental Setting

The Project site is located within the Imperial Valley Groundwater Basin which is within the Colorado River Hydrologic Region south of the Salton Sea. The Imperial Valley Groundwater Basin is located in the southeastern part of California at the international border with Mexico. The Imperial Valley Groundwater basin is bounded on the east by the Sand Hills and on the west by the impermeable rocks of the Fish Creek and Coyote Mountains. To the north the basin is bounded by the Salton Sea, which is the discharge point for groundwater in the basin. The physical groundwater basin extends across the border into Baja California where it underlies a contiguous part of the Mexicali Valley. The southern boundary of the Imperial Valley Groundwater Basin is defined politically as the international border with the Republic of Mexico. Major hydrologic features include the New and Alamo rivers, which flow north towards the Salton Sea. The rivers were formed in the mid to late 1800s when the Colorado River occasionally escaped the normal channel and flowed northward towards the present-day Salton Sea. The All-American Canal (three branches)

and the Coachella Canal also cross over the basin (SWRCB, 2004). The Imperial Valley Planning Area consists of the following Hydrologic Units (HU): Imperial (723.00) comprised of 2,500 square miles in the southern portion of the Colorado River Basin Region, with the majority located in Imperial County; Davies (724.00) and Amos-Ogilby (726.00). The Project site is located within the Imperial HU and Brawley Hydrologic Area (California RWQCB, 2019).

Localized Drainage Conditions

The Project site lies at an elevation of approximately 25 to 45 feet above mean sea level (AMSL) in the northwestern region of the Imperial Valley in the California low desert. The surrounding properties lie on terrain which is flat (planar), part of a large agricultural valley, which was previously an ancient lakebed covered with fresh water (about 300 years ago) to an elevation of 43plus/minus feet AMSL (Landmark Consultants, 2021).

Hydrology on the Project site is manipulated via a system of manufactured canals and reservoirs used for irrigation of croplands. Water from the East Highline Canal is conveyed northward and pumped into several lateral canals that direct flow throughout the Project site. East Highline Lateral Eleven captures flow from the East Highline Canal at the south end of the Project site and conveys it northward via a concrete-lined V-ditch. The V-ditch connects to two active reservoirs via underground culverts and terminates at the northern portion of the site where flow is collected from the V-ditch by an irrigation system along the edges of croplands. Additionally, two abandoned reservoirs (Unnamed Reservoirs 01 and 02) are situated north of the East Highline Lateral Eleven at the south end of the site. Unnamed Reservoirs 01 and 02 do not currently possess hydrological connectivity which means they are isolated and not connected to other water bodies. Another concrete-lined V-ditch (East Highline Lateral Twelve) pumps water from the East Highline Canal at the western edge of the site and conveys the flow westward. A vegetated ditch (Holtville Main Drain) is situated north of East Highline Lateral Twelve (SWCA, 2022e).

The Project site is relatively flat, with a minimal slope across the entire site allowing most of the runoff to sheet flow. There are several areas, particularly in the southeast corner and along the western side of the site, where there is dense vegetation that obstructs the runoff from sheet flowing. The existing site is divided into four watershed areas, A-X1, A-X2, A-X3, and A-X4 (Figure 4.10-1). The size of these watershed areas are 220.8 acres, 160.3 acres, 126.2 acres, and 98.3 acres respectively. A-X1 sheet flows to the west through the dense vegetation and into the East Highline Canal. A-X2 sheet flows directly to the east onto the adjacent undeveloped property. AX3 sheet flows throughout the area, but runoff exits to the south at a single discharge point rather than sheet flowing out like the other areas. A-X4 sheet flows and weaves through dense vegetation before sheet flowing to the undeveloped land to the south (RFE Engineering, 2021).

Flooding

The Project site is located in FEMA Flood Zone X, an area determined to be outside the 0.2% annual chance floodplain (FIRM Panels 06025C1775). The Project site is also along the East Highline Canal which has potential to overflow into the channelized parcels along the east canal bank (Landmark Consultants, 2021).

Surface Water

The East Highline Canal is located on the western border of Project Assessor's Parcel Number (APN) 050-070-021 and traverses the western portion of APN 050-070-019 in a north-south direction. The East Highline Canal is part of the All-American Canal System, an extensive system of irrigation canals that opened in 1940. The site is a linear canal feature that runs from the Alamo River to Niland and varies between 42 and 105 feet in width. It is contained within earthen berms, and while originally the entire length was earthen, several portions have been lined with concrete during the past century.

A concrete-lined V-ditch is located in the southern portion of the Project site in APN 050-070-021. The V-ditch connects to two active reservoirs (Unnamed Reservoirs 03 and 04) via underground culverts and terminates at the northern portion of the site where flow is collected from the V-ditch by an irrigation system along the edges of croplands. Two abandoned reservoirs (Unnamed Reservoirs 01 and 02) are situated north of the East Highline Lateral Eleven at the south end of the Project site in APN 050-070-021. These unnamed reservoirs do not currently possess hydrologic connection. Another concrete-lined V-ditch (East Highline Lateral Twelve) pumps water from the East Highline Canal at the western edge of the site and conveys the flow westward. A vegetated ditch (Holtville Main Drain) is situated north of East Highline Lateral Twelve (SWCA, 2022e).

Surface Water Quality

The surface waters of the Imperial Valley depend primarily on the inflow of irrigation water from the Colorado River via the All-American Canal. Excessive salinity concentrations have long been one of the major water quality problems of the Colorado River, a municipal and industrial water source to millions of people, and a source of irrigation water for agriculture. The heavy salt load in the Colorado River results from both natural and human activities. Land use and water resources are unequivocally linked. A variety of natural and human factors can affect the quality and use of streams, lakes, and rivers. Surface waters may be impacted from a variety of point and non-point discharges. Examples of point sources may include wastewater treatment plants, industrial discharges, or any other type of discharge from a specific location (commonly a large-diameter pipe) into a stream or water body. In contrast, non-point source pollutant sources are generally more diffuse in nature and connected to a cumulative contribution of multiple smaller sources (Imperial County, 2018).

Common non-point source contaminants within the Project site 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. Nutrient loading is a result from excessive fertilizing of agricultural areas; however, pesticides and herbicides are widely used on roadway shoulders to keep right-of-way areas clear of vegetation and pests. Additionally, the use of on-site septic systems for wastewater disposal can degrade shallow groundwater by contributing nitrate. All these substances are entrained by runoff during wet weather and discharged into local drain facilities operated by the Imperial Irrigation District (IID) and eventually terminate into the Salton Sea (Imperial County, 2018).

Based on the Final 2010 Integrated Report (Clean Water Act [CWA] Section 303(d) List/305(b) Report), prepared by the Colorado River Basin Regional Water Quality Control Board (RWQCB), the following water features within the Brawley Hydrologic Area includes the Imperial Valley Drains, New River, and the Salton Sea. Specific impairments listed for each of these water bodies (or Category 5) is identified below (SWRCB, 2021):

- Imperial Valley Drains: Impaired for chlordane, Dichlorodiphenyltrichloroethane (DDT) dieldrin, endosulfan, Polychlorinated Biphenyls (PCB's), sediment/siltation, selenium, and toxaphene.
- New River: Impaired for, chlordane, chlorpyrifos, copper, DDT, diazinon, dieldrin, hexachlorobenzene (HCB), mercury, nutrients, organic enrichment/low dissolved oxygen, PCBs, pathogens, sediment, selenium, toxaphene, toxicity, trash; and zinc.
- Salton Sea: Impaired for arsenic, chlorpyrifos, DDT, enterococcus, nutrients, salinity, and selenium groundwater.

Depth to Groundwater

Groundwater was encountered the vicinity of the proposed electrical substation area at about 9.0 feet below ground surface (bgs). Groundwater was encountered between 18 and 20 feet in Boring B-2 (northern edge of APN 018) and B-1 (center of APN 018) respectively. Groundwater is likely to be present at the interface between surface sands and underlying clays. There is uncertainty in the accuracy of short-term water level measurements, particularly in fine grained soil. The referenced groundwater levels should not be interpreted to represent permanent condition. Groundwater levels may fluctuate with precipitation, East Highline Canal water stage, site watering, drainage, and site grading (Landmark Consultants, 2021, Appendix I).

4.10.2. Regulatory Setting

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

Federal

Clean Water Act (CWA)

The U.S. Environmental Protection Agency (USEPA) is the lead federal agency responsible for managing water quality. The Clean Water Act (CWA) of 1972 is the primary federal law that governs and authorizes the USEPA 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 is discussed below. Wetland protection elements administered by the U.S. Army Corps of Engineers (USACE) under Section 404 of the CWA, including permits for the discharge of dredged and/or fill material into waters of the U.S., are discussed in Section 4.4, Biological Resources.

Under federal law, the USEPA has published water quality regulations under Volume 40 of the Code of Federal Regulation (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 USEPA 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 USEPA 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*, 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 State Water Resources Control Board (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 Pollutant 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 USEPA 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.

Surface waters in the Imperial Valley Planning Area mostly drain toward the Salton Sea. The New and Alamo Rivers convey agricultural irrigation drainage water from farmlands in the Imperial Valley, surface runoff, and lesser amounts of treated municipal and industrial waste waters 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. The impaired water bodies listed on the 303(d) list for the New River Basin include the Imperial Valley Drains (managed by the IID), New River, and the Salton Sea. Further discussion of specific pollutant listings is provided in Section 4.10.1.

Federal Emergency Management Agency (FEMA)

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues flood insurance rate maps (FIRM) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection covered by the FIRMs is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 (0.01) annual exceedance probability) (i.e., the 100-year flood event).

State

Porter-Cologne Water Quality Control Act of 1969

The *Porter-Cologne Water Quality Control Act of 1969*, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of Water Quality Control

Plans and establishment of water quality objectives. Unlike the CWA, which regulates only surface water, the *Porter-Cologne Water Quality Control Act of 1969* 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 Basin 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. According to the Basin Plan the beneficial uses established for the Imperial Valley Drains, which include the Westside Main Canal, New River, and the Salton Sea include: industrial service supply; freshwater replenishment; water contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; preservation of rare, threatened, or endangered species; and aquaculture.

California Toxics Rule

Under the California Toxics Rule, the USEPA has proposed water quality criteria for priority toxic pollutants for inland surface waters, enclosed bays, and estuaries. These federally promulgated criteria create water quality standards for California waters. The California Toxics Rule satisfies CWA requirements and protects public health and the environment.

National Pollutant Discharge Elimination System (NPDES) 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 best management practices (BMPs) in a stormwater pollution prevention plan (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 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, that 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 Guidelines Manual

Based on the guidance contained in the County's Engineering Guidelines Manual, the following drainage requirements would be applicable to the Project.

III A. GENERAL REQUIREMENTS

1. All drainage design and requirements are recommended to be in accordance with the IID "Draft" Hydrology Manual or other recognized source with approval by the County Engineer and based on full development of upstream tributary basins. Another source is the California Department of Transportation (Caltrans) I-D-F curves for the Imperial Valley.
2. Public drainage facilities shall be designed to carry the 10-year, 6-hour storm underground, the 25-year storm between the top of curbs provided two 12-foot minimum width dry lanes exist and the 100-year frequency storm between the right-of-way lines with at least one 12-foot minimum dry lane open to traffic. All

- culverts shall be designed to accommodate the flow from a 100-year frequency storm.
3. Permanent drainage facilities and right-of-way (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 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.
 5. Retention basins should empty within 72 hours and no sooner than 24 hours in order to provide mosquito abatement. Draining, evaporation or infiltration, or any combination thereof can accomplish this. If this is not possible then the owner should be made aware of a potential need to address mosquito abatement to the satisfaction of the Imperial County Public Health Department, Division of Environmental Health. Additionally, if it is not possible to empty the basin within 72 hours, the basin should be designed for 5 inches, not 3 inches as mentioned in Item #4 above. This would allow for a saturation condition of the soil because of a 5-inch storm track. The Division of Environmental Health must review and approve all retention basin designs prior to Imperial County Department of Public Works (DPW) approval. Nuisance water must not be allowed to accumulate in retention basins. The Division of Environmental Health may require a nuisance water abatement plan if this occurs.
 6. The minimum finish floor elevation shall be 12 inches above top of fronting street curb unless property is below street level and/or 6 inches above the 100-year frequency storm event or storm track. A local engineering practice is to use a 5-inch precipitation event as a storm track in the absence of detailed flood information. The 100-year frequency storm would be required for detention calculations.
 7. Finish pad elevations should be indicated on the plans, which are at or above the 100-year frequency flood elevation identified by the engineer for the parcel. Finish floor elevations should be set at least 6 inches above the 100-year flood elevation.
 8. The developer shall submit a drainage study and specifications for improvements of all drainage easements, culverts, drainage structures, and drainage channels to the DPW 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 DPW 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, DPW. When appropriate, water surface profiles and adequate field survey cross-section data may also be required.
10. An airtight or screened oil/water separator or equivalent is required prior to permitting on-site lot drainage from entering any street right of way or public storm drain system for all industrial/commercial or multi residential uses. A maximum 6-inch drain lateral can be used to tie into existing adjacent street curb inlets with some exceptions. Approval from the DPW is 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.

County of Imperial General Plan

Because of the economic, biological, and agricultural significance water plays in the Imperial County, the Water Element and the Conservation and Open Space Element of the General Plan contain policies and programs, created to ensure water resources are preserved and protected. Table 4.10-1 identifies General Plan policies and programs for water quality 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 California Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.10-1: CONSISTENCY WITH GENERAL PLAN WATER AND HYDROLOGY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Water Element		
<p>Goal 2: Long-term viability of the Salton Sea, Colorado River, and other surface waters in the County will be protected for sustaining wildlife and a broad range of ecological communities.</p> <p>Objective 2.2: A balanced ecology associated with the riparian and ruderal biological communities important as breeding and foraging habitats for native and migratory birds and animals occurring within the County.</p> <p>Objective 2.3: Preservation of riparian and ruderal habitats as important biological filters as breeding and foraging habitats for native and migratory birds and animals.</p>	Yes, with Mitigation	<p>Implementation of Mitigation Measures HWQ-1, which would require the Project to obtain coverage under General Stormwater Construction permit, prepare a SWPPP, implement best management practices would reduce these impacts to a level less than significant. Riparian habitats would not be affected by the Project.</p>
Conservation and Open Space Element		
<p>Goal 2: The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability.</p> <p>Objective 2.6: Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.</p>	Yes	<p>The proposed Project would have no effect on riparian habitats.</p>
<p>Goals 6: The County will conserve, protect, and enhance water resources in the County.</p> <p>Objective 6.1: Ensure the use and protection of all the rivers, waterways, and groundwater sources in the County for use by future generations.</p> <p>Objective 6.2: Ensure proper drainage and provide accommodation for storm runoff from urban and other developed areas in manners compatible with requirements to provide necessary agricultural drainage.</p> <p>Objective 6.3: Protect and improve water quality and quantity for all water bodies in Imperial County.</p> <p>Objective 6.4: Eliminate potential surface and groundwater pollution through regulations as well as educational programs.</p> <p>Objective 6.7: Prohibit the inappropriate siting of solid or hazardous waste facilities next to water bodies or over sources of potable groundwater or recharge basins. In</p>	Yes	<p>Under proposed conditions, the existing drainage characteristics of the Project site would remain substantially the same. To retain the total volume of a 3-inch precipitation covering the solar energy facility site with no reduction from infiltration, the proposed onsite roads will be built up to a finish grade elevation above the existing ground and act as berms to allow onsite ponding and make the project site a “retention basin.”. Because of the implementation of infiltration, it is anticipated that the annual runoff from the Project site would decrease when compared to the existing condition. Therefore, the proposed Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the proposed Project is consistent with this objective.</p>

TABLE 4.10-1: CONSISTENCY WITH GENERAL PLAN WATER AND HYDROLOGY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
<p>association with the cleanup of the New River, all existing landfills in or near the river should eventually be closed.</p> <p>Objective 6.8: Discourage the use of hazardous materials in areas of the County where significant water pollution could pose hazards to humans or biological resources.</p> <p>Objective 6.9: Identify and protect watersheds and key recharge areas for the protection of water quality and groundwater (response needs to document how Project would protect water quality).</p> <p>Objective 6.10: Encourage water conservation and efficient water use among municipal and industrial water users, as well as reclamation and reuse of wastewater.</p>		<p>The proposed Project would protect water quality during construction through compliance with NPDES General Construction Permit, SWPPP, and BMPs. Design features and BMPs have also been identified to address water quality for the Project. Water quantity would be maintained for the proposed Project by retaining the majority of the Project site with pervious surfaces. Although the proposed Project may not improve water quality and quantity, it would protect existing conditions and satisfy County requirements. Therefore, the proposed Project is consistent with this objective.</p>

Sources: County of Imperial General Plan S Water Element, 1997; and Conservation and Open Space Element, 2016.

4.10.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site?
4. 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

5. 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 create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?
6. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
7. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Analysis

Impact 4.10-1: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Construction

Construction of the Project facilities would involve excavation, soil stockpiling, grading, and the installation of solar arrays and access roads. There are multiple construction related activities that could have potential direct or indirect impacts on the water quality of local surface water features and shallow groundwater resources including; sedimentation, erosion, handling hazardous materials, and dewatering. Disturbing the geomorphic characteristics and stability of the channel bed and banks may initiate chronic erosion in natural and engineered channels thereby resulting in increased turbidity. A similar circumstance could occur upon decommissioning of the Project prior to site restoration. In both cases, such impacts could be exacerbated if surface vegetation is not reestablished and stabilized prior to the next high-flow or precipitation event and could result in significant direct impacts within the immediate vicinity of construction and indirect impacts on water quality further downstream. Implementation of Mitigation Measure (MM) HWQ-1, which would require the Project to obtain coverage under General Stormwater Construction permit, prepare a SWPPP, and implement best management practices would reduce these impacts to a level less than significant.

Hazardous materials associated with construction would be limited to substances associated with mechanized equipment, such as gasoline and diesel fuels, engine oil, and hydraulic fluids. If precautions are not taken to contain contaminants, accidental spills of these substances during construction could produce contaminated stormwater runoff (nonpoint source pollution), a major contributor to the degradation of water quality in surface waters. Without proper containment and incident response measures in place, the operation of construction equipment could result in significant direct and indirect impacts on water quality. Implementation of MM HWQ-1 would reduce these impacts to a level less than significant.

Construction of the Project would at times, also require dewatering of shallow, perched groundwater in the immediate vicinity of excavations and installation of underground features at a limited number of areas where groundwater depths are shallow. Groundwater withdrawn from the construction areas would be subsequently discharged to local drainage ditches or via land application. These discharges may contain sediments, dissolved solids, salts, and other water quality constituents found in the shallow groundwater, which would degrade the quality of receiving waters. Degradation of local receiving waters from the introduction of shallow groundwater during construction dewatering would result in a significant impact on receiving waters. Implementation of MM HWQ-1 would reduce these impacts to a level less than significant.

Prior to construction and grading activities, the Project applicant would be required to file an NOI with the SWRCB to comply with the NPDES General Construction Permit and prepare a SWPPP, which addresses the measures that would be included during Project construction to minimize and control construction and post-construction runoff to the “maximum extent practicable.” In addition, NPDES permits require the implementation of BMP’s that achieve a level of pollution control to the maximum extent practical, which may not necessarily be completely protective of aquatic life or address water quality impairments for local waterways. Implementation of MM HWQ-1, which would require the Project to obtain coverage under General Stormwater Construction permit, prepare a SWPPP, and implement best management practices would reduce these impacts to a level less than significant. In addition, given that site decommissioning would result in similar activities as identified for construction, these impacts could also occur in the future during site restoration activities.

Operation

Post-construction runoff from the constructed facilities would carry two main water quality impacts that could impact surface water drainages and drains. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. 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 is 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. Implementation of MM HWQ-2 would reduce impacts to a level less than significant.

Long-term point discharges from the Project would be minimal; however, reductions in water quality could occur where the water released is of lower quality than ambient conditions. These discharges would be infrequent, but could include landscape irrigation, uncontaminated pumped ground water, and discharges of potable water during water tank cleaning [as defined in 40 CFR 35.2005(21)]. In this context, long-term water quality impacts from point sources would be less than significant.

The second potential impact from post-construction runoff is a potential increase in the quantity of water delivered to adjacent or nearby water bodies during storms, referred to as hydromodification. Increased impervious surfaces from surfaces such as asphalt, concrete, and other compacted surfaces can interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, large volumes of water runoff collect and are routed to drainage systems where it is discharged to the nearest receiving water. This process can contribute to stream bank scouring and downstream flooding, resulting in impacts on aquatic life and damage property. For these reasons, the Project could result in on- and off-site discharges that could indirectly impact downstream surface waters by increasing drain scour and/or sedimentation. Implementation of MMs HWQ-1 and HWQ-2 would reduce impacts to a level less than significant.

Impact 4.10-2: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Groundwater recharge in the area will not be significantly affected because of the fact that the majority of the Project site would feature a pervious landscape in both the existing and post Project conditions. The design of the Project site as a large retention basin would also provide infiltration and groundwater recharge. Due to the depth of water encountered at the site and the fact the Project does not propose to use groundwater for its construction or operational water needs the Project would not interfere with groundwater recharge.

During the construction phase, construction dewatering is not expected to be required. Groundwater at/near the Project site is too high in salinity for municipal, domestic, or industrial water supply. The Project's water, during construction and operation, would be obtained from IID, and as discussed in Section 4.17- would be less than the demand of the existing agricultural land. As a result, no significant impacts on groundwater levels would occur.

Impact 4.10-3: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site?

With the additions of the solar panels and the battery storage area, there would be an increase in impervious surfaces. The foundations of the solar panels and concrete pads in the battery storage area are the main elements of impervious surfaces that would be added; however, the increase would

not be nearly enough to have any discernible impact on the existing drainage patterns. The proposed grading would have minimal to no impact on the existing drainage patterns as well. The grading that is occurring on the west end would remove the dense vegetation and smooth out the slope, but the drainage patterns would stay the same. Therefore, watershed areas A-X1 and A-X2 are remaining the same in the post-construction stages, becoming watershed areas A-01 and A-02 respectively. The grading that would occur in the southeast corner would remove the dense vegetation and smooth out the slope. The change in grade would direct the runoff slightly to the west towards the discharge location of A-X3 rather than sheet flowing directly south. Postconstruction, watersheds A-X3 and A-X4 would combine to become watershed A-03 (Figure 3-7, Post-Construction Drainage Areas). The proposed onsite roads will be built up to a finish grade elevation above the existing ground and act as berms to allow onsite ponding and make the project site a “retention basin.”. Therefore, the proposed Project would result in no significant impacts associated with the alteration of drainage patterns resulting in substantial erosion or siltation on or off site.

Impact 4.10-4: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

See response to Impact 4.10-3. The proposed Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

Impact 4.10-5: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?

See response to Impact 4.10-3. 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 resources of polluted runoff.

Impact 4.10-6: Would a Project located in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The Project site is not located within a flood hazard, tsunami, or seiche zone, and would not involve the construction of residential housing. Therefore, the Project would not place housing within a 100-year flood hazard area as mapped on the most recent FIRM for the Project site.

There are no flood protection facilities including dam impoundments upstream of the Project site. Although levees provide flood protection from the New River for the Project vicinity, no residential structures would be constructed that could otherwise be subject to hazards from a levee failure.

Additionally, no modifications or crossings at levee structures are proposed, which could otherwise indirectly impact existing residents. Therefore, no impact is identified for this issue area.

Impact 4.10-7: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project site is located within the Imperial Valley Groundwater Basin, as defined by the California Department of Water Resources. The Imperial Valley Groundwater Basin is within the planning area for IID's Integrated Water Resources Management Plan (IWRMP) (IID 2012). In November 2012, the Imperial County Board of Supervisors adopted the IRWMP, and in December 2012, the City of Imperial City Council and the IID Board adopted the plan. Adoption by IID, the County and the City of Imperial meets the basic requirement of the California Department of Water Resources for an IRWMP. The Water Forum authorized the City of Imperial to serve as the Proposition 84 grant administrator. Until the IID board selects and implements such capital development projects, IID provides water to new non-agricultural projects under the terms of the Equitable Distribution Plan and the Interim Water Supply Policy (IWSP) for Non-Agricultural Projects which is incorporated into the 2012 Imperial IRWMP by reference.

The IWSP designates up to 25,000-acre feet per year (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. As of July 2020, 23,800 AF per year remain available for new projects ensuring reasonably sufficient supplies for new non-agricultural water users. The Project water demand of approximately 345.5 AF and 28.43 AFY amortized represents 0.12% of the unallocated supply set aside in the IWSP for non-agricultural project, and approximately 0.12% of forecasted future non-agricultural water demands planned in the Imperial IRWMP through 2055. The water demand for the Project is an increase in the overall historic demand for the Project site. For all the reasons described herein, the amount of water available and the stability of the IID water supply along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers ensure that Vikings Solar Energy Generation and Storage Project water needs will be met for the next 30 years as assessed for compliance under Senate Bill-610. Impacts would be less than significant.

4.10.4. Mitigation Measures

The following MM would reduce impacts to below a level of significance.

MM HWQ-1: Obtain coverage under Construction General Permit (SWRCB Order No. 2009-0009-DWQ and Associated Amendments)

The Project applicant or its contractor would obtain coverage under Construction General Permit (SWRCB Order No. 2009-0009-DWQ and Associated

Amendments). Under this permit they would be required to prepare a SWPPP specific to the Project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the Project applicant prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP(s) shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching).
- Dewatering and/or flow diversion practices, if required (MM HWQ-2).
- Sediment control practices (temporary sediment basins, fiber rolls).
- Temporary and post-construction on- and off-site runoff controls.
- Special considerations and BMPs for water crossings, wetlands, and drainages.
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, pH, and turbidity.
- Waste management, handling, and disposal control practices.
- Corrective action and spill contingency measures.
- Agency and responsible party contact information.
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP.

The SWPPP shall be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by

visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

Timing/Implementation: Prior to the issuance of a Certificate of Occupancy and yearly during Project operations.

Enforcement/Monitoring: ICPDSD and Imperial County DPW

MM HWQ-2 Incorporate Post-Construction Runoff BMPs into Project Drainage Plan

The Project Drainage Plan shall adhere to County guidelines to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project impervious surfaces as necessary.

Timing/Implementation: Prior to the issuance of a Certificate of Occupancy and yearly during Project operations.

Enforcement/Monitoring: ICPDSD and Imperial County DPW

Level of Significance After Mitigation

Impact 4.10-1

1. With the implementation of MM HWQ-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.
2. With the implementation of MM HWQ-2, potential water quality impacts resulting from post-construction discharges during operation for the Project would be reduced to a less than significant level. With the proposed mitigation, any stormwater runoff generated from the Project site would be subject to on-site treatment and retention and, therefore, would not pose a significant threat to local surface water features or shallow groundwater resources. Potable water discharges generated during operations would be of limited quantity and sufficient quality that they would pose a less than significant threat to the environment.

4.11 Land Use and Planning

This section addresses potential land use impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project, as applicable.

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments related to land use and planning were received.

Issues Scoped Out

The Imperial County Planning and Development Services Department (ICPDSD) determined in the Initial Study (IS) located in Appendix A-2, that the following environmental issue area resulted in “No Impact” and was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding this issue.

- Would the Project physically divide an established community? Implementation of the Project would not physically divide an established community.

4.11.1 Environmental Setting

The Project site is comprised of three (3) parcels consisting of approximately 480 acres of agricultural land (east parcel, Assessor’s Parcel Number [APN] 050-070-018) and approximately 124 acres of undeveloped desert land (two western parcels, APNs 050-070-019 and 050-070-021). The 480-acre agricultural use land is separated by East Nelson Pit Road, the north portion is currently in agricultural production while the southern portion is fallowed. The two western parcels are undeveloped desert land that abut and cross the Imperial Irrigation District (IID’s) East Highline Canal. The subject property is located within a mixed agricultural, desert, and geothermal resource area 5.5 miles east of Holtville, California. Adjacent properties consist of agricultural use lands west of the East Highline Canal and vacant desert land to the north. Vacant desert land and geothermal wells and power plants are located to the east and south (G.S. Lyon Associates, 2021).

Onsite Land Use

The Project site consists of previously graded, vacant, former agricultural cropland and undeveloped Sonoran Desert scrub. The Project area elevation ranges from 10 feet below mean sea level (AMSL) to 60 feet (AMSL). Within and adjacent to the west of the Project site lies the existing New Coachella

Canal, a 122-mile aqueduct that conveys Colorado River water from the All-American Canal, through the Imperial Valley, to the Coachella Valley for irrigation purposes.

Surrounding Land Uses

Agricultural development to the west of the Project site largely contributes to the human-made changes in the natural landscape, as have surrounding roads and transmission lines with scattered rural residences and agricultural buildings located on subdivided land. Vegetation in the geometric agricultural fields is defined by distinct edges of exposed soils, with consistent groupings of bright yellow to dark green colors and a smooth, carpet-like texture. The vegetation to the north, east, and south is consistent and includes localized, isolated areas of globular shaped trees with pale green foliage and grey with woody trunks and branches ranging from 20 to 50 feet in height, with smooth, light khaki to dark brown, low-profile desert shrubs near residential developments throughout the landscape. The existing human-made features in the landscape are primarily geometric and consist of vertical, continuous, galvanized, grey to silver (metallic) and light brown to dark brown (woodtone) transmission line infrastructure; rectangular, constructed agricultural buildings; stacked crop bales covered with bright white sheeting; and blocky, bright yellow to dark green agricultural plots. Additionally, geothermal pipelines from the geothermal energy facilities are visible to the east and south of the Project site (SWCA, 2022a).

The Algodones Dunes, including the Imperial Sand Dunes Recreation Area and North Algodones Dunes Wilderness Area, are approximately 12 miles east of the Project area. The dunes consist of gradually sloping sand dune formations that reach up to 400 feet AMSL (SWCA, 2022a).

General Plan and Zoning Designation

Land Use Designations

Two of the parcels (APNs 050-070-018; 050-070-019) are designated as Agriculture in the Imperial County General Plan. APN 050-070-021 is designated as "Recreation/Open Space". All are located within a Renewable Energy Overlay Zone. Project parcels 050-070-019 and 050-070-018 are both zoned A-2-RE (General Agriculture with Renewable Energy Overlay) and parcel 050-070-021 is zoned GS-RE (Government/Special Public Zone with Renewable Energy Overlay) (Figure 3-4).

4.11.2 Regulatory Setting

State

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning.

The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period or more.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific zone district, are required to be consistent with the general plan and any applicable specific plans.

Local

Imperial County General Plan

The purpose of the Imperial County General Plan is to guide growth throughout the County. Urban development is directed to areas where public infrastructure can be readily extended to areas with limited health and safety hazards. Likewise, development should avoid natural, cultural, and economic resources.

The General Plan includes ten elements: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; Renewable Energy and Transmission; Water; Parks and Recreation. These elements satisfy the California Government Code requirements for general plan elements. Each element includes goals, objectives, and implementing policies and programs.

Relevant County of Imperial General Plan policies related to the Land Use, Renewable Energy and Transmission and the Conservation and Open Space Elements, are provided below. Table 4.11-1 summarizes the Project's consistency with the County's General Plan policies.

While this Draft 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.

Imperial County Land Use Ordinance – Title 9

The County of Imperial Land Use Ordinance (Title 9) provides the physical land use planning criteria, development standards, and zoning regulations for development in the unincorporated areas of the County. Title 9 specifies permitted and conditional uses for the various zoning designations within unincorporated areas of the County. Development and performance standards included in Title 9 are adopted to protect the health, safety, and general well-being of the public through the orderly regulation of land uses within the County.

Imperial County Airport Land Use Compatibility Plan (ALUCP)

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.

TABLE 4.11-1: CONSISTENCY WITH GENERAL PLAN LAND USE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General plan	Analysis
Land Use Element		
<p>Goal 8: Coordinate local land use planning activities among all local jurisdictions and state and federal agencies.</p>	Yes	<p>Public scoping was held May 7 to June 9, 2021 to allow federal, state and local jurisdictions the opportunity to comment.</p>
<p>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.</p>	Yes	<p>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 4.9, Hydrology/Water Quality, of the DEIR. Once the Project is operational, water would be required for solar panel washing and fire protection. The Project site is within the IID’s water service boundary and therefore would receive water service from the IID. Water for construction (primarily for dust control) would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. 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.</p>
<p>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.</p>	Yes	<p>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 Conditional Use Permit (CUP). The Renewable Energy 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. The Project is located in the Renewable Energy Overlay Zone.</p>

TABLE 4.11-1: CONSISTENCY WITH GENERAL PLAN LAND USE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General plan	Analysis
Objective 8.9: Require necessary public utility rights-of-way when appropriate.	Yes	The Project would include the dedication of necessary right of way (ROW) to facilitate the placement of electrical distribution and transmission infrastructure.
Renewable Energy and Transmission Element		
Goal 8: Develop overlay zones that will facilitate the development of renewable energy resources while preserving and protecting agricultural, natural, and cultural resources. Development of overlay zones shall include coordination with Federal, State, County, Tribal governments, educational entities, the public and local industries.	Yes	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 Renewable Energy 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. The Project is located in the Renewable Energy Overlay Zone.
Objective 8.1: Allow for County review with appropriate development and performance standards for development of local resources within the overlay zones.	Yes	The County has provided review and comment at every stage of development including the CUP application.
Objective 8.2: Promote the exchange of information concerning renewable energy development to be circulated between industry, County staff, and the public.	Yes	Public scoping was held May 7 to June 9, 2021 to allow federal, state and local jurisdictions the opportunity to comment.
Objective 8.3: Provide the public adequate opportunity to obtain information on the current status of renewable energy development and to provide input on matters related to the development of renewable energy resources.	Yes	Public scoping was held May 7 to June 9, 2021 to allow all local jurisdictions the opportunity to comment.
Conservation and Open Space Element		
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.	Yes	See response to Objective 1.5 below.
Objective 1.5: Provide for the most beneficial use of land based upon recognition of natural constraints.	Yes	The Project site would be converted from undeveloped agricultural land to a solar energy and battery storage facility. The proposed Project would provide a beneficial use of the land by creating local jobs during construction and to a lesser degree during operation.

TABLE 4.11-1: CONSISTENCY WITH GENERAL PLAN LAND USE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General plan	Analysis
		In addition, the generation of 150 megawatts (MW) of renewable electrical energy is a benefit that would otherwise be generated by nonrenewable fossil fuels. Therefore, the proposed Project is consistent with this objective.
Goal 8: Open space shall be maintained to protect the aesthetic character of the region, protect natural resources, provide recreational opportunities, and minimize hazards to human activity.	Yes	See response to Objective 8.2 below.
Objective 8.2: Focus all new renewable energy development within adopted Renewable Energy Overlay Zones.	Yes	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 Renewable Energy 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. The Project is located in the Renewable Energy Overlay Zone.

Source: Imperial County, General Plan Land Use Element, 2015a; Renewable Energy and Transmission Element, 2015c; and Conservation and Open Space Element, 2016.

4.11.3 Analysis of Project Effects and Significance

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. 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?

Analysis

Impact 4.11-1: 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?

Imperial County General Plan

Project APNs 050-070-019 and 050-070-018 are both zoned A-2-RE (General Agriculture with Renewable Energy Overlay) and APN 050-070-021 is zoned GS-RE (Government/Special Public

Zone with Renewable Energy Overlay). All parcels are located within the Renewable Energy Overlay Zone. Project APNs 050-070-019 and 050-070-018 are both designated by the General Plan as Agriculture and APN 050-070-021 is Recreation/Open Space. The current land use is idle land and agriculture. The Project would not conflict with any applicable land use plan, policy, or regulation. There are no adopted habitat conservation plans or natural community conservation plans encompassing the Project site therefore there is no potential for the Project to conflict with any land use plan, policy or regulation. There would be no impact.

Imperial County Airport Land Use Compatibility Plan

The Project site is not located within the Holtville Airport land use compatibility zones and there would be no conflict with this plan (Imperial County, 1996). A hearing of the County's Airport Land Use Commission was held August 18, 2021. The Commission concurred with the Project's consistency with the ALUCP.

4.11.4 Mitigation Measures

No mitigation measures would be required.

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4.12 Mineral Resources

This section addresses potential mineral resource impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project, as applicable.

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments related to minerals were received.

4.12.1 Environmental Setting

The Project site is comprised of three (3) parcels consisting of approximately 480 acres of agricultural use land (east parcel) and 124-acres of undeveloped desert land (two western parcels). The 480-acre agricultural use land is separated by East Nelson Pit Road, the north portion is currently in agricultural production while the southern portion is fallowed. The two western parcels are undeveloped desert land the abut and cross the IID's East Highline Canal. The subject property is located within a mixed agricultural, desert, and geothermal resource area east of Holtville, California. Adjacent properties consist of agricultural use lands west of the East Highline Canal and vacant desert land to the north. Vacant desert land and geothermal wells and power plants are located to the east and south (G.S. Lyon Inc. 2021).

According to *Figure 8: Imperial County Existing Mineral Resources of the Conservation and Open Space Element* of the County's General Plan (County of Imperial 2016), the Project site appears to be near sand and gravel, construction mines. According to the *Phase I Environmental Site Assessment* (G.S. Lyon Inc. 2021) prepared for the Project, on topographic maps from 1957 and 1979 a "mine" is shown on the south side of Nelson Pit Road where soil was surface mined. This is consistent with observations made during a site visit that showed what appeared to be a borrow pit in this location. The borrow pit mine is located on Assessor's Parcel Number (APN) 050-070-021, which is zoned GS-RE. According to the County of Imperial Land Use Ordinance (Title 9), mining is not a permitted use in the GS-RE zone. The *Phase I Environmental Site Assessment* (G.S. Lyon Inc. 2021) also included a review of the Mineral Resources Data System (MRDS), which found three (3) mines on the Project site: J.B. Nelson South Plant, J.B. Nelson South, and Highline Pit. MRDS is a collection of reports describing metallic and nonmetallic mineral resources throughout the world, but as of 2011 systematic updates have ceased. These three mines are all located on APN 050-070-018, which is zoned A-2-RE. The A-2-RE zone permits mineral exploration. Additionally, aerial photographs of the Project site show the site undergoing land leveling for the agricultural field

in 1949 and conversion of the site into agricultural production in 1953. Aerial photographs from 1976, 1985, 2002 and 2006 show the Project site as a predominately agricultural field.

4.12.2 Regulatory Setting

Local

Imperial County General Plan

The purpose of the Imperial County General Plan is to guide growth throughout the County. Urban development is directed to areas where public infrastructure can be readily extended to areas with limited health and safety hazards. Likewise, development should avoid natural, cultural, and economic resources.

The General Plan includes ten elements: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; Renewable Energy and Transmission; Water; Parks and Recreation. These elements satisfy the California Government Code requirements for general plan elements. Each element includes goals, objectives, and implementing policies and programs.

Relevant County of Imperial General Plan policies related to mineral resources are provided below. Table 4.12-1 summarizes the Project's consistency with the County's General Plan policies.

While this Draft Environmental Impact Report (EIR) analyzes the Project's consistency with the General Plan pursuant to State California Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.12-1: CONSISTENCY WITH GENERAL PLAN LAND USE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
Goal 4: The County will identify and protect geologic, soil, aggregate, and mineral resources for extraction while minimizing the effect of mining on surrounding land uses and other environmental resources.	Yes	The applicant is not proposing any form of mineral extraction therefore the Project will not have result in impacts from mining on surrounding land uses and other environmental resources.
Objective 4.3: Safeguard the use and full development of all mineral deposits.	Yes	According to the Conservation and Open Space Element of the General Plan, no known mineral resources occur within the Project site nor does the Project site contain mapped mineral resources. The Project site is near mapped sand and gravel, construction mines and has been

TABLE 4.12-1: CONSISTENCY WITH GENERAL PLAN LAND USE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
		historically mined. Construction of the Project would result in hindrance of full access to any remaining sand and gravel materials. However, the Project site is not an active mine and mining has ceased years ago. There are no mineral deposits to safeguard.
Objective 4.4: Regulate the development adjacent to or near all mineral deposits and geothermal operations due to the potential for land subsidence.	Yes	There is a potential for 1/3 inch of liquefaction induced differential settlement at the Project site. Because of the depth of the liquefiable layer, the 15-foot-thick non-liquefiable layer may act as a bridge over the liquefiable layer resulting in a fairly uniform ground surface settlement; therefore, wide area subsidence of the soil overburden would be the expected effect of liquefaction rather than bearing capacity failure of the proposed structures. However, with the implementation of the MM GEO-2, potential impacts associated with liquefaction and land subsidence would be reduced to a less than significant level.

Source: County of Imperial, General Plan Conservation and Open Space Element, 2016.

4.12.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Analysis

Impact 4.12-1: Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Under the proposed Project, areas that appear to have been used in the past for soil borrow pits would be filled and leveled for use. Construction of the proposed Project would hinder any further access to any remaining sand and gravel materials within the pit because the pit would be capped by fill material. Access to and extraction of the sand and gravel at a future date would be challenging

from both an economic and geotechnical standpoint, due to the large quantity of overburden that would have to be removed.

However, while backfill and reclamation of the borrow pits would hinder future extraction of the remaining sand and gravel deposits beneath the existing pit; the Project as a whole would not reduce the overall availability of mineral resources in the Project Area for several reasons:

- Mining in the borrow pit appears to have ceased many years ago. The borrow pit is currently overgrown with vegetation. The 2012 topographic map does not show any development on the subject property.
- A review of the California Department of Conservation (DOC), Division of Mine Reclamation Mines Online website does not show any active mines in this location.

Thus, the impact of the Project on mineral resources of regional and local significance is less than significant.

Impact 4.12-2: Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The Project site is not delineated on the County General Plan as a locally important mineral resource recovery site, thus, there would be no impact.

4.12.4 Mitigation Measures

No mitigation measures would be required.

4.13. Noise

This section addresses potential noise impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions at the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the Project, as applicable.

Information used in preparing this section and in the evaluation of potential aesthetic impacts was derived, in part, from the *Noise Technical Report for the Vikings Solar Energy Storage Project* prepared by SWCA which is provided as Appendix O this EIR (SWCA, 2022h).

Scoping Issues Raised

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No issues related to noise were raised during scoping.

Issues Scoped Out

The Imperial County Planning and Development Services Department (ICPDSD) determined in the Initial Study (IS) located in Appendix A-2, that the following environmental issue area resulted in “No Impact” and was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the Initial Study and additional information regarding this issue.

- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? The proposed Project is located within the vicinity of the Holtville Airport, which is located 1.6 miles north of the Project site. According to the Imperial County Airport Land Use Compatibility Plan (ALUCP) (Imperial County, 1996), the Project is outside the compatibility zones of the Holtville Airport. Specifically, the Project site is approximately 1.4 miles south of the boundary line of Compatibility Zone C. Construction noise levels would not exceed the County’s 75 dBA Leq threshold. Furthermore, operational noise levels would be minimal. For these reasons, the Project would not expose people residing or working in the area to excessive noise levels and no impacts would occur.

4.13.1. Environmental Setting

The Project site is comprised of three (3) parcels consisting of agricultural land (east parcel) and undeveloped desert land (two western parcels). The agricultural land is separated by East Nelson Pit Road, the north portion is currently in agricultural production while the southern portion is fallowed.

The two western parcels are undeveloped desert land the abut and cross the Imperial Irrigation District (IID's) East Highline Canal. The Project site is located within a mixed agricultural and desert area east of Holtville, California. Adjacent properties consist of agricultural use lands west of the East Highline Canal and vacant desert land to the north. Vacant desert land and geothermal wells and power plants are located to the east and south (G.S. Lyon Associates, 2021).

The Project site is generally located south of Kavanaugh Road, west of Graeser Road, the East Highline Canal and IID's KN/KS 230 kV transmission line, approximately 1.8 miles north of I-8. It should be noted however that the northwest portion of the Project site is bisected by Graeser Road and the East Highline Canal (APN 050-070-019). The Project site is surrounded by agricultural uses on the west and by open desert on the north, south and east. The Holtville Airport is located 1.6 miles to the north, and the nearest existing or planned solar PV projects are located approximately 7.25 miles to the south, across State Route (SR)-98. The predominant sources of noise in the Project vicinity includes vehicular traffic on local roads and highways and agricultural operations. Activities involving the use of heavy-duty equipment, such as front-end loaders, forklifts, and diesel-powered trucks, are common noise sources typically associated with agricultural uses. Noise typically associated with agricultural operations, including the use of heavy-duty equipment, can reach maximum levels of approximately 85 dBA at 50 feet (County of Imperial, 2018). Based on field observations of the Project site, the existing noise environment is generally influenced by the noise produced from the following sources:

- Vehicle traffic along Graeser and East Nelson Pit Road.
- Agricultural operations throughout the Project vicinity including the operation of heavy equipment and vehicles.

Sensitive Receptors

Although noise pollution can affect all segments of the population, certain groups and land uses are considered more sensitive to ambient noise levels than others, sensitivity being a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. Children, the elderly, and the chronically or acutely ill are the most sensitive population groups. Residential land uses are also generally more sensitive to noise than commercial and industrial land uses. The *Noise Technical Study* (SWCA, 2022h) identified a total of 13 residential noise sensitive areas (NSAs) within 2 miles of the project boundary. Additionally, 35 temporary NSAs (i.e., recreational vehicles) were identified and included in the analysis. A house is currently located on the Project site; however, it is slated to be demolished as part of the Project and does not qualify as a "sensitive residential receptor". The nearest sensitive receptors (residences) are located west of the East Highline Canal, approximately 1.6 miles south of the Project site.

Overview of Sound Measurement

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations. Noise levels typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from point sources (i.e., industrial machinery). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed (approximately 30 years old or older) generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units and office buildings construction to California Energy Code standards is generally 30 dBA or more.

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over an extended period of time are more likely to be an annoyance average noise level. Typically, equivalent continuous sound level (Leq) is summed over a one-hour period. Lmax is the highest, and Lmin is the lowest, root mean squared sound pressure level within the measuring period. The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (Ldn), which is the 24-hour average noise level with a 10-dBA penalty for noise occurring during nighttime (10 PM to 7 AM) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a 5 dBA penalty for noise occurring from 7 PM to 10 PM and a 10 dBA penalty for noise occurring from 10 PM to 7 AM. Daytime Leq levels are louder than Ldn or CNEL levels; thus, if the Leq meets noise standards, the Ldn and CNEL are also met.

Ground-borne Vibration

Ground-borne vibration consists of rapidly fluctuating motions or waves, which are also measured in dB. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside structures. Differences in subsurface geologic conditions and distance from the source of vibration will result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes will decrease with increasing distance. High frequency vibrations reduce much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances.

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (FTA, 2018), ground-borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads.

Some common sources of ground-borne vibration are construction activities such as blasting, pile-driving, and operation of heavy earth-moving equipment. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. Peak particle velocity is typically a factor of 1.7 to 6 times greater than RMS vibration velocity (FTA, 2018). The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration sensitive equipment.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

In residential areas, the background vibration velocity level is usually around 50 VdB (approximately 0.0013 inches per second [in/sec] PPV). This level is well below the vibration velocity level threshold of perception for humans, which is approximately 65 VdB. A vibration velocity level of 75 VdB is considered to be the approximate dividing line between barely perceptible and distinctly perceptible levels for many people (FTA, 2018).

4.13.2. Regulatory Setting

Federal

The Federal Noise Control Act of 1972⁽¹⁾ addressed the issue of noise as a threat to human health and welfare. To implement the Federal Noise Control Act, the U.S. Environmental Protection Agency (USEPA) undertook a number of studies related to community noise in the 1970s. The USEPA found that 24-hour averaged noise levels less than 70 dBA would avoid measurable hearing loss, levels of less than 55 dBA outdoors and 45 dBA indoors would prevent activity interference and annoyance (USEPA, 1972).

The U.S. Department of Housing and Urban Development (HUD) published a Noise Guidebook for use in implementing the Department's noise policy. In general, HUD's goal is exterior noise levels that are less than or equal to 55 dBA Ldn. The goal for interior noise levels is 45 dBA Ldn. HUD suggests that attenuation be employed to achieve this level, where feasible, with a special focus on sensitive areas of homes, such as bedrooms (HUD, 2009).

State

Title 24 of the California Code of Regulations (CCR) establishes standards governing interior noise levels that apply to all new single-family and multi-family residential units in California. These standards require that acoustical studies be performed before construction at building locations where the existing Ldn exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum Ldn levels to 45 dBA in any habitable room. Although there are no generally applicable interior noise standards pertinent to all uses, many communities in California have adopted an Ldn of 45 as an upper limit on interior noise in all residential units.

In addition, the State of California General Plan Guidelines, provides guidance for noise compatibility. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

¹ The Noise Control Act of 1972 (42 U.S.C. 4901–4918) consists of Public Law 92–574 (Oct. 27, 1972) and amendments made by subsequent enactments

Local

County of Imperial General Plan

The County of Imperial General Plan, specifically the Noise Element, outlines the goals and objectives for identifying and managing existing and future noise sources in County of Imperial. The General Plan also contains plans and policies to protect the public from noise intrusion. Table 4.13-1 identifies applicable General Plan policies, goals, and objectives applicable to the Project’s consistency with the General Plan. While this DEIR analyzes the Project’s consistency with the County of Imperial General Plan pursuant to CEQA Guidelines, Section 15125(d), the County of Imperial Planning Commission will determine the Project’s consistency with the General Plan.

TABLE 4.13-1: CONSISTENCY WITH APPLICABLE GENERAL PLAN NOISE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Noise Element		
<p>Goal 1: Provide an acceptable noise environment for existing and future residents in Imperial County.</p> <p>Objective 1.1: Adopt noise standards which protect sensitive noise receptors from adverse impact.</p> <p>Objective 1.3: Control noise levels at the source where feasible.</p> <p>Objective 1.5: Identify sensitive receptors with noise environments which are less than acceptable, and evaluate measures to improve the noise environment.</p> <p>Objective 1.6: Collect data for existing noise sources in the County in order to improve the data base and enhance the ability to evaluate proposed projects and land uses.</p>	Yes	The Project site is surrounded by agricultural and open desert. There are no residential uses or other sensitive noise receptors within close proximity.
<p>Goal 2: Review proposed projects for noise impacts and require design which will provide acceptable indoor and outdoor noise environments.</p> <p>Objective 2.1: Adopt criteria delineating projects which should be analyzed for noise impact to sensitive receptors.</p> <p>Objective 2.3: Work with project proponents to utilize site planning, architectural design, construction, and noise barriers to reduce noise impacts as projects are proposed.</p>	Yes	See response to Goal 1 above.

TABLE 4.13-1: CONSISTENCY WITH APPLICABLE GENERAL PLAN NOISE GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
Objective 2.6: Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.	Yes	No significant noise impacts were identified in the preparation of the EIR.

Sources: County of Imperial, General Plan Noise Element, 2015; and Conservation and Open Space Element, 2016.

County of Imperial Construction Noise Standards

The County of Imperial General Plan Noise Element requires that construction noise from a single piece of equipment or a combination of equipment shall not exceed 75 dB Leq, when averaged over an 8-hour period and measured at the nearest sensitive receptor. This standard assumes a construction period of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB Leq when averaged over a 1-hour period.

County of Imperial Noise Ordinance

Noise-generating sources in County of Imperial are regulated under the County of Imperial Codified Ordinances, Title 9, Division 7 (Noise Abatement and Control). Noise limits are established in Chapter 2 of this ordinance. Under Section 90702.00(A) of this rule, 70 dB is the normally acceptable limit for agriculturally zoned land at or beyond the boundaries of the property on which the noise is produced at any location in the County.

County of Imperial Property Line Noise Standards

The Property Line Noise Limits listed in Table 9 of the County’s General Plan Noise Element provide acceptable sound level limits based on the property zoning. The applicable property line sound level limits are provided in Table 4.13-2 below and apply to noise generation from one property to an adjacent property. These standards do not apply to construction noise.

These standards are enforced through the County's Code Enforcement Program on the basis of complaints received from persons impacted by excessive noise. It must be acknowledged that a noise nuisance may occur even though an objective measurement with a sound level meter is not available. In such cases, the County may act to restrict disturbing, excessive, or offensive noise which causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

TABLE 4.13-2: PROPERTY LINE NOISE LEVEL LIMITS

Zone	Time	Applicable Limit One-hour Average Sound Level (Decibels)
Residential Zones	7 AM to 10 PM	50
	10 PM to 7 AM	45
Multi-residential Zones	7 AM to 10 PM	55
	10 PM to 7 AM	50
Commercial Zones	7 AM to 10 PM	60
	10 PM to 7 AM	55
Light Industrial/Industrial Park Zones	Anytime	70
General Industrial Zones	Anytime	75

When the noise-generating property and the receiving property have different uses, the more restrictive standard shall apply. When the ambient noise level is equal to or exceeds the Property Line noise standard, the increase of the existing or proposed noise shall not exceed 3 dB Leq.

Source: County of Imperial Noise Element, 2015.

The standards prescribed in the County Noise Element also establish that construction equipment operation shall be limited to the hours of 7 AM to 7 AM, Monday through Friday, and 9 AM to 5 PM on Saturday, unless the County Planning and Development Services Director authorizes otherwise. No commercial construction operations are permitted on Sunday or holidays.

The Noise/Land Use Compatibility Guidelines are not intended to allow the increase of ambient noise levels up to the maximum without consideration of feasible noise reduction measures. The following guidelines are established by the County of Imperial for the evaluation of significant noise impact.

1. If the future noise level after the Project is completed will be within the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, but will result in an increase of 5 dB CNEL or greater, the Project will have a potentially significant noise impact and mitigation measures must be considered.
2. If the future noise level after the Project is completed will be greater than the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, a noise increase of 3 dB CNEL or greater shall be considered a potentially significant noise impact and mitigation measures must be considered.

Vibration Standards

The County Noise Ordinance does not provide vibration standards. The FTA has determined vibration levels that would cause annoyance to a substantial number of people and potential damage to building structures. The FTA criterion for vibration induced structural damage is 0.20 in/sec for the PPV. Project construction activities would result in PPV levels below the FTA's criteria for vibration induced structural damage. The FTA criterion for infrequent vibration induced annoyance is 80 Vibration Velocity (VdB) for residential uses.

4.13.3. Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
2. Result in generation of excessive ground-borne vibration or ground-borne noise levels?

Analysis

Impact 4.13-1: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels?

The noise levels generated by construction equipment would vary significantly and depend on several different parameters, such as the type, model, size, and condition of the equipment; the operation schedule; and the condition of the area being worked. Additionally, construction projects are accomplished in several different stages. Each stage has a specific equipment mix, depending on the work to be completed. The following sections estimated noise levels related to the construction of the project.

Temporary Construction/Decommissioning Noise

It is anticipated that construction activities would start in the first quarter of 2022 and would last approximately 12 months with the Project operation commencing in 2023. Construction is expected to include six phases, which have the potential to overlap with one another. Noise levels for typical construction equipment that would likely be used at the project are approximately in the 70 to 90 dBA range at a distance of 50 feet (15 meters), as shown in Table 4.13-3. Construction noise levels were estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). The RCNM is FHWA's national model for the prediction of construction noise.

Estimates of noise from the construction of the project are based on a roster of the maximum number of construction equipment types used on a given day. Table 4.13-3 lists typical construction equipment and the noise level at 50 feet. The RCNM has noise levels for various types of equipment preprogrammed into the software; therefore, the noise level associated with the equipment is typical for the equipment type and not based on any specific make or model. The RCNM assumes that the maximum sound level for the project (L_{max}) is the maximum sound level for the loudest piece of equipment. The approximate noise generated by the construction equipment used at the facility has been conservatively calculated based on an estimated project construction equipment roster to be used at the project area at one time, and not considering further attenuation due to atmospheric interference or intervening structures. The equipment and activities on-site would vary throughout

the project, depending on various stages of construction. The predicted noise from construction activity is presented as a worst case (highest noise level) scenario, where it is assumed, all equipment is present and operating simultaneously on-site for each stage of construction. Results of the RCNM construction noise calculations are presented in Table 4.13-4,

TABLE 4.13-3: NOISE LEVELS FOR COMMON CONSTRUCTION EQUIPMENT

Equipment Onsite	Typical Maximum Level (dBA) at 50-Feet from the Source
Crane	81
Dozer	82
Drill Rig Truck	79
Excavator	81
Flat Bed Truck	74
Front End Loader	79
Generator	81
Grader	85
Man Lift	75
Scraper	84
Tractor	84
Trencher	80
Welder/Torch	74
Other Equipment > 5 horsepower	85

Source: SWCA, 2022h.

Noise levels assume a noise attenuation rate of 6 dBA per doubling of distance.

TABLE 4.13-4: PREDICTED CONSTRUCTION NOISE LEVELS

Phase	Equipment	Distance (feet)	Construction 1-hr Leq (dBA)	Construction Lmax ^a (dBA)	Combined Ambient + Calculated Noise Level, 1-hr Leq ^{b,c} (dBA)
Site Preparation	Rubber Tired Dozers Scrapers Skid Steer Loaders Tractors/Loaders/Backhoes	25	92.6	93.0	89.6
		50	86.6	87.0	83.6
		100	80.6	81.0	77.6
		200	74.6	75.0	71.6
		250	72.6	73.0	69.6
		500	66.6	67.0	63.6
		1,000	60.6	61.0	57.7
		2,000	54.6	55.0	51.8
		4,000	48.6	48.9	46.3
		5,000	46.6	47.0	44.8

TABLE 4.13-4: PREDICTED CONSTRUCTION NOISE LEVELS

Phase	Equipment	Distance (feet)	Construction 1-hr Leq (dBA)	Construction Lmax ^a (dBA)	Combined Ambient + Calculated Noise Level, 1-hr Leq ^{b,c} (dBA)
Grading	Excavators Graders Off-Highway Trucks Rubber Tired Dozers Scrapers Tractors/Loaders/Backhoes	25	93.6	94.0	90.6
		50	87.6	88.0	84.6
		100	81.6	82.0	78.6
		200	75.6	76.0	72.6
		250	73.6	74.0	70.6
		500	67.6	68.0	64.6
		1,000	61.6	62.0	58.6
		2,000	55.6	56.0	52.7
		4,000	49.6	49.9	47.2
		5,000	47.6	48.0	45.6
Trenching	Cranes Forklifts Trenchers Skid Steer Loaders Generator Sets Other General Industrial Equipment Tractors/Loaders/Backhoes Welders	25	94.1	91.0	91.1
		50	88.1	85.0	85.1
		100	82.1	79.0	79.0
		200	76.0	73.0	73.0
		250	74.1	71.0	71.1
		500	68.1	65.0	65.1
		1,000	62.1	59.0	59.1
		2,000	56.0	53.0	53.2
		4,000	50.0	46.9	47.6
		5,000	48.1	45.0	45.9
Interconnection Connection	Cranes Forklifts Generator Sets Other General Industrial Equipment Aerial Lifts Tractors/Loaders/Backhoes Welders	25	92.9	93.0	89.9
		50	86.9	87.0	83.9
		100	80.9	81.0	77.9
		200	74.9	75.0	71.9
		250	72.9	73.0	69.9
		500	66.9	67.0	63.9
		1,000	60.9	61.0	57.9
		2,000	54.9	55.0	52.1
		4,000	48.8	48.9	46.6
		5,000	46.9	47.0	45.0
Solar Array Installation	Cranes Pile Driver Forklifts Bore/Drill Rigs Skid Steer Loaders	25	94.2	94.8	91.2
		50	88.2	88.8	85.2
		100	82.2	82.8	79.2
		200	76.1	76.7	73.1

TABLE 4.13-4: PREDICTED CONSTRUCTION NOISE LEVELS

Phase	Equipment	Distance (feet)	Construction 1-hr Leq (dBA)	Construction Lmax ^a (dBA)	Combined Ambient + Calculated Noise Level, 1-hr Leq ^{b,c} (dBA)
	Generator Sets Off-Highway Trucks Tractors/Loaders/Backhoes Welders	250	74.2	74.8	71.2
		500	68.2	68.8	65.2
		1,000	62.2	62.8	59.2
		2,000	56.1	56.7	53.3
		4,000	50.1	50.7	47.7
		5,000	48.2	48.8	46.0

Source: SWCA, 2022h.

a. Calculated Lmax is the loudest individual value.

b. Assumes existing daytime and nighttime noise levels of 40 dBA and 32 dBA.

c. Assumes daytime construction only.

The closest residential NSA is located approximately 6,512-feet from a proposed area where construction activities are expected to occur; maximum 1-hr Leq noise levels at this distance are estimated at 44.3 dBA. Construction is transient in nature and noise levels vary depending on the activity in progress. Noise impacts to residents due to the construction of the project would be temporary and intermittent. Therefore, impacts from construction noise are considered less than significant.

Traffic noise associated with construction vehicle traffic is not anticipated to be a significant source of noise. Traffic levels typically would have to double in order for the increase in traffic noise levels to increase perceptively, by 3 dBA. As discussed under Impact 4.15-1, the Project is anticipated to generate 180 inbound/180 outbound daily trips during construction. The distribution of construction traffic on area roadways would increase hourly traffic volumes by much less than double; therefore, impacts from traffic noise are considered less than significant.

Operational Noise

The modeled sound sources from the project would include up to 31 inverters, one generator step-up transformers (GSU) and a BESS. There would be a small amount of transportation of equipment and traffic to the project during the operation and maintenance of the facility. Estimated 1-hr Leq noise levels from the operation and maintenance traffic was estimated to be no more than 64.4 dBA at a distance of 50 feet.

This facility design consists of approximately 31 inverters, 1 GSU transformer and a BESS. The proposed inverters will be Sun Grow SG3600UD-MV model. The calculated noise levels emitted by the project would be below USEPA's 55 dBA Ldn noise standard at all identified residential NSAs. Noise contributions from the project are low and well below the stated noise limits; therefore, the project noise would remain at or below the specified noise standard. Since noise contribution

from the project at the closest NSA was estimated at 14.3 dBA Leq, the Ldn at the NSA was estimated to be 42.0 dBA, which is below the USEPA recommendation of 55 dBA for residential land use.

Maintenance activities would include periodic site visits to solar panels, inverters, transformers, transmission lines, substations, and auxiliary structures. These activities would involve vehicle traffic with relatively low noise levels. Infrequent maintenance activities would be anticipated, such as road maintenance work, or repair or replacement of equipment. However, anticipated noise levels from maintenance activities would be lower than those of construction activities.

Operation noise outputs of transmission lines are minimal and generally limited to corona noise and the occasional maintenance vehicle surveying the transmission line. It is anticipated that transmission line operational noise sources would not permanently increase ambient noise levels above the baseline conditions at the nearest sensitive receptor.

Estimated noise levels from decommissioning activities would be comparable to but less than those associated with the construction of the project, because the activity type and level would be similar but shorter in duration. It is anticipated that the decommissioning activities for the project can be completed over a two-year period. The estimated schedule length for decommissioning is tied to assumptions about the number of equipment types mobilized, crew sizes, weather and climate conditions, and overall productivity, and, accordingly, the potential impacts would be temporary and intermittent in nature. No significant operational noise impacts would result and no mitigation would be required.

Impact 4.13-2: Would the Project result in generation of excessive ground-borne vibration or ground-borne noise levels?

The FTA has determined vibration levels that would cause annoyance to a substantial number of people and potential damage to building structures. The FTA criterion for vibration induced structural damage is 0.20 in/sec for the PPV. Project construction activities would result in PPV levels below the FTA's criteria for vibration induced structural damage. The FTA criterion for infrequent vibration induced annoyance is 80 VdB for residential uses.

Table 4.13-5 lists the average vibration levels that could be experienced at adjacent land uses from the temporary construction activities. As shown, construction activities would generate levels of vibration that would not exceed the FTA criteria for nuisance for nearby residential uses. In addition, there are no vibration-sensitive uses located adjacent to, or in the vicinity of, the Project site. Construction-related vibrations would be imperceptible (i.e., below 80 VdB) at a distance of 800-feet from the construction activities. The nearest offsite uses are agricultural and the nearest residential use is 1.6 miles south of the Project site. Therefore, project construction activities would not result in vibration induced structural damage or vibration induced annoyance to adjacent land uses. The same would be expected in association with Project decommissioning. No vibration would

be generated during Project operations. Therefore, Project impacts associated with excessive ground-borne vibration or groundborne noise are considered less than significant.

TABLE 4.13-5: VIBRATION LEVELS FROM CONSTRUCTION ACTIVITIES

Equipment	Approximate Velocity Level at 25 Feet (VdB)	Approximate RMS Velocity at 25 Feet (in/sec)	Approximate Velocity Level at 800 Feet (VdB)	Approximate RMS Velocity at 800 Feet (in/sec)
Small bulldozer	58	0.003	12.8	0.0000
Jackhammer	79	0.035	33.8	0.0002
Loaded trucks	86	0.076	40.8	0.0004
Large bulldozer	87	0.089	41.8	0.0005
<i>FTA Criteria</i>			<i>80</i>	<i>0.2</i>
Significant Impact?			No	No

4.13.4. Mitigation Measures

No mitigation measures would be required.

4.14 Public Services

This section describes the existing public services in the vicinity of the Project site and identifies the potential physical environmental impacts that would result from provision of services to the proposed Project.

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. No comments related to public services were received.

Issues Scoped out as part of the Initial Study

The Imperial County Planning and Development Services Department (ICPDSD) determined in the Initial Study (IS), located in Appendix A-2, that the following environmental issue areas resulted in no impact was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this DEIR for a copy of the IS and additional information regarding this issue.

- Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools, parks and other public facilities. Construction of the Project would not include the provision of, or the need for, new schools, parks or other public facilities. The Project would not result in new long-term housing. There would not be a permanent increase in the population. Because the Project would not result in a substantial increase in population, it does not require additional schools, parks, or other public facilities beyond that which already exists. No physical impacts related to the provision of schools, parks, or other facilities would occur.

4.14.1 Environmental Setting

The Project site is comprised of three (3) parcels consisting of approximately 480 acres of agricultural use land (east parcel) and 125 acres of undeveloped desert land (two western parcels). The 480-acre agricultural use land is separated by East Nelson Pit Road, the north portion is currently in agricultural production while the southern portion is fallowed. The two western parcels are undeveloped desert land the abut and cross the IID's East Highline Canal. The subject property is located within a mixed agricultural, desert, and geothermal resource area east of Holtville, California. Adjacent properties consist of agricultural use lands west of the East Highline Canal and vacant desert land to the north. Vacant desert land and geothermal wells and power plants are located to the east and south (G.S. Lyon Associates, 2021).

Fire protection services are provided to the Project site by the County of Imperial Fire Department (ICFD) through the Holtville Fire Department Station, located in the City of Holtville approximately 5.5 miles to the west. The County of Imperial Sheriff’s Department provides law enforcement to the Project site. Sheriff’s officers that patrol the area are based in the City of Holtville.

4.14.2 Regulatory Setting

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

State

Fire Protection

The California Fire and Building Codes address general and specialized fire safety requirements for buildings. Topics addressed in the codes include, but are not limited to, fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, and industrial processes.

Local

County of Imperial General Plan

The Imperial County General Plan provides goals, objectives, policies, and programs regarding the preservation and use of water. Table 4.14-1 provides a consistency analysis of the applicable Imperial County General Plan goals and objectives as they relate to the Project. While the Draft EIR analyzes the Project’s consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.14-1: CONSISTENCY WITH APPLICABLE GENERAL PLAN UTILITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Seismic and Public Safety Element		
<p>Goal 1: Include public health and safety considerations in land use planning. Objective 1.8: Reduce fire hazards by the design of new developments.</p>	Yes	<p>The Project’s Conditional Use Permit (CUP) application and site plan will be reviewed by the ICFD 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 to reduce the potential for fire hazards including up to three 10,000-gallon fire water tanks for operations and maintenance, and sufficient turnaround areas to allow clearance for fire trucks per fire</p>

TABLE 4.14-1: CONSISTENCY WITH APPLICABLE GENERAL PLAN UTILITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
		<p>department standards (70 feet by 70 feet, and 20-foot-wide access road).</p> <p>Proper battery storage and transport strategies will help manage the fire risk. Air conditioning equipment will be used to maintain safe ambient operating temperature conditions. An effective method for Li-ion battery storage is to use a fire containment and suppression system that would deal with a battery fire event. Such systems contain the fire event and encourage suppression through cooling, isolation, and containment (SCIC).</p> <p>The Project would use a fire protection system with the SCIC strategy for fire containment. To that end, the containerized battery energy storage system (BESS) would include a gaseous fire suppressant agent (e.g., 3M™ Novec™ 1230 Fire Protection Fluid) and an automatic fire extinguishing system with sound and light alarms. The system would be designed in accordance with National Fire Protection Association (NFPA) safety standards including an automatic shut-down system for fans that keep the container sealed when the fire extinguishing system is activated. The fire suppressant agent is released by a releasing panel that uses an aspirating smoke detection system and has a manual release. The aspirating smoke detection system provides for four levels of signaling before release of the fire suppressant agent. A disable switch is provided for maintenance personnel to allow for work on the container without accidental discharge.</p>
<p>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.</p> <p>Objective 2.5: Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.</p>	<p>Yes</p>	<p>See response above for a discussion on how the Project would implement all state and local building codes, fire codes and provide site design measures to reduce the potential for fire hazards. With regards to public safety and security, the Project would include 6-foot-tall perimeter security fencing with cameras. In addition, the Project’s driveways would each be provided with a minimum of 30-foot double swing gates with “Knox Box” for keyed entry. Emergency response personnel would be provided with manual override capability in order to access the site facility.</p>

Source: County of Imperial, General Plan Seismic and Public Safety Element, n.d.

4.14.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

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

Analysis

Impact 4.14-1: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire or police protection services?

Fire Protection

Construction

As described in Chapter 3, Project Description, the number of on-site construction workers for the solar facilities is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the battery storage facility and the substation is not expected to exceed 100 workers at any one time. If the two components (Solar photovoltaic [PV] and BESS) were constructed at the same time, the on-site construction workers are not expected to exceed 250 workers at any one time. The presence of construction workers would be temporary and would last approximately 12 months. It is anticipated that most workers would be sourced from within the County and would commute to the site.

According to the California Department of Forestry and Fire Protection (CALFIRE), Imperial County Fire Hazards Severity Zone Maps the Project site is within an area that is classified at the Local Responsible Areas. Accordingly, the Project is not expected to expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Fire protection facilities requirements are based on the number of residents and workers in the ICFD service area. Service demand is primarily tied to population, not building size, because emergency medical calls typically make up the majority of responses provided by the fire department. As the

number of residents and workers increase, so do the number of emergency medical calls. There are no residential uses proposed as a part of the Project. Therefore, no residents would occupy the Project site and a population-based increase in service demands as a result of an increase in residential uses would not occur.

While the construction of the Project would increase the number of people on the Project site, the increase would be temporary, fire hazards from the Project, as a large-scale construction Project would increase the need for response from fire for emergency services as well as fire protection. As required by Mitigation Measure (MM) FIRE-7, the Project proponent would prepare and implement a fire safety plan that contains notification procedures and emergency fire precautions consistent with the 2019 California Fire Code and Imperial County Fire Code. The plan would be for use during the 12-month construction period and would include emergency fire precautions for vehicles and equipment as well as implementing fire rules and trainings so temporary employees are equipped to handle fire threats. With implementation of this plan, impacts to fire protection services during Project construction would be less than significant.

Operations

The Project would result in a minor increase in demand for fire protection services over existing levels. No 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 intends to feature a battery energy storage system (BESS), located at or near the proposed substation. The batteries would be housed in storage containers or buildings fitted with heating, ventilation and air conditioning and fire suppression systems. The Project would use a fire protection system with the suppression through cooling, isolation, and containment (SCIC) strategy for fire containment. To that end, the containerized BESS would incorporate adequate explosion prevention protection as required in NFPA 855 or International Fire Code Chapter 12, where applicable and include a gaseous fire suppressant agent (e.g., 3M™ Novec™ 1230 Fire Protection Fluid) and an automatic fire extinguishing system with sound and light alarms. The system would be designed in accordance with the National Fire Protection Association (NFPA) safety standards and incorporate adequate explosion prevention protection as required in NFPA 855 or International Fire Code Chapter 12, where applicable and include an automatic shut-down system for fans that keep the container sealed when the fire extinguishing system is activated. The fire suppressant agent is released by a releasing panel that uses an aspirating smoke detection system and has a manual release. The aspirating smoke detection system provides for four levels of signaling before release of the fire suppressant agent. A disable switch is provided for maintenance personnel to allow for work on the container without accidental discharge.

The facility would maintain the volume of water required for firefighting, based on the number and sizes of structures located on the site. As discussed in Chapter 3, Project Description, A minimum of 40,000 gallons of fire water would be maintained across the solar energy facility site and kept

filled during operations for on-site fire protection. Portable fire extinguishers would be provided at various locations throughout the solar energy facility site. Both the access and service roads (along the perimeter of the Project facility) would have turnaround areas to allow clearance for fire trucks per fire department standards (70 feet by 70 feet, and 20-foot-wide perimeter access road). Additionally, fire protection for the Project will be provided by vegetation management programs as part of Project design measures. As such, the Project would not result in a need for fire facility expansion. Decommissioning of the Project at the end of its 30-year life would occur through implementation of a required Reclamation Plan. These activities would not be anticipated to result in an increased need for fire protection services.

Imperial County requires payment of impact fees for new development projects. Fire Impact Fees are imposed pursuant to Ordinance 1418 §2 (2006), which was drafted in accordance with the County's TischlerBise Impact Fee Study. The ordinance has provisions for non-residential industrial projects based on square footage. The Project applicant 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.

However, the ICFD Fire Prevention Bureau has indicated in a letter dated December 29, 2021, the need for additional equipment such that firefighting operations can be conducted safely and effectively to meet NFPA, Occupational Safety and Health Administration (OSHA) and ICFD standards and requirements.

MM FIRE-1: Purchase Type 1 Fire Engine

The Applicant shall be required to purchase a Type 1 fire engine with All Terrain Capabilities as specified and approved by the Fire Department. The Fire Engine cost estimate will be at Current Market Value for approved Fire Engine. Final Cost, conditions and equipment of the Fire Engine shall be determined prior to the issuance of the initial grading permit. The County agrees to require, as a condition of approval, other developers in the area to reimburse the Applicant for the expenses associated with the purchase of the Fire Engine. The Permittee shall be reimbursed only for those expenses more than their proportionate share for the purchase of the Fire Engine that the Permittee would have been required to pay. Furthermore, if a Fire Engine was already purchased by another developer in the area, then the Permittee shall only be required to pay a fire mitigation in the amount of up to \$100 per acre that would represent their proportionate share to reimburse the purchaser of the Fire Engine. The County shall be responsible for the managing the reimbursement component of this condition of approval.

MM FIRE-2: Purchase Hazardous Material Emergency Response Equipment

The Applicant shall be required to purchase Fire and Hazardous Material response equipment (i.e., Thermo) which will be determined by Fire Department and Hazmat Operations annually, or as needed, for the project as new technology, tactics, and/or equipment are developed to protect the project. This item will be a cost shared with other solar projects.

MM FIRE-3: Emergency Operations Plan

The Applicant shall develop an Emergency Operation Plan in conjunction with local fire service personnel and the AHJ and hold a comprehensive understanding of the hazards associated with lithium-ion battery technology. Lithium-ion battery ESSs must incorporate adequate explosion prevention protection as required in NFPA 855 or International Fire Code Chapter 12, where applicable and Research focused on emergency decommissioning best practices and the role of the fire service in an emergency should be conducted.

MM FIRE-4: Yearly Training

The Applicant shall fund and provide Training yearly. This item will be a cost shared item with other solar projects.

MM FIRE-5: Signage

The Applicant shall provide signage that identifies the contents of an ESS is required on all ESS installations to alert first responders to the potential hazards associated with the installation.

MM FIRE-6: Operation and maintenance, fees associated with ICFD/Office of Emergency Services (OES)

For operation and maintenance, fees associated with ICFD/OES, the Applicant shall pay a fee of \$50 per acre per year prior to commencement of the construction period to address the ICFD/OES expenses for service calls within the Project site. Said amount shall be prorated monthly for periods of time less than a full year. Permittee shall provide advance, written notice to County Executive Office of the construction schedule and all revisions thereto.

- (a) Applicant shall pay an annual fee of \$20 per acre per year during the post-construction, operational phase of the Project to address the ICFD/OES expenses for service calls within the Project site. Said fee will be paid to the ICFD/OES to cover on-going maintenance and operations cost created by the Project.

- (b) Costs associated with items two above items shall annually adjusted on January 1st to add a consumer price index (Los Angeles) increase. Such costs associated with these items can be readjusted in the County's sole discretion if a new service analysis is prepared and that service analysis is approved by both the County and the Permittee.
- (c) In lieu of providing all-weather access roads for fire protection vehicles, the Applicant shall be permitted to provide compacted dirt roads (in compliance with ICAPCD's rules and regulations) for fire protection vehicles. .

The Project shall also be required to demonstrate the following as Conditions of Approval:

- An approved water supply capable of supplying the required fire flow determined by Appendix B of the California Fire Code shall be installed and maintained. Private fire service mains and appurtenance shall be installed in accordance with NFPA 24.
- An approved automatic fire suppression system shall be installed on all required structures as per the California Fire Code. All fire suppression systems shall be installed and maintained to the current adopted fire code and regulations
- An approved automatic fire detection system shall be installed on all required structures as per the California Fire Code. All fire detection systems will be installed and maintained to the current adapted fire code and regulations.
- Fire department access roads and gates will be in accordance with the current adapted fire code and the facility will maintain a Knox Box for access on site.
- Compliance with all required sections of the fire code.
- Applicant shall provide product containment areas(s) for both product and water run-off in case of fire applications and retained for removal
- A Hazardous Waste Material Plan shall be submitted to Certified Unified Program Agency (CUPA) for their review and approval.
- All hazardous material and wastes shall be handled, store, and disposed as per the approved Hazardous Waste Materials Plan. All spills shall be documented and reported to ICFD and CUPA as required by the Hazardous Waste Material Plan.

MM FIRE-7: Fire Safety Plan

Prior to the issuance of grading or building permits the Applicant shall develop and implement a fire safety plan for use during construction, operation and decommissioning.

The Project Applicant shall submit the plan, along with maps of the Project site and access roads, to the ICFD for review and approval. A copy of the approved Fire Safety Plan shall be submitted to the ICPDSD. The Fire Safety Plan shall contain notification procedures and emergency fire precautions including, but not limited to, the following:

- (a) All internal combustion engines, both stationary and mobile, shall be equipped with spark arresters. Spark arresters shall be in good working order.
- (b) Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. These vehicle types will maintain their factory-installed (type) muffler in good condition.
- (c) Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees.
- (d) Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials.

Level of Significance

With the implementation of MM FIRE-1, MM FIRE-2, MM FIRE-3, MM FIRE-4, MM FIRE-5, MM FIRE-6 and MM FIRE-7 impacts would be reduced to below a level of significance.

Police Services

The Project would result in a minor increase in demand for law enforcement protection services over existing levels. Emergency response times can vary because of the large patrol area of the County. Depending on the location of the deputy, response times can range from approximately 5 minutes to 1 hour; however, emergency calls involving public safety would take priority.

The Project does not include a residential component; therefore, it would not result in a substantial addition of residents to the Sheriff Department's service area. A part-time operations and maintenance staff of two to three people would be responsible for performing all routine and emergency operational and maintenance activities. The perimeter of the solar energy facility site (includes the Project's substation, battery storage system, and retention basins) would be secured with 6-foot-tall security fencing. In addition, a motion detection system and closed-circuit camera system may also be installed. The solar energy facility 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. The solar energy facility site would include both a primary and secondary access driveway off the adjacent public roads. The Project's driveways would each be provided with a minimum of 30-foot double swing gates with "Knox Box" for keyed entry. Emergency response personnel would be provided with manual override capability in order to access the site facility. With these features installed on site, the security on the solar energy facility site would be adequate and would not require the addition of staff to the Sheriff's Department. As such, the Project would not result in a need for police facility expansion. Decommissioning of the Project at the end of its 30-year life would occur through implementation of a required Reclamation Plan. These activities would not be anticipated to result in an increased need for police services.

Imperial County requires payment of impact fees for new development projects. Police services Impact Fees are imposed pursuant to Ordinance 1418 §2 (2006), which was drafted in accordance with the County's Traffic 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 police protection services' impact fees. These fees would be included in the Conditions of Approval for the CUP. Impacts would therefore be less than significant.

4.14.4 Mitigation Measure(s)

No mitigation measures are required.

4.15 Transportation and Traffic

This section addresses potential transportation and traffic impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing traffic in the Project area, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the Project, as applicable.

Information used in preparing this section and in the evaluation of potential transportation and traffic was derived from the Traffic Impact Study prepared by Kittelson & Associates which is provided as Appendix M this EIR (Kittelson & Associates, 2022).

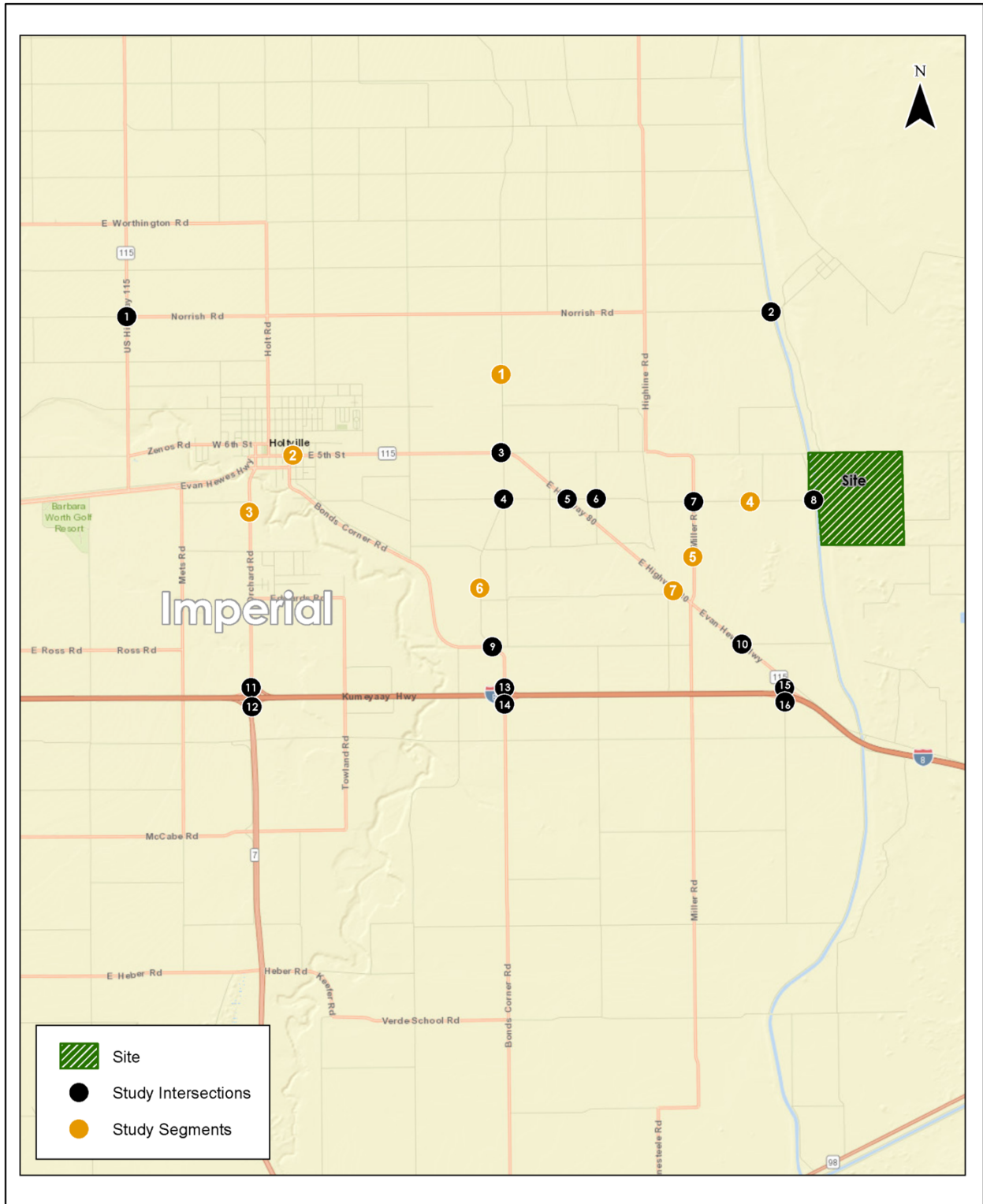
The following locations were analyzed as part of the traffic study (see Figure 4.15-1):

Intersections

- SR 115/Norrish Road
- Graeser Road/Norrish Road
- Snyder Road/Evan Hewes Highway
- Snyder Road/Nelson Pit Road
- SR 115/Nelson Pit Road
- Fust Road/Nelson Pit Road
- Miller Road/Nelson Pit Road
- Graeser Road/Nelson Pit Road
- Bonds Corner Road/Ogier Road/Snyder Road
- Evan Hewes Highway/Graeser Road
- Orchard Road (County Route S7)/I-8 WB Ramps
- Orchard Road (County Route S7)/I-8 EB Ramps
- Bonds Corner Road & I-8 WB Ramp
- Bonds Corner Road & I-8 EB Ramps
- SR 115 & I-8 WB Ramps
- SR 115 & I-8 EB Ramps

Segments

- Snyder Road, from Nelson Pit Road to Norrish Road
- SR 115, from Walnut Avenue to Maple Avenue
- Orchard Road, from County Route S7 to SR 115
- Nelson Pit Road, from Evan Hewes Highway to the Project Site
- Miller Road, from Evan Hewes Highway to Nelson Pit Road
- Snyder Road, from Evan Hewes Highway to Nelson Pit Road
- Evan Hewes Highway, from Snyder Road to Van Der Linden Road



Source: Kittelson & Associates 2021

Traffic Study Area
Vikings Solar Energy Generation and Storage Project
Figure 4.15-1

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from agencies and the public. The following issues related to transportation and traffic were raised by the California Department of Transportation (Caltrans) and the Imperial County Department of Public Works (DPW) and are addressed in this section:

Caltrans

Traffic Engineering Analysis

- All construction vehicles and heavy truck deliveries shall not use the dirt access road at the Intersection of State Route (SR)-115/Evan Hewes Highway and East Nelson Pit (dirt) Road.
 - The shoulder structural section would be severely impacted and possibly damaged if the construction site is accessed via this intersection.
 - The motoring public will not be expecting construction vehicles and heavy trucks to enter and exit from East Nelson Pit Road.
 - There will be heavy soil tracking onto the state facility.
- Access to the Project site shall be made via only the paved roads of Kavanaugh Road, Miller Road, and Nelson Pit Road.
- The intersections of SR-115/Evan Hewes Highway at Miller Road, and SR-115/Evan Hewes Highway at Kavanaugh Road will require some type of notice to motorist on SR-115 of construction vehicles entering/exiting the construction site.
- Possible offsite traffic control signs or portable changeable message signs (PCMS) might be required on SR-115.
- Possible Encroachment Permit might be required.
- Provide a construction access route exhibit to see how trucks will impact SR-115.
- Any impacts, structures, utilities, or other miscellaneous items related to this project that do encroach within Caltrans right of way will require further review and encroachment permits.

Design

- If the intersections between SR-115 and the side streets leading to the entrance of the power generation plant are to be paved, the pavement and intersection should be designed per the Caltrans Highway Design Manual (HDM), especially to accommodate the larger turning radius that may be needed for the trucks.

Traffic Control Plan/Hauling

- Caltrans has discretionary authority with respect to highways under its jurisdiction and may, upon application and if good cause appears, issue a special permit to operate or move a vehicle or combination of vehicles or special mobile equipment of a size or weight of vehicle or load exceeding the maximum limitations specified in the California Vehicle Code.
- If a Traffic Control Plan is required, it is to be submitted to Caltrans District 11, including the intersections along SR-115 in the project's vicinity at least 30 days prior to the start of any construction. Traffic shall not be unreasonably delayed. The plan shall also outline suggested detours to use during closures, including routes and signage.
- Potential impacts to the highway facilities (SR-115) and traveling public from the detour, demolition and other construction activities should be discussed and addressed before work begins.

Right-of-Way

- Per Business and Profession Code 8771, perpetuation of survey monuments by a licensed land surveyor is required, if they are being destroyed by any construction.
- Any work performed within Caltrans' right of way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans' R/W prior to construction.

Imperial County Department of Public Works

East Nelson Pit Road is rated for less than legal weights. It has a limited weight capacity of less than 63,500 pounds and is also 18 feet in width. It is unable to accommodate the typical semi-trailer transport due to its operating rating and is limited to one lane direction at a time due to its narrow width.

4.15.1 Environmental Setting

Existing Roadway Network

The roadway system in the Project vicinity consists of interstate freeways, state routes and arterial, collector, and local roadways that serve local and regional traffic demand. The vehicular facilities in the Project vicinity are discussed below.

Interstate and State Roadways

Interstate-8 (I-8) is the primary east-west route through Imperial County, running from San Diego, California to Arizona. It is a four-lane facility with complete grade separation and a speed limit of 70 miles per hour (mph).

State Route 115 (SR-115) has a distance of 33.6 miles and facilitates interregional agricultural goods movement and provides intraregional travel between various cities within Imperial County. For the most part, SR-115 is a two-lane conventional highway, although some short segments are four lanes. The posted speed limit of 65 mph.

Evan Hewes Highway (SR-115) is an east-west, two-lane undivided paved road from Austin Road to La Brucherie Road. Bike lanes or bus stops are not provided, and the posted speed limit is 40 mph.

State Route-7 (SR-7) is a four-lane highway that connects I-8 to the border of Mexico in Calexico. The posted speed limit is 65 mph.

Arterial Roadways

Kavanaugh Road is an east-west, two-lane roadway with a posted speed limit of 65 mph. The road merges with SR-115 for approximately one mile, and this road connects Graeser Road. It is a paved road west of Miller Road and becomes an unpaved road east of Miller Road.

Bonds Corner Road is a two-lane, north-south facility which connects from SR-98 in Calexico to the city of Holtville. It connects to I-8 via a diamond interchange with stop sign controls on the east and west approaches. The posted speed limit is 55 mph.

Orchard Road is a two-lane, north-south road that connects I-8 to the city of Holtville. The interchange at I-8 is a partial cloverleaf interchange with stop sign controls on the east-west approaches. The posted speed limit is 55 mph.

Collector Roadways

Snyder Road is a two-lane, north-south road that is 24 feet wide with unpaved shoulders.

Miller Road, also known as County Highway S-33 in the study area, is a two-lane, north-south road with unpaved shoulders.

Local Roadways

Norrish Road is a two-lane, east-west road that runs from SR-115 to Graeser Road.

Nelson Pit Road is a two-lane, east-west road with unpaved shoulders.

Fust Road is an unpaved two-lane, north-south road.

Graeser Road is an unpaved two-lane local road that runs east from Miller Road until the irrigation channel, where it runs north parallel to the channel.

Ogier Road is an unpaved two-lane local road that connects Snyder Road and Miller Road. It becomes Graeser Road west of Miller Road.

Transit, Bicycle and Pedestrian Facilities

Transit, bicycle, and pedestrian facilities are not available in the Project area.

Airports

The Holtville Airport, located approximately 1.6 miles north of the Project site, is the nearest public airport.

Existing Traffic Conditions

The following provides a summary of existing traffic conditions on study roadways and intersections.

Level of Service Standards

A project's effect on roadway capacity and Level of Service (LOS) does not constitute a significant environmental impact under the California Environmental Quality Act (CEQA). However, a LOS evaluation is required per the County's guidelines to determine if the project would cause any negative effects on roadway operations. The Imperial County Traffic Study and Report Policy, and the County's General Plan Circulation and Scenic Highway Element requires intersections and roadway segments to maintain a peak-hour LOS of C or better.

Intersection Level of Service Definitions

For this analysis, LOS is based on the *Highway Capacity Manual* (HCM) 6th edition definitions, included as Table 4.15-1: Level of Service Standards for ease of reference. The HCM methodology assigns a LOS grade to an intersection based on the delay for vehicles at the intersection, ranging from LOS A to LOS F; LOS A signifies very slight delay with no approach phase fully utilized, while LOS F signifies very high delays and congestion, frequent cycle failures, and long queues. For signalized and all-way stop-controlled intersections, the average control delay for all vehicles is assessed; for two-way stop-controlled intersections, the intersection approach with the highest delay is utilized. Table 3 shows the LOS thresholds from the HCM.

For signalized intersections, LOS criteria are stated in terms of the average control delay (in seconds) per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For unsignalized intersections, LOS is determined by the computed or measured control delay. It is defined for each movement through the intersection rather than for the intersection as a whole.

TABLE 4.15-1: LOS DEFINITIONS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS

Level of Service (LOS)	Average Control Delay (Signalized) (sec/veh)	Average Control Delay (Unsignalized) (sec/veh)
A	≤ 10.0	≤ 10
B	10.0 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.1	≥ 50.0

Source: Kittelson & Associates, 2022 (Appendix M).

Roadway Segment Level of Service Definitions

For Roadway segments, operations were assigned a Level of Service letter grade ranging from LOS A to LOS F (from better to worse congestion), with LOS “A” signifying free-flow traffic and LOS F signifying volumes that are over roadway capacity. For this analysis, the LOS and ADT corresponding table (Table 4.15-2) from the Circulation and Scenic Highway Element of the Imperial County General Plan was utilized.

TABLE 4.15-2: LEVEL OF SERVICE DEFINITIONS FOR ROADWAY SEGMENTS

Roadway Classification	Level of Service and ADT				
	A	B	C	D	E
Prime Arterial	22,200	37,000	44,600	50,000	57,000
Minor Arterial	14,800	24,700	29,600	33,400	37,000
Minor Collector	1,900	4,100	7,100	10,900	16,200

Notes: ADT=Average Daily Traffic.

Source: Kittelson & Associates, 2022 (Appendix M).

Intersection Operations

A LOS analysis was performed for the Project vicinity for the weekday AM peak hour (7:15 to 8:15) and PM peak hours (4:15 to 5:15) using traffic counts collected December 18, 2020. Table 4.15-3 provides a summary of the existing automobile LOS. As shown in Table 4.15-3, all study area intersections operate acceptably (at LOS C or better) under existing conditions.

TABLE 4.15-3: EXISTING INTERSECTION OPERATIONS

No.	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay (Sec)	LOS	Delay (Sec)	LOS
1	SR 115 & Norrish Road	TWSC	10.4	B	9.4	A
2	Graeser Road & Norrish Road	TWSC	8.6	A	8.5	A
3	Snyder Road & Evan Hewes Highway	TWSC	9.6	A	9.7	A
4	Snyder Road & Nelson Pit Road	TWSC	8.7	A	8.6	A
5	SR 115 & Nelson Pit Road	TWSC	9.1	A	9.6	A
6	Fust Road & Nelson Pit Road	TWSC	8.3	A	8.3	A
7	Miller Road & Nelson Pit Road	TWSC	9.1	A	9.1	A
8	Graeser Road & Nelson Pit Road	TWSC	0.0 ^(*)	A	7.2	A
9	Bonds Corner Road/Ogier Road & Snyder Road	TWSC	9.3	A	9.3	A
10	Evan Hewes Highway & Graeser Road	TWSC	9.1	A	8.6	A
11	Orchard Road (S7) & I-8 WB Ramps	TWSC	9.0	A	8.9	A
12	Orchard Road (S7) & I-8 EB Ramps	TWSC	9.2	A	9.1	A
13	Bonds Corner Road & I-8 WB Ramp	TWSC	8.8	A	8.6	A
14	Bonds Corner Road & I-8 EB Ramps	TWSC	8.6	A	8.7	A
15	SR 115 & I-8 WB Ramps	TWSC	8.5	A	8.5	A
16	SR 115 & I-8 EB RAMPS	TWSC	8.9	A	9.3	A

Notes:

* Delay of 0.0 second means traffic volumes are zero or no conflicts.

TWSC = Two-Way Stop Sign Controlled.

Source: Kittelson & Associates, 2022 (Appendix M).

Signalized Delay/LOS Thresholds		Unsignalized Delay/LOS Thresholds	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

Roadway Segment Operations

Table 4.15-4 provides a summary of existing roadway segment operations in the study area and denotes all roadway segments operating acceptably (at LOS “C” or better) under existing conditions.

TABLE 4.15-4: EXISTING ROADWAY OPERATIONS

Roadway Segment	LOS C Capacity	ADT	V/C Ratio	LOS
Snyder Rd/Nelson Pit Rd to Norrish Rd	7,100	964	0.14	A
SR 115 from Walnut Ave to Maple Ave	44600	5,957	0.13	A
Orchard Rd from S7 to SR 115	29600	4,527	0.15	A
Nelson Pit Rd from Evan Hewes Highway to Project Site	7,100	77	0.01	A
Miller Rd from Evan Hewes Highway to Nelson Pit Rd	7,100	466	0.07	A
Snyder Rd from Evan Hewes Highway to Nelson Pit Rd	7,100	536	0.08	A
Evan Hewes Highway from Snyder Rd to Van Der Linden Rd	44,600	2,273	0.05	A

Source: Kittelson & Associates, 2022 (Appendix M).

4.15.2 Regulatory Setting

State

California Department of Transportation (Caltrans)

Caltrans has jurisdiction over state highways and establishes maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Transportation and traffic impacts are regulated by Caltrans codes pertaining to licensing, size, weight, and load of vehicles operated on highways (California Vehicle Code [CVC], division 15, chapters 1 through 5) as well as the Street and Highway Code (Code §§660-711, 670-695) which requires permits from Caltrans for any roadway encroachment during truck transportation and delivery. The Street and Highway Code includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Senate Bill 743 (SB-743)

Senate Bill 743/State CEQA Guidelines Senate Bill (SB) -743, signed in 2013, required a change in the way that transportation impacts are analyzed under CEQA. Historically, environmental review of transportation impacts has focused on the delay vehicles experience at intersections and roadway segments, as expressed in LOS. The legislation, however, sets forth that upon certification of new guidelines by the Secretary of the Natural Resources Agency, automobile delay, as described solely by LOS or other similar measures of traffic congestion shall not be considered a significant impact on the environment. Local jurisdictions may continue to consider LOS with regard to local general plan policies, zoning codes, conditions of approval, thresholds, and other planning requirements. New criteria for measuring traffic impacts under CEQA are to focus on the reduction of greenhouse gas emissions, the development of multi-modal transportation networks, and a diversity of land uses.

State CEQA Guidelines Section 15064.3 was adopted in December 2018 to implement SB 743. In addition to establishing Vehicle Miles Traveled (VMT) as the most appropriate measure of transportation impacts, and shifting away from LOS, primary elements of this section:

- Reiterate that a project's adverse effect on automobile delay shall not constitute a significant environmental impact;
- Create a rebuttable presumption of no significant transportation impacts for (a) land use projects within 0.5-mile of either an existing major transit stop or a stop along an existing high-quality transit corridor, (b) land use projects that reduce VMT below existing conditions, and (c) transportation projects that reduce or have no impact on VMT;
- Allow a lead agency to qualitatively evaluate VMT if existing models are not available; and

Give lead agencies discretion to select a methodology to evaluate a project's VMT, but requires disclosure of that methodology in the CEQA documentation. Lead agencies are required to comply with CEQA Guideline revisions no later than July 1, 2020. To assist lead agencies in this endeavor, the State Office of Planning and Research (OPR) has also published a Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), which provides guidance in the calculation and application of VMT analyses within CEQA documents.

Local

The Imperial County General Plan Circulation and Scenic Highways Element is intended to provide a plan to accommodate a pattern of concentrated and coordinated growth, providing both, regional and local linkage systems between unique communities, and its neighboring metropolitan regions while protecting and enhancing scenic resources within both rural and urban scenic highway corridors. The Imperial County General Plan Circulation and Scenic Highways Element policies related to the proposed Project are outlined below. Table 4.15-5 summarizes the proposed Project's consistency with the applicable General Plan policies.

While this DEIR analyzes the proposed Project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Planning Commissioners and Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.15-5: CONSISTENCY WITH GENERAL PLAN TRANSPORTATION GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies and Objectives	Consistency with General Plan	Analysis
Circulation and Scenic Highways Element (CSHE)		
CSHE Goal 1: The County will provide and require an integrated transportation system for the safe and efficient movement of people and goods within and through the County of Imperial with minimum disruption to the environment.	Yes	A Traffic Impact Report (Appendix M) has been prepared which demonstrates that the proposed Project would not cause existing roadways or intersections to operate below a Level of Service "C". The Traffic Impact Report also evaluated potential VMT impacts and found the Project met the small project screening criteria and was not found to have a significant VMT impact. Traffic impacts would not be significant. No mitigation is required.
CSHE Objective 1.2: Require a traffic analysis for any new development which may have a significant impact on County roads.	Yes	See Response above.
CHSE Objective 1.12: Review new development proposals to ensure that the proposed development provides adequate parking and would not increase traffic on	Yes	See Response above.

TABLE 4.15-5: CONSISTENCY WITH GENERAL PLAN TRANSPORTATION GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies and Objectives	Consistency with General Plan	Analysis
Circulation and Scenic Highways Element (CSHE)		
existing roadways and intersection to a level of service (LOS) worse than “C” without providing appropriate mitigations to existing infrastructure.		

Source: County of Imperial, General Plan Circulation and Scenic Highway Element, 2008.

4.15.3 Analysis of Project Effects and Significance Determination

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

Methodology

The analysis prepared in this section is based on a *Traffic Impact Study* prepared by Kittelson & Associates (Kittelson & Associates, 2022: Appendix M). As discussed above, under SB-743, a project’s effect on automobile delay shall not constitute a significant environmental impact. Therefore, OS) and other similar vehicle delay or capacity metrics may no longer serve as transportation impact metrics for CEQA impact analyses. The OPR has updated the CEQA Guidelines and provided a final technical advisory in December 2018 which recommends VMT as the most appropriate measure of transportation impacts under CEQA. For land use and transportation projects, SB-743-compliant CEQA analysis became mandatory on July 1, 2020. Automobile delay, as described solely by LOS or similar measure of traffic congestion, is no longer considered a significant impact under CEQA. However, the County of Imperial DPW requires transportation analyses to review roadway capacity in terms of LOS to identify deficiencies and required improvements to the circulation system, outside of the CEQA analysis.

VMT Impact Significance Criteria

The County has not adopted its own VMT thresholds, for this reason the OPR Technical Advisory (December 2018) was used to evaluate VMT impacts. OPR’s Technical Advisory provides guidance for lead agencies to evaluate transportation impacts from projects based on VMT metrics. It provides screening criteria, which can be used to quickly identify whether a project should be expected to cause a less-than-significant impact related to VMT. Per OPR’s Technical Advisory, projects may be screened out as follows:

- Small Projects: projects generate fewer than 110 trips per day

- Local Serving Retail (generally less than 50,000 square feet in building area)
- Location-Based (low VMT areas, within ½ mile of an existing major transit stop, or along a high-quality transit corridor)
- Provision of affordable housing

The thresholds for a significant VMT impact are summarized in Table 4.15-6.

TABLE 4.15-6: OPR'S RECOMMENDED VMT SIGNIFICANCE THRESHOLDS

Residential	Exceeding a level of 15 percent below existing VMT per capita
Office	Exceeding a level of 15 percent below existing regional VMT per employee
Retail	A net increase in total VMT

Source: Kittelson & Associates, 2022 (Appendix M).

The seven (7) street segments and intersections selected for purposes of the analysis are presented in Section 4.15-1 and are shown on Figure 4.15-1. Figure 4.15-2 shows automobile peak hour volumes at the study intersections. Intersection control (i.e., signalized or stop-controlled) and lane geometries are also shown.

Guidelines for Determination of Significance

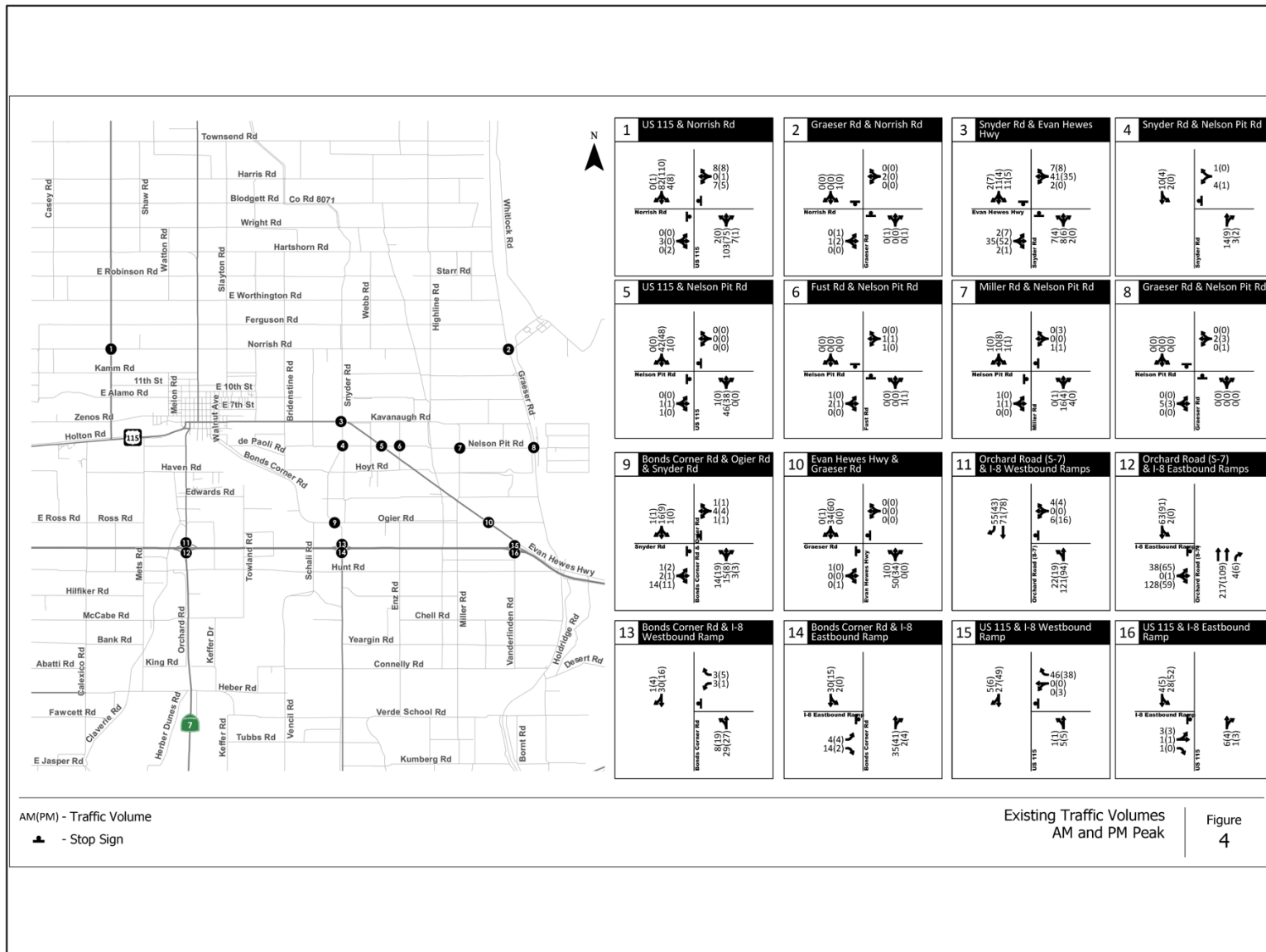
A project would be considered to have a significant impact if it would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
4. Result in inadequate emergency access?

Analysis

Impact 4.15-1: Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The Project consists of construction; operations and maintenance and decommissioning phases. Construction activities will be the primary generator of trips for the project. Therefore, to identify any impacts the addition of construction trips may cause, the LOS analyses of the study intersections and roadway segments during project construction were conducted.



Source: Kittelson & Associates 2021

Existing Traffic Volumes - AM and PM Peak Hour
Vikings Solar Energy Generation Project
Figure 4.15-2

Construction-Related Trip Generation and Distribution

This section provides the vehicle trip generation and distribution estimates for the proposed Project during construction. The number of on-site workers for the solar project and battery storage facilities is not expected to exceed 180 workers at any one time. As a worst-case condition, it is assumed that every construction worker would drive solo, there would be no carpooling, and all trips would coincide with the commute peak hour traffic hours (7-9 AM and 4-6PM, respectively). In reality, it is likely that some workers will carpool and/or travel outside the commuter traffic peak hours. Under this worst-case assumption, project construction is estimated to generate 180 in-bound trips during the AM peak hour, and 180 out-bound trips during the PM Peak hour. Onsite parking would be provided for all construction workers (Kittelsohn & Associates, 2022).

Since the bridge on the Nelson Pit Road, which is used by construction workers, has a weight capacity of 55,000 to 60,000 pounds, delivery trucks are prohibited from crossing it. Delivery trucks beyond the 60,000 pounds range are expected to use the bridge on Norrish Road to access the site. The truck delivery windows should be outside the AM and PM peak hours.

Based on the information provide by project sponsor, the construction worker traffic is expected to travel to the site from either SR-115 east or I-8 east, to north on Miller Road and east on Nelson Pit Road to the Project site. Construction trips are assigned based on the above information, satellite images to identify major origins/destinations near the project, and the Google Maps shortest routes from the site to the major origins/destinations during AM and PM peak hours.

The AM peak trip distribution for the project is as follows:

- 10 percent from the north via SR-115, Norrish Road, and Graeser Road
- 5 percent from the north via SR-115, Snyder Road, and Nelson Pit Road
- 20 percent from the west via SR-115, Evan Hewes Highway, and Nelson Pit Road
- 65 percent from I-8 (60 percent from the west, 5 percent from the south) via Exit 128 - Bonds Corner Road
 - 20 percent via Snyder Road and Nelson Pit Road
 - 45 percent via Ogier Road, Miller Road, and Nelson Pit Road

The PM peak trip distribution for the project is slightly different due to the shortest route showed in Google Maps that drivers are likely to take I-8 during the PM peak hour:

- 10 percent from the north via SR-115, Norrish Road, and Graeser Road
- 5 percent from the north via SR-115, Snyder Road, and Nelson Pit Road
- 20 percent from the west via SR-115, Evan Hewes Highway, and Nelson Pit Road

- 65 percent from I-8 (60 percent from the west, 5 percent from the south) via Nelson Pit Road, Miller Road, and SR-115 to Exit 131 – SR-115 and Van Der Linden Road

All trip distribution destinations total up to 100 percent.

Figure 4.15-3 presents the weekday AM and PM project-only turning movements that were derived from the trip generation and trip distribution discussed in this section.

Existing Plus Project Construction Traffic Conditions

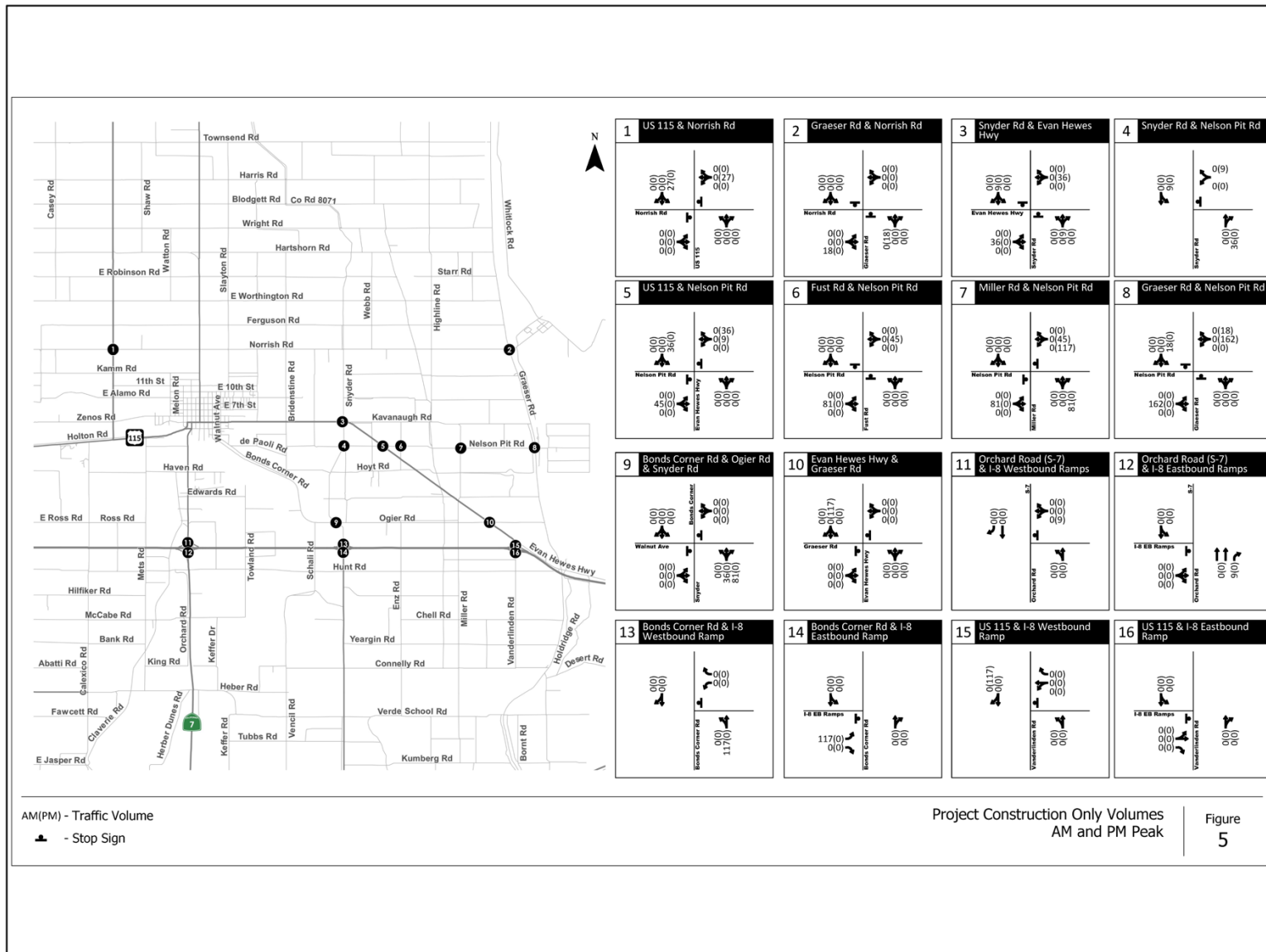
The automobile turning movement counts for the Existing Plus Construction scenario were developed from summing the Existing Conditions turning movement counts and the Construction Only turning movements. Figure 4.15-4 presents the Existing Plus Construction turning movements. The lane configuration during the Existing Plus Construction traffic conditions remains the same as the Existing Conditions (shown in Figure 4.15-2).

Table 4.15-7 presents the Existing Plus Construction delays and LOS for the study intersections. The table also compares the changes in delay between the Existing and Existing Plus Construction scenarios. Appendix C contains the Existing Plus Construction LOS worksheets.

TABLE 4.15-7: INTERSECTION OPERATIONS – EXISTING + CONSTRUCTION

#	Intersection	Weekday AM			Weekday PM		
		Delay (Sec)	LOS	Change	Delay (Sec)	LOS	Change
1	SR 115 & Norrish Road	10.9	B	0.5	10.5	B	1.1
2	Graeser Road & Norrish Road	8.7	A	0.1	8.7	A	0.2
3	Snyder Road & Evan Hewes Highway	10.1	B	0.5	10.2	B	0.5
4	Snyder Road & Nelson Pit Road	8.9	A	0.2	8.5	A	-0.1
5	SR 115 & Nelson Pit Road	10.7	B	1.6	9.6	A	0.0
6	Fust Road & Nelson Pit Road	9.1	A	0.8	8.3	A	0.0
7	Miller Road & Nelson Pit Road	11.2	B	2.1	9.6	A	0.5
8	Graeser Road & Nelson Pit Road	10.7	B	10.7	7.2	A	0.0
9	Bonds Corner Road/Ogier Road & Snyder Road	9.5	A	0.2	9.3	A	0.0
10	Evan Hewes Highway & Graeser Road	9.1	A	0.0	9.4	A	0.8
11	Orchard Road (S7) & I-8 WB Ramps	9.0	A	0.0	9.1	A	0.2
12	Orchard Road (S7) & I-8 EB Ramps	9.2	A	0.0	9.2	A	0.1
13	Bonds Corner Road & I-8 WB Ramp	9.5	A	0.7	8.6	A	0.0
14	Bonds Corner Road & I-8 EB Ramps	9.7	A	1.1	8.7	A	0.0
15	SR 115 & I-8 WB Ramps	8.5	A	0.0	8.6	A	0.1
16	SR 115 & I-8 EB Ramps	8.9	A	0.0	9.3	A	0.0

Source: Kittelson & Associates, 2022 (Appendix M).



Source: Kittelson & Associates 2021

Project Construction Only Volumes - AM and PM Peak Hour
Vikings Solar Energy Generation Project
Figure 4.15-3

As shown in the Table 4.15-8, all study intersections are expected to operate acceptably (LOS C or better) with the additional of Project construction traffic.

TABLE 4.15-8: ROADWAY OPERATIONS – EXISTING + CONSTRUCTION

Roadway Segment	Existing			Construction Trips	Existing + Construction		
	ADT	V/C Ratio	LOS		ADT	V/C Ratio	LOS
Snyder Rd Nelson Pit Rd to Norrish Rd	964	0.14	A	18	982	0.14	A
SR 115 Walnut Ave to Maple Ave	5,957	0.13	A	72	6,029	0.14	A
Orchard Rd S7 to SR 115	4,527	0.15	A	0	4,527	0.15	A
Nelson Pit Rd Evan Hewes Highway to Project Site	77	0.01	A	324	401	0.06	A
Miller Rd Evan Hewes Highway to Nelson Pit Rd	466	0.07	A	198	664	0.09	A
Snyder Rd Evan Hewes Highway to Nelson Pit Rd	536	0.08	A	36	572	0.08	A
Evan Hewes Highway Snyder Rd to Van Der Linden Rd	2,273	0.05	A	0	2,273	0.05	A

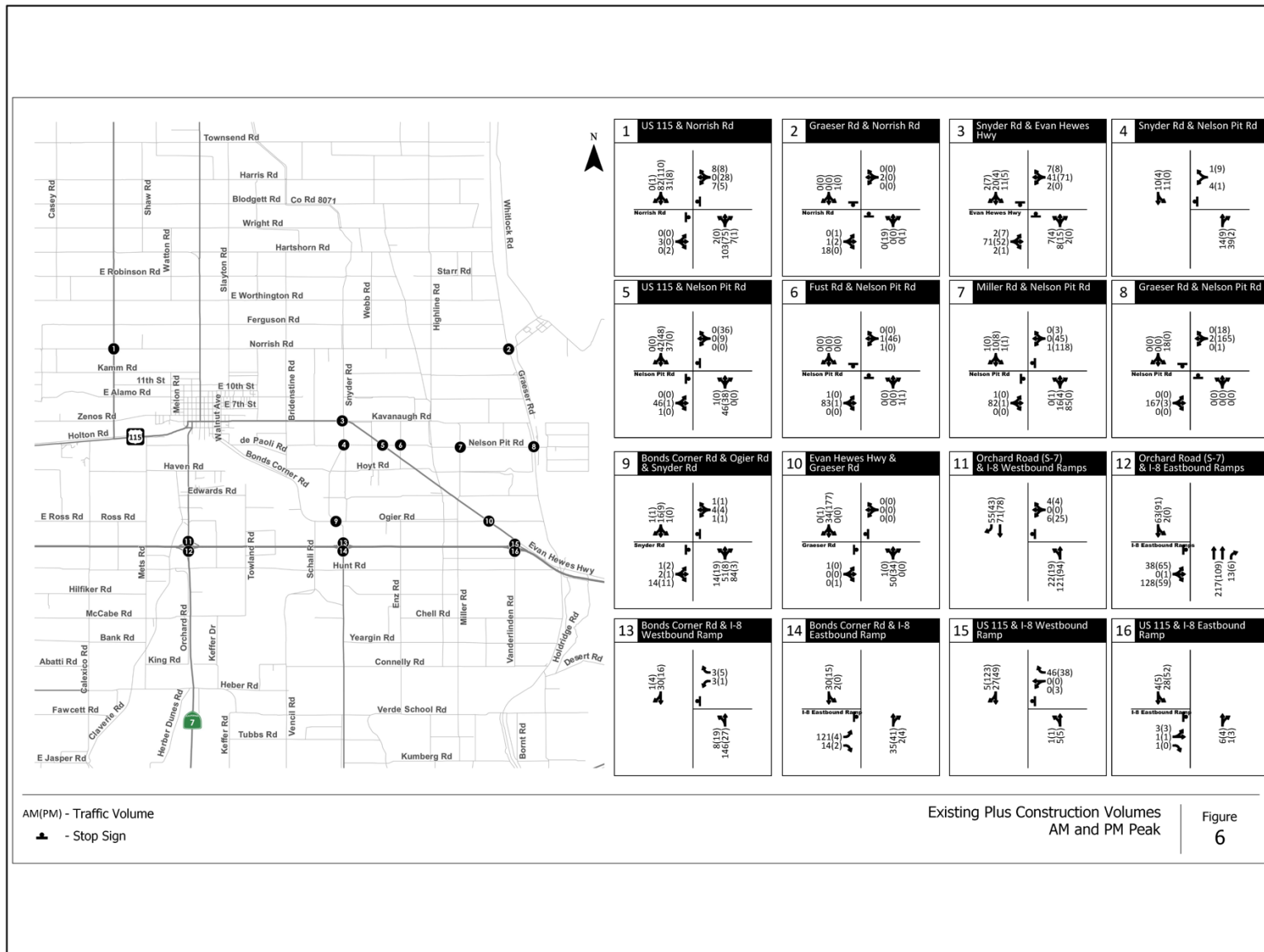
Source: Kittelson & Associates, 2022 (Appendix M).

Roadway segments were also analyzed for the Existing Plus Construction scenario. All roadway segments operate acceptably (LOS C or better) under the Existing Plus Construction scenario. In summary, construction traffic would not result in congestion and excessive delays at study intersections and roadways.

The development of the Project site would not cause a substantial increase in traffic affecting the efficiency of the circulation system; this includes all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, such as highways and freeways, pedestrian and bicycle paths, and mass transit. Thus, the impact would be less than significant and no mitigation would be required.

Impact 4.15-2: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) relative to Vehicle Miles Traveled?

As discussed previously, OPR provides screening criteria that allow small projects (from a traffic standpoint) to screen out of a detailed VMT analysis based on the number of daily trips it generates. Projects that generate fewer than 110 trips per day can be presumed to result in less than significant VMT impacts. The project would be remotely controlled. No employees would be based at the Project site. Security-related monitoring would be done remotely. Personnel may conduct



Existing Plus Construction Volumes
AM and PM Peak
Figure 6

Source: Kittelson & Associates 2021

Existing Plus Construction Volumes - AM and PM Peak Hour
Vikings Solar Energy Generation Project
Figure 4.15-4

unscheduled security rounds, and maintenance workers may access the site periodically to clean the panels and maintain the equipment and project area. The public would not have access to the facility. Thus, the project will not generate more than 110 trips per day. Therefore, the project meets the small project screening criteria, and it will not have significant VMT impact.

Impact 4.15-3: 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)?

The project does not include changes to existing roadways. A 20-foot-wide access road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. These access roads would not increase hazards because of design features or incompatible uses and no significant impact is identified.

Impact 4.15-4: Would the Project result in an inadequate emergency access?

To accommodate emergency access, PV panels would be spaced to maintain proper clearance. A 20-foot-wide access road would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. The internal access road would be graded and compacted (native soils) as required for construction, operations, maintenance, and emergency vehicle access. The access and service roads would also have turnaround areas at any dead-end to allow clearance for fire trucks per fire department standards (70 feet by 70 feet and 20-foot-wide access road). Based on this context, impacts on this issue area are considered less than significant.

4.15.4 Mitigation Measure

The Project would not result in significant transportation and traffic impacts. No mitigation is required; however the following would be added as a Conditions of Approval.

MM-TR-1: Permits, Agreements and Traffic Control Plan

Prior to the issuance of construction, grading or building permits, the Applicant shall:

- a. Obtain all necessary encroachment permits for work within Imperial County road or highway R/W. Obtain all necessary Oversize/Overweight permits to operate or move a vehicle of a size or weight exceeding the maximum limitations specified in the California Vehicle Code. Copies of the approved Construction Traffic Control Plan and issued permits shall be submitted to the ICPDSD and the Imperial County DPW, prior to the commencement of construction or decommissioning activities.

- b. Prepare a Haul Route Study for the proposed construction haul route to evaluate any impacts to County roads. Said study shall be submitted to the ICPDSD and the Imperial County DPW for review and approval. The haul route study shall include pictures and/or other documents to verify the existing conditions of the impacted County roads along the proposed haul route before construction begins. The haul route study shall also include recommended mitigation improvements to impacted County roads along with any fair share costs for such improvements.
- c. Enter into a secured Road Maintenance Agreement with the County of Imperial, prior to the issuance of a grading permit, to ensure that any County roads that are demonstrably damaged by construction traffic are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the State and/or Imperial County.
- d. Prepare and submit a Construction Traffic Control Plan to Imperial County DPW-Development Review and Caltrans District 11, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following issues:
 1. Timing of deliveries of heavy equipment and building materials;
 2. Directing construction traffic with a flag person;
 3. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;
 4. Ensuring access for emergency vehicles to the Project site;
 5. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections;
 6. Maintaining access to adjacent property; and,
 7. Specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during the AM and PM peak hours, distributing construction traffic flow across alternative routes to access the Project site, and avoiding residential neighborhoods to the maximum extent feasible.
- e. Institute construction work hours as necessary, such that the arrival and/or departure times of workers would be staggered as necessary.
- f. Identifying vehicle safety procedures for entering and exiting site access roads.

- g. Submit documentation that identifies the roads to be used during construction. The Applicant shall be responsible for repairing any damage to non-County maintained roads that may result from construction activities. The Applicant shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Imperial County PWD and the IICPDSD.
- h. Within 30 days of completion of construction, the project proponent/operator shall submit a post-construction video log and inspection report to the County. This information shall be submitted in electronic format. The County, in consultation with the Applicant's engineer, shall determine the extent of remediation required, if any.

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4.16 Tribal Cultural Resources

This section addresses potential tribal cultural resource impacts that may result from the construction, operation, maintenance and decommissioning of the Project. The following discussion addresses the existing conditions in the Project area, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts from implementation of the Project, as applicable.

The analysis in this section is based on the *Cultural Resources Technical Report for the Vikings Solar Energy Storage Project* prepared by SWCA Environmental Consultants, August 2021 (SWCA, 2022f; Appendix H-1). Information used in preparing this section was also derived from the Assembly Bill (AB) -52 Consultation Letters prepared by the County of Imperial and the results of the AB-52 Consultation efforts (which are included in Appendix H-2).

Scoping Issues Addressed

During the scoping period for the Project, a scoping meeting was conducted, and written comments were received from agencies and the public. The following issues related to Cultural Resources and Native American Tribal Consultations were raised by the Native American Heritage Commission (NAHC) and are addressed in this section:

- AB-52 applies to any project for which a Notice of Preparation (NOP), a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.
- NAHC recommends that lead agencies consult with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the Project.
- Both Senate Bill (SB) -18 and AB-52 have tribal consultation requirements.
- NAHC provided recommendations regarding the preparation of Cultural Resource Assessments so that the existence and significance of tribe cultural resources is identified and that plans for the avoidance, preservation and mitigation of project-related impacts to tribal cultural resources are adequately assessed.

Because the Project does not include a General Plan Amendment, compliance with SB-18 is not applicable. Tribal consultations, pursuant to SB-18 are not required and are not addressed in this Draft Environmental Impact Report (EIR).

4.16.1 Environmental Setting

Refer to Section 4.5 of this Draft EIR (Cultural Resources) for history and background of the Project site. The Project vicinity is most closely associated with the Kumeyaay, although other groups, such as the Quechan, are known to have visited the region to access the abundant resources associated with Lake Cahuilla or its associated rivers, or passed through the area during travel between the coast and the lower Colorado River (SWCA, 2022f; Appendix H-1). The region's cultural

chronology can be divided into seven developmental periods: (1) Paleoindian (c.a. 10,000-6,000 B.C.); (2) Early Archaic/Pinto (6,000-2,000 B.C.); (3) Late Archaic/Gypsum (2,000 B.C. - A.D. 500); (4) Late Prehistoric / Patayan Period (A.D. 500-Historic Contact); (5) Spanish (1769–1822); (6) Mexican (1822–1848); and (7) American (1848–present). These periods are discussed in more detail in the *Vikings Solar Energy Storage Project Cultural Resources Technical Report* (SWCA, 2022f) which is included as Appendix H-1.

4.16.2 Regulatory Setting

Federal

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

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants and culturally affiliated Indian tribes.

State

Assembly Bill 52 (AB-52)

California Assembly Bill 52 of 2014 (AB-52) was enacted on July 1, 2015, and expands the California Environmental Quality Act (CEQA) by defining a new resource category, “Tribal Cultural Resources.” AB-52 establishes that “A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (Public Resources Code [PRC] Section 21084.2). It further states that the lead agency avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as:

- “Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe” and meets either of the following criteria: Listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in PRC Section 5020.1(k); or
- A cultural 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.

AB-52 also establishes a formal consultation process for California tribes regarding those resources.

The consultation process must be completed before a CEQA document can be certified or adopted. Additionally, AB-52 requires that lead agencies “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the formal consultation process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

Native American Historic Resource Protection Act

Public Resources Code Sections 5097 et seq. codify the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. Section 5097.9 states that no public agency or private party on public property shall “interfere with the free expression or exercise of Native American Religion.” The code further states that:

No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine... except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, except for parklands larger than 100 acres.

California Health and Safety Code, Section 7050 and 7052

California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Local

County of Imperial General Plan

The County of Imperial General Plan (General Plan) provides goals, objectives, and policies for the identification and protection of significant cultural resources. Specifically, the Conservation and Open Space Element of the General Plan calls for the protection of cultural resources and scientific sites and contains requirements for cultural resources that involve the identification and documentation of significant historic and prehistoric resources and the preservation of representative and worthy examples. The Conservation and Open Space Element also recognizes the value of historic and prehistoric resources and the need to assess current and proposed land uses for impacts upon these resources.

TABLE 4.16-1 CONSISTENCY WITH APPLICABLE GENERAL PLAN TRIBAL CULTURAL RESOURCES GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<p>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.</p>	<p>Yes, with mitigation</p>	<p>A Cultural Resources Technical Report (Appendix H-1) has been conducted for the proposed Project and potential impacts have been avoided or minimized. The Project is in compliance with this goal through incorporation of mitigation measures (MM) CR-1 through MM CR-4.</p>
<p>Preservation of Cultural Resources, Goal 3: Objective 3.1: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.</p>	<p>Yes, with mitigation</p>	<p>The proposed Project would not impact any known significant prehistoric, historic, or tribal cultural resources. The proposed Project includes MM CR-1 through MM CR-4, which will avoid and/or mitigate potential impacts to unknown cultural and tribal cultural resources.</p>
<p>Preservation of Cultural Resources, Goal 3: Objective 3.3: Engage all local Native American Tribes in the protection of tribal cultural resources, including prehistoric trails and burial sites.</p>	<p>Yes</p>	<p>Local Native American Tribes have been engaged in the protection of tribal cultural resources through the consultation process required under AB-52. Consultation letters were distributed to local Native American tribes offering them of an opportunity to consult with the County on the Project, to determine whether or not Tribal Cultural Resources are present within the Project area, and if so, to determine the most appropriate way to avoid or mitigate impacts.</p> <p>The AB-52 consultation letters and results of those consultations are included in Appendix H2.</p>

Source: County of Imperial, General Plan Conservation and Open Space Element, 2016.

While this Draft EIR analyzes the Project’s consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Planning Commissioners and Board of Supervisors ultimately determine consistency with the General Plan.

4.16.3 Analysis of Project Effects and Significance Determination

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.

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a. listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or
 - b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Methodology

The NAHC was contacted via email in December 2020 and in May 2021, requesting a Sacred Lands File search for cultural resources in the Project vicinity. The NAHC's email response to both requests indicated that no known resources occur within the Project area.

The NAHC also provided a list of Native American tribes to obtain information regarding cultural resources. Pursuant to (PRC Section 21080.3.1, upon determining that an Initial Study (IS) would be prepared for the proposed Project, the County initiated a plan to conduct consultation with California Native American Tribes traditionally and culturally affiliated with the Project area.

In addition to the Native American contact program conducted for the Cultural Resources Study (Appendix H-1), and in conformance with rules enacted under AB-52, the County, as CEQA lead agency for the Project, initiated consultation with local Native American representatives to identify tribal cultural resources that may be affected by the Project. On March 26, 2021, the County sent a letter to the Quechan Tribe offering them an opportunity to consult on the Vikings Solar Energy Project. Similar letters were sent to the following California Native American Tribes and/or their representatives on June 23, 2021:

- Barona Group of the Capitan Grande
- Campo Band of Diegueno Mission Indians
- Ewiiapaayp Band of Kumeyaay Indians
- Inaja-Cosmit Band of Indians
- Jamul Indian Village
- Kwaaymii Laguna Band of Mission Indians

- La Posta Band of Diegueno Mission Indians
- Manzanita Band of the Kumeyaay Nation
- Mesa Grande Band of Diegueno Mission Indians
- Sycuan Band of the Kumeyaay Nation
- Viejas Band of the Kumeyaay Indians

Copies of the AB-52 notification letters and responses received are provided in Appendix H-2. To date, the County has received responses from three (3) of the 12 tribes.

Quechan Tribe

On April 8, 2021, the Quechan Tribal Historic Preservation Officer (THPO) sent an email to the County requesting consultation on the Project. They also requested a copy of the Cultural Resources Report, which was provided on April 29, 2021. A consultation meeting was held at the Project site on June 2, 2021, with the County and representatives from the Quechan Tribe. During the meeting, the Quechan Tribe had the following questions and concerns:

- What transect spacing was used during the Class III Cultural Resource Survey?
- How many meters outside of the property boundary was considered in the survey? This primarily related to parcels with APN 050-070-021 and 050-070-019 because they did not seem as disturbed as the agricultural parcel APN 050-070-018.
- The concrete irrigation ditch (East Highline canal) may be at least 50 years old and therefore is historic.

The County responded to the Quechan's concerns during the on-site meeting. The Quechan THPO also requested a copy of the revised Cultural Resources Report, which was provided on June 29, 2021.

Viejas Band of Kumeyaay Indians

On July 1, 2021, the Viejas Band of Kumeyaay Indians (Viejas Band) sent an email to the County stating the Project site has cultural significance or ties to the Viejas Band and that cultural resources have been located within or adjacent to the Project's area of potential effect (APE). The Viejas Band requested a Kumeyaay cultural monitor be on site for all ground disturbing activities. The Viejas Band also requested that they be informed of any new developments such as inadvertent discovery of cultural artifacts, cremation sites, or human remains. The Viejas Band also noted that if a tribe, having a closer proximity to the Project, requested to perform cultural monitoring, they will defer to them.

Jamul Indian Village

On July 23, 2021, the Jamul Indian Village sent a letter to the County requesting to enter into formal consultation on the Project. They noted that while the Project site was not within the boundaries of the recognized Jamul Indian Reservation, it is within the boundaries of the territory the tribe considers its Traditional Use Area (TUA). They requested to be kept informed as the Project progressed and would like to receive Project updates, reports of investigations, and/or any documentation that might be generated regarding previously reported or discovered sites. They also recommended archaeological monitoring pending the results of site surveys and records searches. In response, the County provided a copy of the *Vikings Solar Energy Storage Project Cultural Resources Technical Report* (August 2021) in November 2021.

As a result of the consultation efforts, no known tribal cultural resources have been identified within the Project site.

Analysis

Impact 4.16-1: Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource?

No sacred lands have been identified on the Project site by the NAHC or a California Native American Indian tribe, and no objects with cultural value to a Native American Indian tribe have been identified on the Project site. Additionally, the Project site is previously disturbed from current agricultural use.

As noted in Section 4.5 of this EIR, Cultural Resources, a confidential search of the California Historical Resources Information System (CHRIS) records at the South Coastal Information Center (SCIC) was conducted for the Project in November 2020. An intensive-level archaeological and built environment survey of the Project site was conducted in December 2020. As shown on Table 4.5--1, three (3) previously recorded archaeological sites are located within the Project site. Of these, only the East Highline Canal (Site P-13-008333/CA-INY-783), has previously been recommended as being eligible for listing on the CRHR and therefor qualifies as a historical resource under CEQA⁽¹⁾. However, the Project would not disturb this resource during the construction, operation, maintenance or reclamation phases. Additionally, five (5) historic-era archaeological sites and one historic-era isolated find were identified during the pedestrian survey. As shown in Table 4.5-2, none of the resources found during the pedestrian survey are considered eligible for listing in the CRHR.

¹ A full description of each resource is provided in Appendix H-1 of this EIR.

Therefore, the Project would not result in a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC section 5020.1(k), since no tribal cultural resources were identified within or immediately adjacent to the Project site. No impacts to known tribal cultural resources would occur.

The Cultural Resources Report found the potential for buried cultural resources and/or subsurface deposits to be “low” in light of the decades of agricultural activity across most of the Project site. Nevertheless, there is a possibility for the inadvertent discovery of a currently unknown resource that could be impacted during construction. For this reason, a Native American monitor the Kumeyaay Tribe shall be on-site full-time during the initial grubbing and all ground disturbing activities, as included in Mitigation Measure (MM) CR-1. With implementation of MMs CR-1 through CR-4, the Project’s impact on tribal cultural resources would be less than significant.

Impact 4.16-2: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe determined to be significant the County of Imperial?

Based on coordination to date, Native American representatives have not provided information indicating there are resources that are significant to a California Native American tribe or otherwise qualify as Tribal Cultural Resources, as defined in PRC Section 5024.1.

The Cultural Resources Report found the potential buried cultural resources and/or subsurface deposits to be low in light of the decades of agricultural activity across most of the Project site. Nevertheless, there is a possibility for the inadvertent discovery of a currently unknown resource that could be impacted by Project implementation. Impacts would be considered potentially significant. With implementation of MMs CR-1 through CR-4, potential impacts to buried cultural resources and/or subsurface deposits would be less than significant.

4.16.4 Mitigation Measures

Implementation of MMs CR-1 through CR-4 would reduce potentially significant impacts to tribal cultural resources to below a level of significance because these measures require the performance of professionally accepted and legally compliant procedures for the discovery of previously undocumented significant archaeological resources and human remains.

Level of Significance After Mitigation

Less than significant.

4.17 Utilities and Service Systems

This section addresses potential utilities and service system impacts that may result from construction, operation, maintenance and decommissioning of the Vikings Solar Energy Generation and Storage Project. The following discussion addresses the existing conditions on the Project site, identifies applicable regulations, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project, as applicable. Information used in preparing this section and in the evaluation of potential utilities and service systems was derived from the *Water Supply Assessment* prepared by Dubose Design Group which is provided as Appendix K this EIR (Dubose Design Group, 2022).

Scoping Issues Addressed

During the scoping period for the Project, a public scoping meeting was conducted, and written comments were received from public agencies and the public. The Imperial Irrigation District (IID) provided the following comments:

1. If the project requires temporary construction or permanent electrical service at the distribution level, the applicant should be advised to contact Joel Lopez, IID Customer Project Development Planner, at (760) 482-3300, (760) 482-3444 or e-mail Mr. Lopez at jflopez@iid.com to initiate the customer service application process. In addition to submitting a formal application (available for download at the district website <http://www.iid.com/home/showdocument?id=12923>), the applicant will be required to submit a complete set of plans approved by the County of Imperial (in hardcopy and AutoCad formats), including site plan, plan & profile drawings, one-line diagrams, and electrical loads, panel size, voltage requirements, project schedule, and the estimated in-service date, as well as the applicable fees, permits, easements and environmental compliance documentation pertaining to the provision of electrical service to the project. The applicant shall be responsible for all costs and mitigation measures related to providing electrical service to the project.
2. Distribution-rated electrical service is limited in the area. A circuit study may be required. Any improvements or mitigation identified in the circuit study to enable the provision of electrical service shall be the financial responsibility of the applicant.
3. To insure there are no impacts to IID facilities, applicant should submit project plans, including grading & drainage and fencing plans, to IID Water Department Engineering Services for review and comment prior to final project design and CUP approval. IID WOES can be contacted at (760) 339-9265 for further information on this matter.

4. The project may impact IID drains with project site runoff flows draining into IID drains. To mitigate impacts, the project may require a comprehensive IID hydraulic drainage system analysis. IID's hydraulic drainage system analysis includes an associated drain impact fee.
5. A construction storm water permit from the California Regional Water Quality Control Board is required before commencing construction and an industrial storm water permit from CRWQCB is required for the operation of the proposed facility. The project's Storm Water Pollution Prevention Plan and storm water permits from CRWQCB should be submitted to IID for review.
6. In order to obtain a water supply from IID for a non-agricultural project, the project proponent will be required to comply with all applicable IID policies and regulations and may be required to enter into a water supply agreement. Such policies and regulations require, among other things, that all potential environmental and water supply impacts of the project be adequately assessed, appropriate mitigation developed if warranted, including any necessary approval conditions adopted by the relevant land use and permitting agencies.
7. If IID implements a water allocation or apportionment program pursuant to the IID Equitable Distribution Plan, or any amending or superseding policy for the same or similar purposes, during all or any part of the term of said water supply agreement, IID shall have the right to apportion the project's water as an industrial water user. Information on how to obtain a water supply agreement can be found at the district website <https://www.iid.com/water/municipal-industrial-and-commercial-customers> or obtained by contacting Justina Gamboa-Arce, Water Resources Planner at (760) 339-9085 or jgamboarce@iid.com.
8. For information on procuring construction water, the applicant should contact IID South End Division at (760) 482-9800.
9. Any construction or operation on IID property or within its existing and proposed right of way or easements including but not limited to: surface improvements such as proposed new streets, driveways, parking lots, landscape; and all water, sewer, storm water, or any other above ground or underground utilities; will require an encroachment permit, or encroachment agreement (depending on the circumstances). A copy of the IID encroachment permit application and instructions for its completion are available at <https://www.iid.com/about-iid/department-directory/rea-lestate>. The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits or agreements.
10. In addition to IID's recorded easements, IID claims, at a minimum, a prescriptive right of way to the toe of slope of all existing canals and drains. Where space is limited and depending upon the specifics of adjacent modifications, the IID may claim additional secondary easements/prescriptive rights of ways to ensure operation and maintenance of IID's facilities

can be maintained and are not impacted and if impacted mitigated. Thus, IID should be consulted prior to the installation of any facilities adjacent to IID's facilities. Certain conditions may be placed on adjacent facilities to mitigate or avoid impacts to IID's facilities

11. The applicant may not use IID's canal or drain banks to access the project site. Any abandonment of easements or facilities shall be approved by IID based on systems (Irrigation, Drainage, Power, etc.) needs.
12. An IID encroachment permit is required to utilize existing surface-water drainpipe connections to drains and receive drainage service from the district. Surface-water drainpipe connections are only modified in accordance with IID Water Department Standards.
13. Any new, relocated, modified or reconstructed IID facilities required for and by the project (which can include but is not limited to electrical utility substations, electrical transmission and distribution lines, water deliveries, canals, drains, etc.) need to be included as part of the project's CEQA and/or NEPA documentation, environmental impact analysis and mitigation. Failure to do so will result in postponement of any construction and/or modification of IID facilities until such time as the environmental documentation is amended and environmental impacts are fully analyzed. Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent.

Issues Scoped Out

The Imperial County Planning and Development Services Department (ICPDSD) determined in the Initial Study (IS), located in Appendix A-2, that the following environmental issue areas resulted in no impact and was scoped out of requiring further review in this Draft Environmental Impact Report (EIR). Please refer to Appendix A-2 of this Draft EIR for a copy of the IS and additional information regarding these issues.

- Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? Relatively small amounts of trash would be generated during construction from packaging materials delivered to the site. Construction related waste would be transported to a local landfill authorized to receive this waste for disposal. Portable toilets would be located on-site during construction and sanitary waste would be removed from the site by a local contractor. The Applicant will comply with federal, state and local statutes related to solid waste. All solid waste shall be disposed of in approved solid waste disposal sites in accordance with existing County, State and Federal regulations (Per Imperial County Code of Ordinances, Chapter 8.72). No impacts would occur.
- Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Wastewater treatment for the existing

Project Site is provided by an on-site septic system and leach field for the house located onsite. Implementation of the Project would result in the house being demolished. There would be no permanent, onsite staff at the Project site and there would be no need for wastewater treatment. There would be no impact.

4.17.1 Environmental Setting

The Imperial Valley area is located within the south-central part of Imperial County and is bound by Mexico on the south, the Algodones Sand Hills on the east, the Salton Sea on the north and San Diego County on the northwest, and the alluvial fans bordering the Coyote Mountains and the Yuha Desert to the southwest. The IID supplies water and power to most users in the Imperial Valley, and the Project site is located within IID's service area for water and electricity. Operations are divided between a water division responsible for distribution and collection of water, and a power division responsible for generation and distribution of electrical power. The majority of the public water supply is imported from the Colorado River. Natural gas service in the area is provided by the Southern California Gas Company. The two western parcels on the Project site are currently vacant with overgrown brush and multiple piles of debris. These two parcels parallel the East Highline Canal and are channel shaped in the north-south direction. The larger agricultural parcel that makes up approximately 480 acres is fallowed south of Nelson Pit Road and in agricultural production north of the road. A residential farmhouse and shop are located along the southwest end of this parcel. Two freshwater ponds are located along the western boundary of this parcel. Water is supplied by a private ditch that pumps water from canal that comes off of the East Highline Canal. The north portion of this parcel is sprinkler irrigated with signs of old underground piping with standpipes. The southern fallowed portion of the eastern parcel has underground transit water pipelines.

Water Supplies

IID delivers untreated Colorado River water to the Project site for agricultural uses through Laterals 11 and 12 from the East Highline Canal. These laterals serve Assessor's Parcel Numbers (APNs) 050-070-018 and 019. The annual volume of water delivered to the site (2011 through 2020) accounting is shown in Table 4.17--1 and has a ten-year historic average of 345 Acre Feet per Year (AFY).

TABLE 4.17-1: TEN-YEAR HISTORIC DELIVERY TO THE PROJECT SITE (AFY), 2011-2020

Canal Name/ Gate No.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
East Highline/ 11	446.5	532.5	259.2	231.7	215.3	199.3	182.6	189.7	148.6	7.7
East Highline/ 12	354.2	497.2	43.4	146.6	NA	NA	NA	NA	NA	NA
Total	800.7	1029.7	302.6	378.3	215.3	199.3	182.6	189.7	148.6	7.7

Source: Dubose Design Group, 2022 (Appendix K).

Electricity

With the exception of one (1) residence located within the project boundaries, the Project site is undeveloped and utilized for agricultural production. Therefore, the site's current energy demand is minimal. The IID would provide electricity service to the Project site (i.e., during non-generating hours for the facility). IID meets its annual resource requirements through a mix of the IID-owned generation and a number of purchase power contracts that can take the form of must-take contracts and call options. The IID's generation resources range from hydroelectric resources on the All-American Canal System to San Juan Unit 3, a coal plant in New Mexico to the Palo Verdes Nuclear Generation Station near Phoenix. The IID also owns thermal generation facilities within its service territory, fueled by natural gas or diesel.

4.17.2 Regulatory Setting

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

State

Senate Bill (SB) 610 and 221

Senate Bill (SB) -610 (Chapter 643, Statutes of 2001) and SB-221 (Chapter 642, Statutes of 2001) amended State of California law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB-610 and SB-221 are companion measures that seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision-makers prior to approval of specified large development projects. Both statutes also require this detailed information to be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Both measures recognize local control and decision making regarding the availability of water for projects and the approval of projects.

Water Code Sections 10910–10915 require lead agencies to identify the public water system that may supply water for a proposed development project and to request from that public water system a water supply assessment for the proposed Project. The purpose of the water supply assessment is to demonstrate that the public water system has sufficient water supplies to meet the water demands associated with the proposed Project in addition to meeting the existing and planned future water demands projected for the next 20 years. A water supply assessment is required for:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- 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.
- A mixed-use development that includes one or more of the uses described above.
- A development that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling-unit project.

For lead agencies with fewer than 5,000 water service connections, any new development that would increase the number of water service connections in the service area by 10 percent or more.

Urban Water Management Planning Act – Assembly Bill 797

The *Urban Water Management Planning Act* was established by AB-797 on September 21, 1983. Passage of this law was recognition by state legislators that water is a limited resources and a declaration that efficient water use and conservation would be actively pursued throughout the state. The law requires water suppliers in California, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 AFY of water, to prepare and adopt a specific plan every 5 years, which defines their current and future water use, sources of supply and its reliability, and existing conservation measures.

Local

Imperial Integrated Regional Water Management Plan

The *Imperial Integrated Regional Water Management Plan* (IRWMP) serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management and determination and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Through the IRWMP process, IID presented options to the region stakeholders in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.

Imperial Irrigation District Interim Water Supply Policy for Non-Agricultural Projects

The *Interim Water Supply Policy* (IWSP) was adopted by the IID Board on September 29, 2009. The IWSP provides a mechanism to address water supply requests for projects being developed within the IID service area. The IWSP designates up to 25,000 AFY of IID's annual Colorado River

water supply for new non-agricultural projects, provides a mechanism and process to develop a water supply agreement for any appropriately permitted project, and establishes a framework and set of fees to ensure the supplies used to meet new demands do not adversely affect existing users by funding water conservation or augmentation projects as needed.

Depending on the nature, complexity and water demands of the proposed projects, new projects may be charged a one-time Reservation Fee and an annual Water Supply Development Fee for the contracted water volume used solely to assist in funding new water supply projects. All new industrial use projects are subject to the fee, while new municipal and mixed-use projects shall be subject to the fee if the project water demands exceed certain district-wide average per capita use standards. The applicability of the fee to mixed-use projects will be determined by IID on a case-by-case basis, depending on the proportion of types of land uses and water demand proposed for a project.

Groundwater Management Ordinance

In 1998, the County adopted, and in 2015 amended, a comprehensive Groundwater Management Ordinance to preserve and manage groundwater resources within the County. The Groundwater Management Ordinance, codified as Division 22 of Title 9 of the Imperial County Code, is implemented by the Planning Commission acting upon the direction of the Board of Supervisors. The Groundwater Management Ordinance provides the County with various regulatory tools that are designed to avoid or minimize the impact of existing and proposed groundwater extraction activities on groundwater resources and other users, such as overdraft or excessive drawdown. The Groundwater Management Ordinance requires that existing extraction facilities be permitted and registered with the County.

County of Imperial General Plan

The Imperial County General Plan provides goals, objectives, policies, and programs regarding the preservation and use of water. Table 4.17-2 provides a consistency analysis of the applicable Imperial County General Plan goals and objectives as they relate to the proposed project. While the EIR analyzes the project's consistency with the General Plan pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.17-2 CONSISTENCY WITH APPLICABLE GENERAL PLAN UTILITY GOALS, POLICIES AND/OR OBJECTIVES

General Plan Policies	Consistency with General plan	Analysis
Agricultural Element		
Goal 4: Water Availability and Conservation: Maximize the inherent productivity of Imperial County’s agricultural resources by ensuring future availability of adequate and affordable irrigation water and by managing water such that it is used effectively and not wasted.	Yes	A Water Supply Assessment (Appendix K) has been prepared for the Project, which confirms that there is adequate water for 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 will be used on site during construction, operation, and decommissioning/ restoration for potable, non-drinking non-potable water needs. No groundwater would be used.

Sources: County of Imperial, General Plan Agricultural Element, 2015a and Renewable Energy and Transmission Element, 2015c.

4.17.3 Analysis of Project Effects and Significance Determination

Guidelines for Determination of Significance

A project would be considered to have a significant impact if it would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
3. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?
4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Analysis of Project Effects and Significance Determination

Impact 4.17-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water Supply

Water would be required during construction for such activities as dust suppression, soil compaction, and grading. Water may also be used at points of ingress/egress to minimize the tracking of dirt off-site onto local roadways from construction vehicles. It is anticipated that water would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. Water would be picked up from a nearby lateral canal and delivered to the construction location by a water truck capable of carrying approximately 4,000 gallons per load. It is estimated that up to 275 acre-feet (AF) of water would be needed over the expected construction period. The actual amount of water required to be brought on site may vary depending upon site conditions such as wind speed, direction, and the amount and timing of rainfall. Bottled water would be provided to the construction workers. Additionally, on-site restroom facilities (temporary sanitation facilities) for the construction workers would be provided by portable units to be serviced by licensed providers; no connection to a public sewer system is required for Project construction, and therefore, water for such purposes is not required.

Periodic washing of the PV modules is not expected to be necessary but could be needed to remove dust in order to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at five (5) AF per washing, with up to two washings per year, for a total of up to 10 AF per year. This water would be water purchased from the IID and delivered to the site via truck. Each washing is expected to take one to two weeks to complete. Once the Project is operational, water would be required for solar panel washing and fire protection. The Project site is within the IID's boundary and therefore would receive water service from the IID. Water would be purchased from the IID and delivered to the Project site by water trucks. The volume of water to be used for solar panel washing and dust control is estimated to be 10 AF per year.

Because no operations and maintenance (O&M) buildings are being proposed and no personnel would be regularly on site, the proposed Project would not require or result in the construction of new or expanded water, wastewater treatment facilities or expansion of existing facilities.

To retain the total volume of a 3-inch precipitation covering the solar energy facility site with no reduction from infiltration, the proposed onsite roads will be built up to a finish grade elevation above the existing ground and act as berms to allow onsite ponding and make the Project site a "retention basin." These retention basins would be sized to empty within 72 hours (through draining, evaporation, or infiltration, or any combination thereof) to provide mosquito abatement.

In the unlikely event that conditions prevent removal of accumulated storm water from any of the retention basins within 72 hours, measures would be implemented to control mosquito breeding in the affected basin consistent with the requirements of the Imperial County Health Department, Environmental Health and Consumer Protection Services, Vector Control Program. Construction of the Project features would be located entirely within the Project footprint and would not have a significant impact. Overall, any impacts would be less than significant.

Electrical Supply

The Project will help California meet its Renewable Portfolio Standard (RPS) of 50 percent of retail electricity sales from renewable sources by the end of 2030. The electricity generation process associated with the Project would utilize solar technology to convert sunlight directly into electricity. Solar photovoltaic (PV) technology is consistent with the definition of an “eligible renewable energy resource” in Section 399.12 of the California Public Utility Commission (CPUC) and the definition of “in-state renewable electricity generation facility” in Section 25741 of the California Public Resources Code (PRC). The Project would generate and transmit renewable energy resources and is considered a beneficial effect rather than an impact. The use of energy associated with the project include both construction and operational activities. Construction activities typically include site grading and clearing. Operational activities would include energy consumption associated with vehicular uses.

The Project would not use natural gas during the construction or operation of the Project. The facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Because no O&M buildings are being proposed and no personnel would be regularly on site, the proposed Project would not result in the need for additional natural gas, wastewater or telephone facilities. Therefore, a less than significant impact is identified for this issue area.

Impact 4.17-2: Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Project water demand would include water for dust control (e.g., soil during construction compaction) and panel cleaning.

Construction

As described in Chapter 3, Project Description, construction of the project would take up to 12 months. Water will be needed during construction for dust control and site grading. All non-potable water for construction would be obtained from IID. As shown in Table 4.17-3, the volume of water to be used during construction is estimated at 275 AF. The actual amount of water that will also be brought on site will vary depending on site conditions such as wind speed, direction, and the amount and timing of rainfall.

Operations and Maintenance

Panel washing and operational water required for O&M of the project will be provided by IID. As described in Chapter 3, Project Description, up to three 10,000-gallon fire water tanks would be constructed across the solar energy facility site and kept filled during operations for on-site fire protection. Water will also be used for periodic cleaning of the solar PV panels. It is anticipated that the solar PV panels will be washed up to two times per year to ensure optimum solar absorption by removing dust particles and other buildup. As shown in Table 4.17-3, it is estimated that a total of 10 AFY would be used in the operation and maintenance of the facility.

Decommissioning

Water may also be required during decommissioning of the project and site reclamation at the end of the project's life. Total water demand during decommissioning is anticipated to be similar to the demand during construction and is estimated to be 275 AF.

Total and Annual Water Demand

Water would be picked up from a nearby lateral canal and delivered to the construction location by a water truck capable of carrying approximately 4,000 gallons per load. It is estimated that up to 275 acre-feet (AF) of water would be needed over the expected construction period.

Periodic washing of the PV modules is not expected to be necessary but could be needed to remove dust in order to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at five (5) AF per washing, with up to two washings per year, for a total of up to 10 AF per year. This water would be water purchased from the IID and delivered to the site via truck. The proposed Project intends to enter into an agreement with a local vendor to provide potable water needs which has the ability to provide the applicant with treated water for drinking and temporary restroom facilities (i.e., porta potties). Therefore, the proposed project will only need the water requested in this Water Supply Assessment. The Project is anticipated to use approximately 10 AFY of water to operate a Vikings Solar Energy Generation and Storage Project as well as necessary plant operation mitigation. Project raw water uses are summarized in Table 4.17-3.

TABLE 4.17-3 PROJECT WATER DEMANDS

Water Use	Annual Demand (AFY)	Total Demand (AF)
Construction (a)	275	275
Raw Water for Operations and Maintenance (b) (Panel Washing and Fire Protection)	10	280 (b) (c)
Decommissioning/Reclamation (a)	275	275
TOTAL	27.66 (b)	830

Notes: (a) Assumes construction and decommission/reclamation duration of 11 to 12-Months
(b) Amortized over 30-Year Lifespan including construction and demolition.
(c) Calculated as 10 AFY x 28 Years = 280 AF.

Source: Dubose Design Group, 2022 (Appendix K).

It is anticipated that IID will provide Schedule 7 General Industrial Use for the proposed project. In the event that IID determines that the project is to utilize IWSP for Non-Agricultural Projects water, the project applicant will enter into an IWSP Water Supply Agreement with IID to meet the project's water demands. IID has adopted an IWSP for non-agricultural projects from which water supplies can be contracted to serve new non-agricultural developments within IID's water service area. The IWSP sets aside 25,000 AFY of IID's Colorado River water supply to serve new non-agricultural projects. Untreated Colorado River water will be supplied to the project via existing IID delivery gates on Lateral 11 and Lateral 12 of the East Highline Canal. Potable drinking water will be obtained for the duration of the project from a state-approved provider.

Based on the water supply assessment prepared for the Project (Appendix K of this EIR), there is adequate water supply from IID to support the project. IID's IWSP for non-agricultural projects dedicates 25,000 AFY of IID's annual water supply to serve new projects. To date 23,800 AFY remain available for new projects ensuring reasonably sufficient supplies for new non-agricultural water users. Total water usage for the life of the project represents 0.12 percent of the unallocated supply set aside in the IWSP for non-agricultural projects, and approximately 0.001 percent of forecasted future non-agricultural water demands planned in the Imperial IRWMP through 2055. Furthermore, the water demand for the project represents a 99.91 percent decrease from the 10-year average historic average agricultural water use for 2011-2020 at the project site and will provide a reduction in use (9,520 AFY for the project life). For all the reasons described herein, the amount of water available and the stability of the IID water supply along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers ensure that the project's water needs will be met for the next 20 years as requested by SB 610. Therefore, this is considered a less than significant impact.

4.17.4 Mitigation Measures

Implementation of the Project would not result in significant utilities and service system impacts. No mitigation would be required.

Level of Significance After Mitigation

Impacts would be less than significant after mitigation.

5.0 ANALYSIS OF LONG-TERM EFFECTS

This section of the Draft Environmental Impact Report (EIR) discusses additional topics statutorily required under the California Environmental Quality Act (CEQA): significant and unavoidable environmental impacts and growth-inducing impacts.

5.1 Growth-Inducing Impacts

CEQA Guidelines, Section 15126.2[d], requires that an EIR evaluate a proposed action's potential to cause growth-inducing impacts. The growth-inducing impacts discussion should include direct and indirect ways the Project could foster economic or population growth, the construction of additional housing, or remove obstacles to population growth. CEQA Guidelines define a "growth-inducing impact" as follows:

. . . the way in which a 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 . . . It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth-inducing impacts typically include the provision of public services, utilities, and roads to a previously undeveloped area. The introduction of infrastructure and services can result in growth inducing impacts by reducing development constraints for nearby areas, thereby inducing other landowners in the area to convert their properties to other uses. Direct growth inducing impacts can also result from growth in the surrounding population that taxes existing public services, or a particular development that increases the pace or density of surrounding developments.

CEQA Guidelines also specify that the environmental effects of induced growth are considered indirect impacts of the proposed action. The additional demand for housing, commodities and services that new development causes or attracts by increasing population in the area are examples of indirect growth-inducing impacts or secondary effects of growth.

If the growth is not consistent with or accommodated by local land use plans and growth management plans and policies for the area affected, then the growth inducement may constitute an adverse impact. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services. A project that would conflict with the local land use plans (i.e., "disorderly" growth) could indirectly cause additional adverse environmental impacts and other public services impacts. To assess whether a growth-inducing project would result in adverse secondary effects, the growth accommodated by a project must be assessed to determine if it would or would not be consistent with applicable land use plans.

The Project is located within the unincorporated area of Imperial County and does not involve the development of permanent residences that would directly result in population growth in the area. The number of on-site construction workers for the solar facility, battery storage facility, and substation is not expected to exceed 150 workers at any one time. The unemployment rate in Imperial County, as of November 2021 (not seasonally adjusted), was 18.1 percent (State of California, 2021). 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 Project would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services. After the construction of the Project, no permanent construction workers would be hired. Once construction is completed, the facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. As such, the Project would not induce substantial population growth in the area.

While the Project would contribute to energy supply, which indirectly supports population growth, the proposed development is in response to the state's need for renewable energy to meet its Renewable Portfolio Standard, and while it will increase the availability of renewable energy, it will also replace existing sources of non-renewable energy. Unlike a gas-fired power plant, the 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 Senate Bill (SB-2 1X) that a benefit of the Renewable Portfolio Standard (RPS) is displacing fossil fuel consumption within the state. The Project is proposed in response to state policy and legislation promoting development of renewable energy.

The 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); Pub. Res. Code Section 21100(b)(3)). However, the relationship between the 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 California Code of Regulations (CCR) §15145, which provides that, if an impact is too speculative for evaluation, the agency should note this conclusion and terminate discussion of the impact. As the court explained in *Napa Citizens for Honest Gov't v. Napa County Board of Supervisors* (2001) 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 Project’s growth-inducing effects cannot be resolved by collection of further data because of the diversity of factors affecting growth.

Although the Project would contribute to the energy supply, which supports growth, the development of power infrastructure is a response to increased market demand and statewide regulatory mandates, including the RPS mandate, and is not a factor that induces new growth. Imperial County planning documents already permit and anticipate a certain level of growth in the area of the Project site, along with attendant growth in energy demand. It is this anticipated growth that drives energy- production projects, not vice versa. The Project would supply energy to accommodate and support existing demand and projected growth, but it would not foster any new growth. Therefore, any link between the Project and growth in Imperial County would be speculative.

In *Kerncrest Audubon Society v. Los Angeles Department of Water and Power*, the analysis of growth- inducing effects contained in the EIR for the Pine Tree Wind Development Project was challenged. Plaintiffs argued that the discussion was too cursory to provide adequate information about how additional electricity generated by the project would sustain further growth in the Los Angeles area. The Court of Appeals held that the additional electricity that the project would produce was intended to meet the current forecast of growth in the Los Angeles area. As such, the wind development project would not cause growth, and so it was not reasonable to require a detailed analysis of growth-inducing impacts. In addition, EIRs for similar energy projects have contained similarly detailed analyses of growth-inducing impacts. Their conclusions that increasing the energy supply would not create growth has been upheld, because: (1) the additional energy would be used to ease the burdens of meeting existing energy demands within and beyond the area of the project; (2) the energy would be used to support already-projected growth; or (3) the factors affecting growth are so multifarious that any potential connection between additional energy production and growth would necessarily be too speculative and tenuous to merit extensive analysis. Thus, as has been upheld in the courts, the level of analysis provided in this EIR is adequate to inform the public and decision makers of the growth-inducing impacts of the Project. 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.

5.2. Irreversible Environmental Changes

In accordance with CEQA Guidelines Section 15126.2(c), an EIR must identify any significant irreversible environmental changes that would be caused by implementation of the proposed project being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources or secondary growth-inducing impacts that commit future generations to similar uses.

Energy resources needed for the construction of the 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. However, after 30 years, the Project is planned to be decommissioned and the Project applicant is required to restore the site to pre-Project conditions. Consequently, some of the resources on the site could potentially be retrieved after the site has been decommissioned. The Project applicant anticipates using the best available recycling measures at the time of decommissioning. Additionally, the Project applicant will implement a reclamation plan which will include a performance standard to assess the success of post-Project vegetation.

Implementation and operation of the Project would promote the use of renewable energy and contribute incrementally to the reduction in demand for fossil fuel use for electricity-generating purposes. Therefore, the incremental reduction in fossil fuels would be a positive effect of the commitment of nonrenewable resources. Additionally, the Project is consistent with future buildout plans for the Project site under the General Plan, as well as with the state's definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Commission (CPUC) and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California Public Resources Code (PRC).

5.3. Significant Environmental Effects Which Cannot Be Avoided

CEQA Guidelines, Section 15126.2(b), requires an EIR to address any unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. Section 15093(a) of CEQA Guidelines allows the decision-making agency to determine if the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. A Statement of Overriding Considerations can be prepared by the County of Imperial to approve a project with unavoidable adverse impacts if it sets forth the specific reasons for making such a judgment.

The impact analysis, as detailed in Chapter 4.0 of this Draft EIR, concludes that no unavoidable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact levels to less than significant. Thus, the Project would not result in any significant and unavoidable adverse impacts.

6.0 CUMULATIVE IMPACTS

This chapter of the Draft Environmental Impact Report (EIR) provides an analysis of the contribution to cumulative environmental effects that could result from the construction and operation of the Vikings Solar Energy and Battery Storage Project. The Project would result in direct impacts that are less than significant for several environmental resource areas; however, the projects may incrementally impact the environment when combined with other past, current, and reasonably foreseeable projects. As required by Section 15130 of California Environmental Quality Act (CEQA) Guidelines, the following discussion considers the cumulative impacts for relevant environmental issue areas.

6.1. CEQA Requirements For Cumulative Impact Analysis

The following analysis evaluates the potential for the proposed Project's environmental impacts to be cumulatively significant. CEQA requires that an EIR contain an assessment of the cumulative impacts that could be contributed to by the proposed Project. "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or . . . compound or increase other environmental impacts." (CEQA Guidelines, § 15355.) Stated another way, "A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." (CEQA Guidelines, § 15130, subd. (a)(1)). Cumulative impacts occurs from a change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects.

Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time. (CEQA Guidelines, § 15355, subd. (b)).

In addition, CEQA Guidelines, Section 15130(b), identify three elements that are necessary for an adequate cumulative analysis:

1. Either:
 - a. 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
 - b. 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. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2. A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and
3. A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

6.2. Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effects varies by each resource area considered in Chapter 4. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. Similarly, impacts on the habitats of special-status wildlife species need to be considered within its range of movement and associated habitat needs. The analysis of cumulative effects in this DEIR considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project sites and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects of a project, but not beyond the scope of the direct and indirect effects of that project.

The cumulative development scenario includes projects that extend through year (2030), which is the planning horizon of the County of Imperial General Plan. Because of uncertain development patterns that are far in the future, it is too speculative to accurately determine the type and quantity of cumulative projects beyond the planning horizon of the County's adopted County General Plan.

The geographic area that could be affected by development of the Vikings Solar Energy Battery Storage Project varies depending on the type of environmental resource being considered. The general geographic area associated with various environmental effects of construction and operation of the proposed Project defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Table 6-1 presents the general geographic areas associated with the different resources addressed in this EIR and evaluated in those sections of this cumulative analysis.

TABLE 6-1: GEOGRAPHIC SCOPE OF CUMULATIVE IMPACTS

Resource Issue	Geographic Area
Aesthetics	<ul style="list-style-type: none"> • Local (immediate project vicinity—effects are highly localized)
Air Quality	<ul style="list-style-type: none"> • Regional (Imperial Valley portion of the Salton Sea Air Basin for pollutants that have regional effects) • Local (immediate project vicinity—pollutant emissions that are highly localized)
Biological Resources	<ul style="list-style-type: none"> • Regional (Imperial County)
Cultural Resources	<ul style="list-style-type: none"> • Regional (Imperial County)
Energy	<ul style="list-style-type: none"> • Regional (Imperial County)

TABLE 6-1: GEOGRAPHIC SCOPE OF CUMULATIVE IMPACTS

Resource Issue	Geographic Area
Geology & Soils	• Local (immediate project vicinity)
Greenhouse Gas Emissions	• Global
Hazards and Hazardous Materials	• Local (immediate project vicinity)
Hydrology and Water Quality Local	• Local (immediate project vicinity—local watershed)
Land Use and Planning	• Local (immediate project vicinity) and Regional (Imperial County)
Noise	• Local (immediate project vicinity—effects are highly localized)
Public Services	• Regional (regional service areas)
Transportation and Traffic	• Regional and local (discussed in Section 4.15, “Transportation and Traffic”)
Tribal Cultural Resources	• Regional (Imperial County)
Utilities/Service Systems	• Regional (regional service areas)

Source: McIntyre Environmental, LLC, 2021.

6.3. Cumulative Analysis Approach

As stated above, CEQA Guidelines require the use of a list of past, present, and probable future projects and/or the use of adopted projections from a general plan, other regional planning document, or a certified EIR. The list approach has been used in this Draft EIR.

This cumulative impact analysis utilizes an expanded list method (as defined under CEQA) and considers environmental effects associated with those projects identified in Table 6-2 in conjunction with the impacts identified for the Project in Chapter 4 of this Draft EIR. Table 6-2 includes projects known at the time of release of the Notice of Preparation (NOP) of the Draft EIR. Figure 6-1 provides the general geographic location for each of these projects. Some of the cumulative impacts associated with the proposed Project are more localized in nature (e.g., noise) and, thus, are analyzed at a project level. Other cumulative impacts are regional in nature (e.g., air quality, greenhouse gases and climate change) and, therefore, are analyzed at a regional level. Because of this variance in impact range, each resource area has been evaluated and an appropriate Cumulative Effects Study Area (CESA) has been defined for each resource. (CEQA Guidelines, § 15130, subd. (b)(3)).

The analysis of cumulative effects considers a number of variables including geographic limits, temporal limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the projects 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, but not beyond the scope of the direct and indirect effects of the Project. In addition, each cumulative project has its own implementation schedule, which may or may not coincide or overlap with the proposed Project. However, to be conservative, the cumulative analysis assumes that all projects in the cumulative scenario are built and operating during the operating lifetime of the Project.

TABLE 6-2: POTENTIAL CUMULATIVE PROJECTS – VIKINGS SOLAR ENERGY GENERATION AND STORAGE PROJECT

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Project
EXISTING PROJECTS					
1.	Calexico I-A ^{(d) (s)}	8 Minute Energy	100 MW PV solar facility and supporting structures on y 666 acres.	Under Construction	7.4 miles southwest
2.	Calexico I-B ^{(d) (s)}	8 Minute Energy	100 MW PV solar facility and supporting structures on 666 acres.	Under Construction	7.9 miles southwest
3.	Cluster I Solar (Calipatria, Wilkinson, Lindsey, Midway I, Midway II, Midway III, Midway IV) ^{(k) (s)}	8 Minute Energy	Three (3) PV solar farms generating 255 MW on 1,731 acres.	Portions are Operational, Portions are Pending Construction, and Portions are Under Construction	9.7 miles northwest
4.	Campo Verde Solar Project and Battery Storage System ^{(e) (i) (s)}	Southern Power Company	140 MW PV solar facility; utility-scale battery energy storage with capacity of 105 MWH of energy and supporting structures on 1,990 acres.	Operational	8.7 miles southwest
5.	Centinela Solar ^{(b) (s)}	Centinela Solar Energy, LLC	A 275 MW PV solar facility and supporting structures on 2,067 acres.	Portions are Operational, Portions Pending Construction	8 miles southwest
6.	Citizens Imperial Solar Project ^{(l) (s)}	Citizens Imperial Solar, LLC	A 30 MW PV solar facility and supporting structures on y 223 acres.	Operational	9.9 miles southwest
7.	Iris Cluster Solar Farm (Ferrel, Rockwood, Iris and Lyons) ^{(g) (s)}	8 Minute Energy	Four (4) separate solar farms and supporting structures on 1,400 acres.	Operational	7.1 miles southwest
8.	Wistaria Ranch Solar Project ^{(f) (s)}	Wistaria Ranch Solar, LLC	A 250 MW PV or CPV solar facility and supporting structures on 2,793 acres.	Portions Are Operational, Portions Are Pending Construction	7.5 miles southwest
9.	Seville Solar Farm Complex (I, II, III, 4 and 5) ^{(e) (s)}	Imp. Solar Holding, LLC	Five (5) PV solar projects generating 135 MW on y 1,238 acres.	Portions Are Operational, Portions Under Construction	16.8 miles northwest
10.	Valencia Solar Project 2 ^{(h) (s)}	IGS, LLC	3MW PV solar facility and associated structures on a portion of a 17-acre property.	Operational	5.4 miles northwest
11.	Valencia Solar Project 3 ^{(i) (s)}	IGS, LLC	3MW PV generation facility on a portion of a of a 40-acre property.	Operational	5.7 miles northwest

TABLE 6-2: POTENTIAL CUMULATIVE PROJECTS – VIKINGS SOLAR ENERGY GENERATION AND STORAGE PROJECT

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Project
PROBABLE FUTURE PROJECTS					
12.	Desert Valley Company Monofill - Cell 3 Closure ^(uu)	CalEnergy	Closure of monofill operations at waste storage Cell 3; installation of final cover; continued leachate monitoring and collection; continued sampling of groundwater monitoring wells; installation and monitoring of radon gas vents.	Anticipated to commence 2025	36.8 miles northwest
13.	Desert Valley Company Monofill Expansion Project (Cell 4) ^(t)	CalEnergy	Expansion of existing DVC Monofill with addition of a new waste storage Cell 4, a new leachate pond, storm-water diversion dikes, minor extension/modification to internal roads, installation of a new water well.	EIR in Progress	37.3 miles northwest
14.	Chocolate Mountain Solar Farm ^(s)	8 Minute Energy	50 MW PV solar facility and supporting structures on 320 acres.	Pending Construction	14 miles northwest
15.	Drew Solar, LLC ^{(q)(s)}	Drew Solar, LLC	100 MW PV solar facility and supporting structures on 808 acres.	Under Construction	8.4 miles southwest
16.	Laurel Cluster (Formerly Big Rock Cluster) ^{(m) (s)}	8 Minute Energy	325 MW PV solar facility and supporting structures on 1,380 acres.	Pending Construction	9.1 miles southwest
17.	Le Conte Energy Storage System ^{(r)(s)}	Centinela Solar Energy, LLC	Battery energy storage system with up to 125 MW of electric storage capacity.	Pending Construction	8.5 miles southwest
18.	Nider Solar Project ^(s)	8 Minute Energy	100 MW PV solar facility and supporting structures on 320 acres	Pending Entitlement (on hold)	9.6 miles northwest
19.	Vega SES Solar Project ^{(p)(s)}	Vega SES, LLC	100 MW PV solar energy facility, supporting structures, and 100 MW battery storage system on 574 acres.	Pending Construction	8.6 miles southwest
20.	Titan Solar II/ Seville 4 ⁽ⁿ⁾	Titan Solar II, LLC	A 20 MW PV solar facility on 175 acres.	Under Construction	16.3 miles northwest
21.	Ormat Wister Solar ^(u)	Orni 22 LLC/Ormat	A 20 MW PV solar facility on 100 acres.	Under Construction	12.2 miles northwest
22.	Westside Canal Battery Storage ^(tt)	CED Westside Canal, LLC	Battery energy storage facility with storage capacity of 2,000 MW on 163-acre site.	Pending Entitlement	25.9 miles southwest
23.	Coyne Ranch Specific Plan ^(ss)	Marty Coyne	A residential project with up to 546 residential units.	In progress	23.1 miles west

TABLE 6-2: POTENTIAL CUMULATIVE PROJECTS – VIKINGS SOLAR ENERGY GENERATION AND STORAGE PROJECT

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Project
24.	Desert Highway Farms ^(o)	Solana Energy Farms 1, LLC	Cannabis cultivation on 320 acres.	Approved, Not Constructed	47.5 miles northwest
25.	El Toro Cattle ⁽ⁱⁱ⁾	ETX, LLC	Expand cattle feed yard operations at the existing Heber facility by 17,000 head of cattle.	In progress.	15.1 miles southwest
26.	Lack Road Bridge Replacement ^(gg)	Imperial County Public Works Dept.	Replace Lack Road Bridge with new precast concrete bridge.	In progress.	29.2 miles northwest
27.	Heber 2 Geothermal ^(ff)	Second Imperial Geothermal	Install two new water-cooled ORMAT Energy Converters to replace six old units, install three 10,000-gallon isopentane above ground storage tanks, and additional pipes to connect the proposed facilities with the existing Heber 2 Geothermal Energy Complex.	In progress.	16 miles southwest
28.	English Road Bridge Pipe Crossing Replacement Project ^(bb)	Imperial County Public Works	Improvements to the existing bridge located at English Road and Pound Road.	In progress.	32 miles northwest
29.	Valencia Solar Project #3 CUP ⁽ⁱⁱ⁾	Valencia 3 Solar	A CUP amendment to construct a 1-mile gen-tie line along south side of Harris Road and interconnect to an IID 12.5kV line.	In progress.	15.9 miles northwest
30.	CUP #20-0002 ^(cc)	Fondomonte California, LLC	Expand operations to increase tonnage of hay pressed, number of presses, truck/vehicle trips, employees and operation hours.	In progress.	25 miles northwest
31.	Mitchell's Camp Family Association - Water Well ^(cc)	Mitchell's Camp Family Association	Install a new water well (14 AFY) to serve Mitchell's Camp and maintain the existing well as a backup well.	In progress.	45.9 miles northeast
32.	West Wind Parking Storage ^(hh)	West Wind Parking Storage, Inc.	A General Plan Amendment to allow for expansion of Heber Specific Plan Area to incorporate existing industrial uses east of Hwy 111 and south of Heber Road and expand existing truck parking facility.	In progress.	13.6 miles southwest
33.	CUP #20-0009, 20-00010, 20-0011, and 20-0012 ^(dd)	Gordons Well II, LLC	CUP to install new water well and increase permitted water allocation to 1,000-AFY.	In progress.	18.3 miles southeast

TABLE 6-2: POTENTIAL CUMULATIVE PROJECTS – VIKINGS SOLAR ENERGY GENERATION AND STORAGE PROJECT

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Project
34.	Glamis Specific Plan ^(y)	Polaris Industries Inc.	The Glamis Specific Plan will facilitate development of recreation-serving land uses and required infrastructure.	In progress.	16.7 miles northeast
35.	Hay Kingdom, Inc. CUP #20-0014 ^(v)	Hay Kingdom, Inc.	Expand operations to increase tonnage of hay pressed, number of presses, volume of hay processed, truck/vehicle trips, employees and i operation hours.	In progress.	13.2 miles northwest
36.	Seeley Fire Facility and Cooling Center Lot Merger #00147 Initial Study #20-0018 ^(z)	Imperial County Executive Office and Imperial County Workforce and Economic Development	Construction of Seely Fire Facility and Cooling Center (includes new fire station).	In progress.	24.2 miles west
37.	Jeffrey Carter Parcel Map #02488 ^(aa)	Jeffrey Carter	Parcel Map #02488 to subdivide the existing vacant lot into parcels, 2.34 acres each for residential purposes.	In progress.	18.4 miles northwest
38.	CUP #20-0018 ^(w)	Albert Garzon	Install water well for 10-AFY for a future vacation residence and potential RV area.	In progress.	18 miles southeast
39.	CUP #19-0026 ^(kk)	Pyramid Construction and Aggregates, Inc.	Construct and operate a portable asphalt batch plant on existing mining site.	In progress.	27 miles northeast
40.	Energy-Source Minerals LLC ALTis ^(x)	Energy-Source Minerals, LLC	Construct and operate a commercial lithium hydroxide production plant at Hudson Ranch I Geothermal Plant.	Draft EIR Published June 2021	32 miles northwest
41.	Heber 1 Geothermal Repower Project ^(pp)	Ormat Nevada Inc.	Upgrades to Heber 1 geothermal facility including new steam turbines, new air coolers, new electrical, control and machinery building and storage tanks.	MND published February 2021	15.1 miles southwest
42.	CUP #19-0016 Imperial Landfill, Inc. ^(ll)	Imperial Landfill, Inc.	Amendment to existing CUP to allow receipt of MSW that originates from outside of Imperial County.	In progress.	14.7 miles northwest

TABLE 6-2: POTENTIAL CUMULATIVE PROJECTS – VIKINGS SOLAR ENERGY GENERATION AND STORAGE PROJECT

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Project
43.	Vestermark Wastewater System CUP #20-0015 (mm)	Kyle Vestermark	Install onsite wastewater treatment system to treat the effluent from the RV dump-holding tank.	In progress.	11.7 miles northwest
44.	VEGA 4 SES ^(oo)	Apex Energy Solutions, LLC	A 100 MW PV solar farm and 100 MW battery storage system on approximately 531 acres of land.	In progress.	7.25 miles southwest
45.	VEGA 2, 3 and 5 SES ⁽ⁿⁿ⁾	Apex Energy Solutions, LLC	A 350 MW PV solar farm and 350 MW battery storage system on approximately 1,963 acres of land.	In progress.	27.9 miles northwest
46.	Orni 30 ^(qq)	Orni 19, LLC	A 40 MW PV solar farm and 40MW/160-megawatt hour battery energy storage system on approximately 225 acres of land.	In progress.	19.4 miles northwest
47.	County of Imperial Housing Element Update (2021-2029)	Imperial County Planning & Development Services Department	The County proposes to update its existing Housing Element of the General Plan to reflect current conditions, County policies and methods to meeting housing requirements mandated by the State.	In Progress. State Certification anticipated October 2021	Countywide.
IMPERIAL IRRIGATION DISTRICT					
48.	East Highline Reservoir and Intake Channel Project ^(rr)	IID	The Project includes a single cell reservoir facility (with a split cell design option), covering approximately 370 acres, within a 417-acre Project footprint, which would manage up to 3,400 acre-feet of water. The water managed in the proposed reservoir would then gravity flow into the East Highline Canal.	Draft EIR Published April 2020	4.3 miles south

Notes: IID = Imperial Irrigation District
MWH = megawatt hour
PV = photovoltaic

kV = kilovolt
MND = Mitigated Negative Declaration
USFWS = United States Fish and Wildlife Service

MW = megawatt
NA = Not Applicable.
AFY = acre-feet per year

TABLE 6-2: POTENTIAL CUMULATIVE PROJECTS – VIKINGS SOLAR ENERGY GENERATION AND STORAGE PROJECT

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Project
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Sources:

- (a) Bureau of Land Management ePlanning Project Search. https://eplanning.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do. Accessed on February 4, 2020.
- (b) County of Imperial, 2011. Final Environmental Impact Report for the Centinela Solar Energy Project. December 2011.
- (c) County of Imperial, 2012a. Final Environmental Impact Report for Campo Verde Solar Project. July 2012.
- (d) County of Imperial, 2012b. Final Environmental Impact Report for the Mount Signal and Calexico Solar Farm Projects Imperial County, California. March 2012.
- (e) County of Imperial, 2014a. Final Environmental Impact Report for Seville Solar Farm Complex. October 2014.
- (f) County of Imperial, 2014b. Final Environmental Impact Report Wistaria Ranch Solar Energy Center Project. December 2014.
- (g) County of Imperial, 2015a. Final Environmental Impact Report for Iris Cluster Solar Farm Project. January 2015.
- (h) County of Imperial, 2015b. Mitigated Negative Declaration for Valencia 2 Solar Project. August 2015.
- (i) County of Imperial, 2015c. Mitigated Negative Declaration for Valencia 3 Solar Project. August 2015.
- (j) County of Imperial, 2016. Final Supplemental Environmental Impact Report for the Campo Verde Battery Energy Storage System. December 2016.
- (k) County of Imperial, 2017. Initial Study and Environmental Analysis for Midway Solar Farm III (CUP #17-0013). August 30, 2017.
- (l) County of Imperial, 2018a. Final Environmental Impact Report for the Citizens Imperial Solar, LLC Project. October 2018.
- (m) County of Imperial, 2018b. Final Environmental Impact Report Laurel Cluster Solar Farms Project. August 2018.
- (n) County of Imperial, 2018c. Final Environmental Impact Report Seville 4 Solar. October 2018.
- (o) County of Imperial, 2018d. Initial Study & Environmental Analysis for Desert Highway Farms, LLC Project. November 2018.
- (p) County of Imperial, 2019a. Final Environmental Impact Report VEGA SES Solar Energy Project. January 2019.
- (q) County of Imperial, 2019b. Final Environmental Impact Report for the Drew Solar Project. November 2019.
- (r) County of Imperial, 2019c. Final Supplemental EIR for Le Conte Battery Energy Storage System. October 2019.
- (s) County of Imperial, 2019d. Imperial County Planning & Development Service’s Renewable Energy GIS Mapping Application. Accessed on February 6, 2019.
- (t) County of Imperial, 2019e. Initial Study and Environmental Analysis for Desert Valley Company Monofill Expansion Project. December 2019.
- (u) County of Imperial, 2019f. Initial Study and NOP Wister Solar Energy Facility Project. November 2019.
- (v) County of Imperial, 2020a. Initial Study and Environmental Analysis for Conditional Use Permit #20-0014 Hay Kingdom, Inc. November 2020.
- (w) County of Imperial, 2020b. Initial Study and Environmental Analysis for Conditional Use Permit #20-0018 Initial Study #20-0024 Albert Garzon. December 2020.
- (x) County of Imperial, 2020c. Initial Study and Environmental Analysis for Energy Source Mineral ATLiS Project. December 2020.
- (y) County of Imperial, 2020d. Initial Study and Environmental Analysis for Glamis Specific Plan. October 2020.
- (z) County of Imperial, 2020e. Initial Study and Environmental Analysis for Lot Merger #00147 Initial Study #20-0018 Seeley Fire Facility and Cooling Center. November 2020.
- (aa) County of Imperial, 2020f. Initial Study and Environmental Analysis for Parcel Map #0288 Jeffery Carter. November 2020.
- (bb) County of Imperial, 2020g. Initial Study, Environmental Checklist Form & Mitigated Negative Declaration for IS#19-0021. June 2020.
- (cc) County of Imperial, 2020h. Initial Study, Environmental Checklist Form & Negative Declaration for CUP #20-0003-MCFA. July 2020.
- (dd) County of Imperial, 2020i. Initial Study, Environmental Checklist Form & Negative Declaration for CUP #20-0009 et al. October 2020.
- (ee) County of Imperial, 2020j. Initial Study, Environmental Checklist Form & Negative Declaration for Fondomonte California LLC. June 2020.
- (ff) County of Imperial, 2020k. Initial Study, Environmental Checklist Form & Negative Declaration for Heber 2 Geothermal Repower Project. May 2020.
- (gg) County of Imperial, 2020l. Initial Study, Environmental Checklist Form & Negative Declaration for Lack Road Bridge Replacement Project and County Project Number 6421. February 2020.
- (hh) County of Imperial, 2020m. Initial Study, Environmental Checklist Form & Negative Declaration for West Wind Parking Storage Inc. August 2020.
- (ii) County of Imperial, 2020n. Initial Study, Environmental Checklist Form & Negative Declaration for ZC18-0006. February 2020.

TABLE 6-2: POTENTIAL CUMULATIVE PROJECTS – VIKINGS SOLAR ENERGY GENERATION AND STORAGE PROJECT

Map No.	Project Name	Applicant	Summary Project Description	Status	Distance to Project
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Sources (Continued):

- (jj) County of Imperial, 2020o. Initial Study, Environmental Checklist Form for Valencia 3 Solar Project. June 2020.
- (kk) County of Imperial, 2021a. Initial Study and Environmental Analysis for Conditional Use Permit #19-0026 Pyramid Construction & Aggregates, Inc. American Girl East MI #91-13-0112. January 2021.
- (ll) County of Imperial, 2021b. Initial Study and Environmental Analysis for Conditional Use Permit #19-0016 Initial Study #19-0019 Imperial Landfill, Inc. April 2021.
- (mm) County of Imperial, 2021c. Initial Study and Environmental Analysis for Conditional Use Permit #20-0015/Initial Study #20-0028 Kyle Vestermark On-Site Wastewater Treatment System. April 2021.
- (nn) County of Imperial, 2021d. Initial Study and NOP VEGA SES 2, 3 & 5 Solar Energy Project. April 2021.
- (oo) County of Imperial, 2021e. Initial Study and NOP VEGA SES 4 Solar Energy Project. April 2021.
- (pp) County of Imperial, 2021f. MND and Initial Study for Heber 1 Geothermal Repower Project CUP No.19-0028. February 2021.
- (qq) County of Imperial, 2021g. Request for Proposal – Environmental Impact Report (EIR) for the Brawley Solar Energy Facility, ORNI 30 LLC. February 2021.
- (rr) IID, 2020. Draft East Highline Reservoir Intake Channel Project Environmental Impact Report SCH NO. 2019011070. April 2020.
- (ss) Richard Pata Engineering, Inc. 2017. Coyne Ranch Specific Plan. Revised August 1, 2017.
- (tt) Stantec Consulting Services, 2021X. Westside Canal Battery Storage Project Draft Environmental Impact Report. April 6, 2021.
- (uu) Veizades & Associates, 2015. Preliminary Closure/Post Closure Maintenance Plan for the Desert Valley Company Phase III (Cell 3). November 2015.



SOURCE: Basemap-ESRI; ICPDS NOTE: Please reference Potential Cumulative Projects Table 7-1 for additional project details. Potential Cumulative Project 47 is not mapped.

Location of Potential Cumulative Projects
Vikings Solar Energy Generation and Storage Project
Figure 6-1

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6.4. Environmental Consequences, Impacts, And Mitigation Measures

According to CEQA Guidelines, Appendix G, the proposed Project would be expected to result in a cumulative impact if the projects would have impacts that are individually limited, but cumulatively considerable. CEQA Guidelines, Appendix G, further states, “Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.

The following cumulative impacts analysis used the above standard of significance in combination with project standards of significance for each environmental resource area evaluated in the DEIR.

A proper cumulative impacts analysis requires a two-step inquiry. The first question is whether the combined effects from both the proposed Project and other projects would be cumulatively significant. If the agency answers this question in the affirmative, the second question is whether “the proposed Project’s incremental effects are cumulatively considerable.” (*Communities for a Better Environment v. California Natural Resources Agency* (2002) 103 Cal.App.4th 98, 120.)

Thus, agencies should not merely compare the incremental effect of a proposed against the collective impacts of all other relevant projects, yielding the proposed Project’s “relative” impact vis-à-vis the impacts of the other projects. Rather, in making the first required inquiry, the lead agency must add the project’s incremental impact to the anticipated impacts of other projects. (Id. at pp. 117-121.) See also, CEQA Guidelines section 15130, subdivision (h)(1), which states that “[w]hen assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable.” However, “[t]he mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed Project’s incremental effects are cumulatively considerable.” (CEQA Guidelines, § 15130, subd. (h)(4)). It is not necessarily true that, even where cumulatively significant impacts are significant, any level of incremental contribution must be deemed cumulatively considerable. (*Communities for a Better Environment*, supra, 103 Cal. App.4th at p. 120.)

6.5. Cumulative Impact Analysis

The following text provides the analysis of impacts to each resource, based upon the study area definitions above.

6.5.1. Aesthetics

The cumulative study area for projects considered in the visual resources cumulative impact analysis considers a five (5) mile radius from the Project site. Views beyond five (5) miles are obstructed by a combination of the flat topography coupled with the Earth’s curvature. The short-term visual impacts of the Project would be in the form of general construction activities including grading, use

of construction machinery, and installation of the transmission poles and stringing of transmission lines. Longer-term visual impacts would be in the form of the presence of solar array grids, an electrical distribution and transmission system, battery storage system, and substation.

As provided in Section 4.1, Aesthetics, the Project site is comprised of an agricultural landscape. Undeveloped agricultural lands in the Project vicinity have transitioned to renewable energy developments (Calexico I-A and I-B, Centinela Solar, Iris Cluster Solar Farm). Although the projects would entail a substantial change in the existing visual character of the Project area to solar generating uses, these uses would be located in an area with a general lack of any distinctive visual features, such as varied topography or other topographical features. These factors all contribute to only low to moderate levels of vividness and intactness.

The visual changes associated with the Project would be located in a remote area viewed by a minimal number of people. Additionally, the Project site is not located within a scenic vista, and is not readily visible from any frequently travelled interstates or scenic highways. Additionally, with the exception of the transmission generation tie-line, the Project's structural features would not substantially disrupt background views of mountains to the west. Further, the Project site would be restored to pre-project conditions following the decommissioning of the solar uses. As a result, although the visual character of the Project area would temporarily change from that of a rural agricultural nature to one with developed characteristics, a less than significant impact associated with the Project has been identified.

Development of the proposed Projects in conjunction with the cumulative projects identified in Table 6-1 will gradually change the visual character of this portion of the Imperial Valley. 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. Cumulative projects including the Laurel Cluster Solar Farms, Imperial Solar Energy Center South, Imperial Solar Energy Center West, Centinela, Wistaria Ranch, Campo Verde, and others south of I-8 would not have a cumulative effect on a scenic vista because they are located in an area that is not identified as a designated scenic resource and would not affect a scenic vista. All cumulative projects would not impact scenic resources within a state scenic highway as no designated state scenic highway is located within 5 miles of these cumulative projects.

6.5.2. Agriculture and Forest Resource

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 4.2, Agricultural and Forest Resources, the project would result in the temporary conversion of 591.31 gross acres of Important Farmland, which would correspond with the duration of the lease of the property for solar farm use. Thus, the proposed Project would incrementally add to the temporary conversion of agricultural land in Imperial County. According to the California Farmland Conversion Report, approximately half of the County (522,375 acres out of a total of 1,028,508 acres) is Important Farmland (California DOC 2015). Table 6-3 summarizes the percentage of each type of farmland in the County that would be converted by the proposed Project.

TABLE 6-3: IMPORTANT FARMLAND CONVERSION

Land Use Category	Total Acreage in Imperial County (2018)	Project-Related Conversion (acres)	Project Percent of County Acreages
Prime Farmland	189,163	18.3	<u>0.01%</u>
Farmland of Statewide Importance	291,596	213.5	<u>0.07%</u>
Farmland of Local Importance	39,711	359.51	<u>0.91%</u>
Unique Farmland	1,905	0	<u>0.00%</u>
TOTAL	522,375	591.31	<u>0.11%</u>

Source: California Department of Conservation (DOC), 2015.

As shown in Table 6-3, the Project would temporarily convert a very small fraction of the total Important Farmlands in the County and have a minimal effect on agricultural land on a cumulative scale. Furthermore, the conversion would be temporary, lasting only for the duration of the Project's useful life, which is expected to be up to 30 years.

During the 2010 to 2012 time frame, approximately 5,391 acres of Important Farmland was converted to non-agricultural uses (California DOC 2015). Farmland conversions occurred for a variety of reasons, including fallowing of lands resulting in a conversion to a non-irrigated classification, and conversion to urban and other non-energy related uses because of development of farmsteads, rural commercial facilities, low-density housing, mining facilities, and dairy expansions. The trend in the conversion of agricultural land is expected to continue because of development pressure, and other factors. Table 6-4 identifies each potential cumulative project's impact on important farmlands. The majority of these projects are renewable energy projects. The solar facilities located in close proximity to the proposed Project include Valencia Solar 2 and 3, Calexico I-A and I-B, Centinela Solar, and Iris Cluster Solar Farm among others. Solar energy projects result in temporary conversion of agricultural land. The majority of the cumulative projects are located on private lands, which are predominately agricultural, and would have agricultural impacts similar to the proposed Project. The impacts of these individual projects include conversion of Important Farmland. Table 6-4 provides a summary of the cumulative projects that contain Important Farmland and that would result in a temporary conversion of agricultural lands. Cumulative projects in Table 6-2 that do not result in impacts to agricultural lands are not included in Table 6-4.

TABLE 6-4: SUMMARY OF FARMLANDS BY TYPE FOR CUMULATIVE PROJECTS

Cumulative Project ⁽¹⁾	Prime Farmland Acreage ⁽²⁾	Farmland of Statewide Importance Acreage
Calexico I-A	130.00	588.70
Calexico I-B	184.00	406.00
Cluster I Solar (Calipatria, Wilkinson, Lindsey, Midway I, Midway II, Midway III, Midway IV)	8.80	584.75
Campo Verde Solar Project & Battery Storage System	660.00	1,110.00
Centinela Solar	138.00	1,927.00
Citizens Imperial Solar Project	194.56	7.04
Iris Cluster Solar Farm (Ferrel, Rockwood, Iris and Lyons)	160.40	1,229.05
Wistaria Ranch Solar Project	394.80	2,188.70
Seville Solar Farm Complex (I, II, III, 4 and 5)	651.00	219.00
Valencia Solar Project 2	0.00	0.00
Valencia Solar Project 3	0.00	0.00
Chocolate Mountain Solar Farm	0.00	168.74
Drew Solar, LLC	48.30	714.50
Laurel Cluster (Formerly Big Rock Cluster)	507.53	827.29
Nider Solar Project	0.00	318.93
Vega SES Solar Project	490.64	59.05
Titan Solar II/Seville 4	0.00	0.00
Ormat Wister Solar	0.00	0.00
Westside Canal Battery Storage	0.00	0.00
Coyne Ranch Specific Plan	44.89	84.79
Desert Highway Farms	0.00	0.00
Energy-Source Minerals LLC ALTis	0.00	0.00
VEGA 4 SES	0.00	0.00
VEGA 2, 3 and 5 SES	0.00	0.00
Orni 30	3.36	199.14
Total	3,616.28	10,632.68

Note:

- (1) Project farmland totals include Prime Farmland and of Farmland of Statewide Importance only
(2) Acreages rounded to the nearest hundredth

The Project would result in the temporary conversion of approximately 591 acres of Important Farmland (Prime Farmland and Farmland of Statewide Importance), which would correspond with the duration of the lease of the properties for solar farm use. With the implementation of Mitigation Measures (MMs) AG-1, AG-2 and AG-3, this impact would be reduced to a level less than significant. As with the Project, cumulative projects have been, and are expected to continue to provide mitigation for any impacts on agricultural resources.

When the proposed Project is combined with the cumulative projects identified in Table 6-2, the total agricultural land conversion (Prime Farmland and Farmland of Statewide Importance) from is estimated to be 14,480.86 acres (14,248.96 + 231.9). The proposed Project would contribute approximately 1.60 percent (231.9 acres ÷ 14,480.86 acres) of the total temporary agricultural land conversion. The cumulative projects combined with the proposed Project would contribute to conversion of approximately 2.69 percent (14,480.86 acres ÷ 538,326 acres) of the farmland in Imperial County. With implementation of MMs AG-1, AG2 and AG-3, the project's contribution to this impact would be less than cumulatively considerable. Likewise, each individual cumulative project would be 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.

Given that the incremental conversion of agricultural land would be mitigated via MM AG-1, AG2 and AG-3, which require the full restoration of all sites to pre-project conditions per the requirement that each project prepare and implementation of a Reclamation Plan to comparable agricultural production under post-project conditions, following the conclusion of the lease, project-related agricultural conversion impacts would be reduced to a less than significant level.

6.5.3. Air Quality

The CESA for comprehensive air quality analysis is the Salton Sea Air Basin (SSAB). Although a single project would rarely cause a violation of a federal or state criteria pollutant standard, a new source of pollution may contribute to violations of criteria pollutant standards due to existing background sources or foreseeable future projects.

The Project's contribution to cumulative air quality impacts would be different during construction and operations. The overall construction schedule for the Project is approximately 12 months. The combined lifespan for the Project is estimated to be 30 years. All existing and foreseeable projects in Table 6-2 may contribute to cumulative effects for air quality.

The SSAB is currently designated as being in nonattainment for Ozone (O₃) and particulate matter less than 10 microns in size (PM₁₀) under both the National and California Ambient Air Quality Standards (AAQS). This is considered a significant cumulative impact. During construction the proposed Project would emit PM₁₀ and Nitrous Oxide (NO_x) (an ozone precursor).

As shown on Table 4.3-9, the maximum construction emissions for the Project would range from 0.58 to 678.58 pounds (lbs)/day of PM₁₀, with peak daily emissions reaching 731.08 lbs/day which would exceed the Imperial County Air Pollution Control District's (ICAPCD's) threshold of 150 lbs/day. Construction of the proposed Project would also result in NO_x emissions (an ozone precursor) that range from 1.49 to 24.36 lbs/day, with peak daily emissions reaching 61.59 lbs/day. The maximum NO_x emissions would not exceed the ICAPCD's threshold of 100 lbs/day. During normal operations, the peak daily emission of PM₁₀ would be 23.10 lbs/day which would not exceed

ICAPCD's threshold of 150 lbs/day. The daily peak operational emissions of NO_x would be 4.29 lbs/day which would not exceed ICAPCD's threshold of 137 lbs/day.

Project impacts would be reduced through the implementation of mitigation measures consisting of standard construction and operation measures required by the ICAPCD; therefore, the proposed Project would not make a cumulatively considerable incremental contribution to an existing significant cumulative air quality impact.

6.5.4. Biological Resources

Generally, the CESA for biological resources includes the entirety of the Imperial Valley. This extent (the entire Imperial Valley region) makes it possible to account for impacts to biological resources that may have restricted migration to and from adjacent physiographic regions due to habitat changes from region to region. The duration of time that the projects would contribute to cumulative effects would be approximately 30 years, which reflects the combined lifespans of the proposed Project.

All existing and foreseeable future projects in Table 6-2 may contribute to cumulative effects for biological and natural resources. In conjunction with other development projects in the Project vicinity (Table 6-2), the proposed Project would not have a cumulatively considerable impact on biological resources. As described in Section 4.4, Biological Resources, the project has the potential to result in impacts on biological resources. These impacts are generally focused on potential construction-related effects to burrowing owl and migratory birds.

Burrowing owls are protected by the California Department of Fish and Wildlife (CDFW) mitigation guidelines for burrowing owl (CDFW 2012) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. MM BIO-1 contains these requirements thereby minimizing potential impacts on these species to a less than significant level.

Additionally, as provided in Section 4.4, Biological Resources, several common bird species could nest on the project site. As a result of project-related construction activities, one or more of these species could be harmed. However, with the implementation of MM BIO-2 as identified in Section 4.4, Biological Resources, these impacts would be reduced to a level of less than significant. Similarly, the cumulative projects within the geographic scope of the project would be required to comply with the legal framework as described above. Based on these considerations, impacts on biological resources would not be cumulatively considerable.

As with the proposed Project, each of the cumulative projects would be required to provide mitigation for impacts on biological resources. The analysis below is conducted qualitatively and in

the context that the cumulative projects would be subject to a variety of statutes and administrative frameworks that require mitigation for impacts on biological resources.

Birds listed at 50 Code of Federal Regulations (CFR) 10.3 are protected by the Migratory Bird Treaty Act (MBTA) (16 United States Code [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 Fish and Game Codes 3503.5, 3503, 3513.

The Clean Water Act (CWA) and California's *Porter-Cologne Water Quality Control Act* provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit. No jurisdictional wetlands are located with the project site that could otherwise be directly impacted by construction of the Project. Likewise, MMs HWQ-1 and HWQ-2 would avoid or minimize potential water quality impacts that could otherwise indirectly impact biological resources.

The Project would comply with these and other laws, regulations and guidelines and therefore would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative actions within the geographic scope of the Project will be required to comply with the legal frameworks set forth above, as well as others. The cumulative actions will be required to mitigate their impacts to a less than significant level.

6.5.5. Cultural and Tribal Cultural Resources

The CESA for cultural and paleontological resources consists of the Imperial Valley, including the southern portion of Riverside County. This geographic scope is appropriate because it is likely that cultural resources similar to those in the project area are present throughout the Imperial Valley, and that ground disturbance required for existing, approved, and reasonably foreseeable projects would likely have impacted or would impact similar resources. The occurrence of the impact would be primarily during construction of the Project or any of the foreseeable projects, but impacts would be permanent. All foreseeable projects on Table 6-2 may contribute to cumulative effects for cultural and tribal resources, because all are likely to involve ground-disturbing activities to some extent during construction.

The proposed Project, in combination with existing, approved, proposed, and other reasonably foreseeable projects in the CESA, could result in impacts to prehistoric resources, historic resources, paleontological resources, and human remains.

Construction of multiple projects in the region could result in the loss and/or degradation of cultural or tribal cultural resources regionally, and could also result in the disturbance of human remains. Without proper mitigation, the cumulative effects of these types of large-scale development projects on cultural resources could be significant.

While the historical resources that meet the criteria for listing on the California Register of Historic Resources (CRHR) identified in the Project vicinity would be avoided by the Project, it is possible that subsurface resources are present that have not yet been identified. Although unlikely, Project related ground-disturbing activities could uncover previously unknown prehistoric, historic, as well as paleontological resources within Project boundaries. Therefore, the proposed Project have the potential to incrementally contribute to the disturbance of previously unknown cultural and paleontological resources.

The proposed Project will be required to implement MM CR-1 through MM CR-4 to reduce potential impacts to archaeological, historical and paleontological resources during construction of the proposed Projects to below a level of significance. Existing, approved, proposed, and other reasonably foreseeable projects with potentially significant impacts to archaeological, historical and tribal cultural resources would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar mitigation measures during construction. Therefore, with implementation of regulatory requirements and standard conditions of approval, and MM CR-1. through MM CR- 4; (Section 4.5), the Project's contribution to impacts to cultural and tribal cultural resources would not be cumulatively considerable.

6.5.6. Energy

The CESA for energy consists of the Imperial Valley, including the southern portion of Riverside County. This geographic scope is appropriate because it is likely that energy resources similar to those in the Project area are present throughout the Imperial Valley, and that ground disturbance required for existing, approved, and reasonably foreseeable projects would likely have impacted or would impact similar resources. The occurrence of the impact would be primarily during construction of the Project or any of the foreseeable projects, but impacts would be permanent. All foreseeable projects on Table 6-2 may contribute to cumulative effects for cultural and tribal resources, because all are likely to involve ground-disturbing activities to some extent during construction.

6.5.7. Geology and Soils

The CESA for geology, soils, is confined to the Project site. This is because geologic materials, and soils occur at specific locales and are generally unaffected by activities not acting on them directly or immediately adjacent to them, and any impacts of the proposed Project would be site-specific. The time component of potential impacts would be the lifespan of the Project.

The Project is the only project that could contribute to cumulative impacts on this resource at this location.

The Project would not make a cumulatively considerable contribution to a significant cumulative impact to geology and soils. Soils associated with the Project site are similar to other soils in the area. Site-specific conditions result in impacts associated with fault rupture and strong seismic ground shaking, seismic-related ground failure, including liquefaction and unstable soils, landslides, and shallow groundwater. These inherent conditions are the result of natural historical events that occur through vast periods of geologic time and are not based on cumulative development.

The Project will require grading of portions of the Project site to allow for installation of the solar panels. It is expected that the Project and other area development will comply with the International Building Code and the California Building Code (CBC). Thus, the proposed Project, when considered in combination with other past, present, and reasonably foreseeable projects within the vicinity, would not result in significant cumulative impacts. Accordingly, the Project's contribution to a significant cumulative geology and soils impact is less than cumulatively considerable.

6.5.8. Greenhouse Gas (GHG) Emissions

In considering greenhouse gas impacts, it is necessary to consider both anthropogenic and natural sources. For the proposed Project the CESA is the Imperial County portion of the SSAB. In confining the analysis to this extent, it is possible to accurately calculate cumulative emissions and track the region's contribution to climate change. The duration of impacts would be the lifetime of the project, but there would be different potential impacts during construction and operations.

All existing and foreseeable projects listed in Table 6-21 may have a cumulative effect on climate change. The climate change analysis conducted in the Greenhouse Gas (GHG) Emission section is equivalent to a cumulative analysis. Please see Section 4.8.3 of this EIR.

6.5.9. Hazards and Hazardous Materials

For the purposes of this cumulative analysis, risk from the transport, use, and disposal of hazardous materials during construction would be limited to areas where concurrent construction or operations are occurring in very close proximity to each other. Therefore, the only project that may contribute to cumulative hazards and effects on public safety as a result of the transport, use, and disposal of hazardous materials are those that would occur on the Project site.

Transport, Use, and Disposal of Hazardous Materials

Existing, approved, proposed and reasonably foreseeable projects in the CESA would not create a significantly cumulative hazard to the public through the routine transport, use, or disposal of hazardous materials.

A significant cumulative hazardous materials impact occurs if there is simultaneous uncontrolled release of hazardous materials from multiple locations in a form (gas or liquid) that could cause a significant impact where the release of one hazardous material alone would not cause a significant impact. For a significant impact of this nature to occur, the releases have to occur in a centralized location.

It is unlikely for an event such as this to occur during construction the proposed Project because spills and releases tend be localized and would be smaller than one that could occur during operations because they would only the volume of a container used at any one time. In addition, they would be addressed immediately per a Stormwater Pollution Prevention Plan (SWPPP) or Hazardous Material Business Plan.

During operations, a potential cumulative significant event could occur if an upset event at a nearby development had a cascading effect that caused an upset at the Project site. While this is theoretically possible, it is not very probable. The proposed Project will have its own fire suppression systems and hazardous materials business plan.

Other projects listed in Table 6-2 would be or have been subject to similar project-specific or legally required control and mitigation measures and therefore there is no substantial evidence of a significant cumulative effect relating to hazards and public safety from the transport, use, and disposal of hazardous materials.

Interference with an Emergency Response Plan

Existing, approved, proposed and reasonably foreseeable projects in the CESA would not result in a significant cumulative impact associated with interference with an Emergency Response Plan. Cumulative impacts that would cause an interference with Emergency Response Plans would include infrastructure additions, such as adding a new railway crossing, road closures, road segment removal, or other such modifications. There is no substantial evidence indicating there is significant cumulative impact relating to the hindrance of emergency responses. Moreover, the proposed Project does not include any improvements that would physically interfere with an adopted emergency response plan or emergency evacuation plan

6.5.10. Hydrology and Water Quality

The CESA for hydrology and water quality is the Imperial Valley Groundwater Basin. Projects that may contribute to cumulative effects for hydrology and water quality are shown in Table 6-5.

The proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to hydrology and water quality.

TABLE 6-5: PROJECTS THAT MAY CONTRIBUTE TO CUMULATIVE EFFECTS FOR HYDROLOGY AND WATER QUALITY

No.	Project Name and Distance
1.	Calexico I-A (7.4 miles southwest)
2.	Calexico I-B (7.9 miles southwest)
3.	Cluster I Solar (9.7 miles northwest)
4.	Campo Verde Solar Project and Battery Storage System (8.7 miles southwest)
5.	Centinela Solar (8 miles southwest)
6.	Citizens Imperial Solar Project (9.9 miles southwest)
7.	Iris Cluster Solar Farm (7.1 miles southwest)
8.	Wistaria Ranch Solar Project (7.5 miles southwest)
10.	Valencia Solar Project 2 (5.4 miles northwest)
11.	Valencia Solar Project 3 (5.7 miles northwest)
15.	Drew Solar, LLC (8.4 miles southwest)
16.	Laurel Cluster (9.1 miles southwest)
17.	Le Conte Energy Storage System (8.5 miles southwest)
18.	Nider Solar Project (9.6 miles northwest)
19.	Vega SES Solar Project (8.6 miles southwest)
22.	Westside Canal Battery Storage (25.9 miles southwest)
23.	Coyne Ranch Specific Plan (23.1 miles west)
26.	Lack Road Bridge Replacement (29.2 miles northwest)
27.	Heber 2 Geothermal (16 miles southwest)
28.	English Road Bridge Pipe Crossing Replacement Project (32 miles northwest)
29.	Valencia Solar Project #3 CUP (15.9 miles northwest)
30.	CUP #20-0002 (25 miles northwest)
32.	West Wind Parking Storage (13.6 miles southwest)
33.	CUP #20-0009, 20-00010, 20-0011, and 20-0012 (18.3 miles southeast)
35.	Hay Kingdom, Inc. CUP #20-0014 (13.2 miles northwest)
36.	Seeley Fire Facility and Cooling Center Lot Merger #00147 Initial Study #20-0018 (24.2 miles west)
37.	Jeffrey Carter Parcel Map #02488 (18.4 miles northwest)
38.	CUP #20-0018 (18 miles southeast)
40.	Energy-Source Minerals LLC ALTis (32 miles northwest)
41.	Heber 1 Geothermal Repower Project (15.1 miles southwest)
42.	CUP #19-0016 Imperial Landfill, Inc. (14.7 miles northwest)
43.	Vestermark Wastewater System CUP #20-0015 (11.7 miles northwest)
44.	VEGA 4 SES (7.25 miles southwest)
45.	VEGA 2, 3 and 5 SES (27.9 miles northwest)
46.	Orni 30 (19.4 miles northwest)
48.	East Highline Reservoir and Intake Channel Project (4.3 miles south)

Existing, approved and reasonably foreseeable projects would have to comply with SWPPPs during construction to ensure they would not violate any water quality standards or waste discharge requirements. Such projects would also have to comply with their respective National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permits, which require that water quality control measures be incorporated into project design to reduce discharges of site runoff over the life of the project. Large scale foreseeable projects would also have to include stormwater retention basins. During operations, the proposed Project will comply with and obtain coverage under the General Industrial Stormwater Permit which will require preparation of an Industrial SWPPP. The Industrial SWPPP will identify appropriate best management practices (BMPs) to prevent erosion and the mobilization of pollutants in stormwater runoff, define primary and alternative sampling locations, and describe monitoring and maintenance that will be implemented over the life of the Project. As a result, the proposed Project's contribution to water quality impacts would not be cumulatively considerable.

6.5.11. Land Use and Planning

The CESA for the analysis of cumulative impacts related to land use compatibility is the rural agricultural areas on the west side of the Salton Sea within the County of Imperial's jurisdiction. Cumulative impacts could result from the physical division of an established community or from conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental impacts. As there would be no communities divided by the proposed Project, nor would there be a conflict with a land use plan, policy, or regulation, there is no cumulative impact.

6.5.12. Minerals

The CESA for minerals is confined to the Project site. This is because minerals occur at specific locales and are generally unaffected by activities not acting on them directly or immediately adjacent to them, and any impacts of the proposed Project would be site-specific. The time component of potential impacts would be the lifespan of the Project. The Project site is no longer used for mineral resource production and the Applicant is not proposing any form of mineral extraction. The proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to minerals.

6.5.13. Noise

The CESA for the analysis of cumulative impacts related to noise is generally limited to areas within approximately one mile of the Project site, the haul routes used for transporting waste materials, equipment and people to the Project site for the construction and operation and maintenance phases. This extent is appropriate because noise impacts are generally localized; however, it is possible that noise from different sources could combine to create a significant impact to receptors at any point between the projects, as well as along the common roadways utilized by the projects. At distances

greater than one-mile, impulse noise may be briefly audible and steady construction and/or operational noise would generally dissipate such that the level of noise would reduce to below County of Imperial noise limits and blend in with background noise levels. Therefore, only those related projects and identified in Table 6-2 that are in the direct vicinity of the Project site and those that are considered influential in regard to noise and vibration would have the potential to be considered in a cumulative context with the Project's incremental contribution.

Construction

Construction equipment noise from the related projects identified in Table 6-2 would be similar in nature and magnitude to those discussed for the project in Section 4.12, Noise and Vibration. Specifically, noise levels from on-site construction activities would fluctuate depending on the particular type, number, and duration of usage for the varying equipment. The site preparation phase would be anticipated to generate the most substantial noise levels as the on-site equipment associated with grading, compacting, and excavation tend to be the loudest.

As discussed in Section 4.12, Noise and Vibration, the project's noise levels would not exceed the County's 75 dBA Leq construction noise threshold. Therefore, impacts from construction noise are considered less than significant. Similar to the proposed Project, other cumulative projects would be required to comply with the County's construction noise standards. Construction activity is limited to the hours of 7 a.m. to 7 p.m. Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays. Adhering to the County's construction hours would reduce the noise and vibration impacts to below a level of significance. Thus, the incremental contribution of the project to a cumulative noise impact would not be cumulatively considerable.

Operations

Stationary-source and vehicular noise from the aforementioned related projects would be similar in nature and magnitude to those discussed for the projects in Section 4.12, Noise and Vibration. For the proposed Project, no noise impacts have been identified. Operation of the other cumulative projects listed in Table 6-2 could result in the long-term stationary source noise levels that exceed applicable standards at nearby sensitive receptors and/or result in substantial increases in ambient noise levels. However, given that the Project facilities would be constructed within the A-2-RE and GS-RE zones, and components of the Project associated with noise during operation would be located at appropriate distances from the residential uses scattered in this portion of the County, long-term operational noise levels are not expected to exceed normally acceptable noise levels for these zones. Thus, the incremental contribution of the Project to significant cumulative noise impacts would not be cumulatively considerable.

6.5.14. Public Services

The project would result in increased demand for public services (fire protection service and law enforcement services) (Section 4.14, Public Services). Future development in the Imperial Valley, including projects identified in Table 6-2, 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.

6.5.15. Transportation and Traffic

The CESA for cumulative effects on transportation and circulation includes the local roadway network considered for analysis of the proposed Project's direct impacts including East Nelson Pit Road and Graeser Road. The proposed Project would make a cumulatively considerable contribution to a significant cumulative traffic impact on future operations.

During construction and operations, the proposed Project would add 180 and 10 inbound and outbound daily trips to the regional transportation system, respectively. According to the traffic impact study developed by Kittleson and Associates, all affected road segments, key intersections, and affected highways would operate at acceptable levels of service during construction and operation of the Project. The Project would not contribute to a cumulatively significant impact during construction.

6.5.16. Utilities and Service Systems

Future development in Imperial County would increase the demand for utility service in the region. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public utilities within their jurisdictional boundaries. As indicated in Section 4.16, Utilities/Service Systems, the necessary public utilities would be provided to the project by Imperial Irrigation District (IID); however, the Project is not expected to substantially increase demands for any particular service provider. The related projects identified in Table 6-2 would rely on similar service providers. No habitable structures are proposed on the Project site (such as operations and maintenance (O&M) buildings); therefore, there would be no wastewater generation from the proposed Project. No extension of sanitary sewer service would be required.

The Project would not generate significant volumes of solid waste that could otherwise contribute to significant decreases in landfill capacity. Furthermore, during Project decommissioning, a collection and recycling program will be executed to promote recycling of project components and minimize disposal in landfills. Based on these considerations, the Project would result in less than significant impacts on existing utility providers and, therefore, would not result in cumulatively considerable impacts.

7.0 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires an environmental impact report (EIR) to contain a brief statement indicating the reasons that various possible significant effects of a project were determined not to be significant and therefore not discussed in detail in the EIR. The Project would not have the potential to cause significant impacts to the resources discussed below.

7.1. Population and Housing

A project would be considered to have a significant impact if it would:

1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Analysis

Impact 7.1-1: Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?

The Project does not include the provision of any new homes, and new full-time employment positions would be negligible. Once construction is completed the Project would be remotely controlled. No employees would be based at the Project site. Therefore, the Project would not result in any direct unplanned population growth. Similarly, because the Project does not include any infrastructure that would be available for non-project use, no indirect unplanned growth would occur. Impacts related to unplanned growth would be less than significant.

Impact 7.1-2: Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project includes the demolition of one (1) single-family residence located on the Project site. The displacement of one (1) residence is not considered to be “substantial” and would not necessitate the construction of replacement housing elsewhere. This impact would be less than significant.

7.2. Recreation

A project would generally be considered to have a significant effect if it would:

1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

2. Include recreational facilities or require the construction or expansion of recreational facilities, which have an adverse physical effect on the environment?

Analysis

Impact 7.2-1: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

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

Impact 7.2-2: Would the Project include recreational facilities or require the construction or expansion of recreational facilities, which have an adverse physical effect on the environment?

No recreational facilities are included in the Project nor would the Project result in the need to construct or expand existing recreational facilities; therefore, no impacts are expected.

7.3. Wildfires

A project would generally be considered to have a significant effect if it is located in or near state responsibility areas or lands classified as very high fire hazard severity zones and would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan.
2. Exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors.
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
4. 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.

Analysis

Impact 7.3-1: Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

According to the Fire Hazard Severity Zone Map for Imperial County prepared by the California Department of Forestry and Fire Protection (CALFIRE), the Project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (CALFIRE, 2007). As noted in Section 4.9 of this Draft EIR, Hazards and Hazardous Materials, the proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. No impacts would occur under these criteria.

Impact 7.3-2: Would the Project exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors?

The Project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (CALFIRE, 2007). Therefore, the Project would not exacerbate wildfire risks. No impacts would occur under these criteria.

Impact 7.3-4: Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (CALFIRE, 2007). The Project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that would result in temporary or ongoing impacts to the environment. No impact is identified for these criteria.

Impact 7.3-5: Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The Project site is not located in or near state responsibility areas or lands classified as very high hazard severity zones (CALFIRE, 2007). The Project would not 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 these criteria.

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8.0 ALTERNATIVES

8.1 Introduction

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would “feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant effects of the project and evaluate the comparative merits of the alternatives” (CEQA Guidelines Section 15126.6). This chapter identifies potential alternatives to the proposed Project and evaluates them, as required by CEQA.

8.2 Regulatory Requirements for Identifying and Analyzing Project Alternatives

Key provisions of the CEQA Guidelines on alternatives are summarized below to explain the foundation and legal requirements for the alternative analysis in the Draft EIR (Sections 15126.6(a) through (f)).

- “The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.” (Section 15126.6(b))
- “The specific alternative of ‘No Project’ shall also be evaluated along with its impact.” (Section 15126.6(e)(1))
- “The No Project analysis shall discuss the existing conditions at the time the NOP is published, and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” (Section 15126.6(e)(2))
- “The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.” (Section 15126.6(f))
- “Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent).” (Section 15126.6(f)(1))

- “For alternative locations, “only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.” (Section 15126.6(f)(2)(A))
- “An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.” (Section 15126.6(f)(3))

8.3. Criteria for Alternatives Analysis

This section outlines the process used by the Imperial County Planning and Development Services Department (ICPDSD) to develop the alternatives to be analyzed in this Draft EIR. Alternatives considered by the Applicant and the ICPDSD were evaluated using the CEQA criteria and requirements listed below. No project alternatives were suggested during the public scoping process.

- Does the alternative fulfill all or most of the purpose and need, and Applicant objectives?
- Does the alternative avoid or reduce adverse effects to human/environmental resources associated with the Project, or, conversely, would the alternative create adverse effects potentially greater than those of the Project?
- Is the alternative feasible to construct, operate, and perform post-closure maintenance?
- Are there any conflicts between the alternative and the objectives of federal land use plans, policies, or regulations for the area concerned?

Alternatives that met most or all of the criteria listed above were carried forward for analysis and are detailed in Section 8.5. Those that did not meet the above criteria or were eliminated from further analysis.

8.4. Project Objectives

The primary objective of the Project is to utilize Imperial County’s abundance of available solar energy (sunlight) to generate renewable energy, consistent with the County General Plan renewable energy objectives. The Project applicant and County identified the following objectives for the Project:

- Construct and operate a solar energy facility capable of producing up to 150 megawatts (MW) of electricity to help meet the State-mandated renewable portfolio standard (RPS) of providing 50 percent renewable energy by 2030.
- Provide a not to exceed 300-MW energy (battery storage) system, that would accommodate and store the power generated by the Project so that the facility can continue to provide renewable energy during non-daylight hours.
- Operate a facility at a location that ranks amongst the highest in solar resource potential in the nation.

- Interconnect directly to the Imperial Irrigation District (IID) electrical transmission system.
- Operate a renewable energy facility that does not produce significant noise nor emit any greenhouse gases.
- Help reduce reliance on foreign sources of fuel.
- Supply on-peak power to the electrical grid in California.
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Assembly Bill (AB)-32 (California Global Warming Solutions Act of 2006).
- Provide an investment in California and Imperial County that would create jobs and other economic benefits.

8.5. Alternatives to be Analyzed

8.5.1. Alternative 1: No Project/No Development Alternative

The CEQA Guidelines require analysis of the No Project Alternative (Public Resources Code [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 (NOP) is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services.”

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

Environmental Impact of Alternative 1: No Project/No Development Alternative

Aesthetics and Visual Resources

Under the No Project/No Development Alternative, the Project site would not be developed and continue to be a combination of undeveloped agricultural land and undeveloped desert land. Because the No Project/No Development Alternative would not modify the existing Project site by constructing a utility-scale solar energy facility, 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 photovoltaic (PV) arrays. A less than significant aesthetic impact with mitigation (including potential light and glare impact) has been identified associated with the Project. However, because there would be no change to the existing condition of the Project site under this alternative, there would be no potential impact associated with a change in visual character of the site and the

potential aesthetic impact would be less as compared to the Project as the existing visual conditions would not change.

Agricultural Resources

Under the No Project/No Development Alternative, the Project site would not be developed and the agricultural portion would continue to be utilized as active, agricultural land. Compared to the proposed Project, implementation of this alternative would avoid the conversion of land designated as Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance 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.

Air Quality

Under the No Project/No Development Alternative, there would be no air emissions because of Project construction or operation, and no project- or cumulative-level air quality impact would occur. Therefore, no significant impacts on air quality or violation of air quality standards would occur under this alternative. Similar to the proposed Project, this alternative would be consistent with existing AQAPs and would not result in the creation of objectionable odors.

As discussed in Section 4.3, Air Quality, the proposed Project would not exceed the Imperial County Air Pollution Control District's (ICAPCD's) significance thresholds for reactive organic gases (ROG), carbon monoxide (CO), nitrous oxides (NO_x) and particulate matter less than 10 microns (PM₁₀) during construction and operation with mitigation. Although no significant air quality impacts would occur, all construction projects within Imperial County must comply with the requirements of Imperial County Air Pollution Control District (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. However, the No Project/No Development Alternative would not reduce the long-term need for renewable electricity generation. As a consequence, while the No Project/No Development Alternative would not result in new impacts on air quality as a result of construction, it would likely not realize the overall benefits to regional air quality when compared to the operation of the proposed Project.

Biological Resources

Under the No Project/No Development Alternative, existing biological resource conditions within the Project site would remain unchanged and no impact would occur. Unlike the proposed Project

which requires mitigation for potential impacts on burrowing owl, nesting birds, flat-tailed horned lizard, and Yuma hispid cotton rat, this alternative would not result in construction of a solar facility that could otherwise result in significant impacts on these biological resources. Similar to the proposed Project, this alternative would avoid any impacts associated with habitat modification, riparian or wetlands, the movement of fish and wildlife species, and would not conflict with policies or ordinances relative to protection of biological species or any provisions of an applicable habitat conservation plan. Compared to the proposed Project, this alternative would avoid potential direct and indirect impacts on biological resources. The impact on biological resources would be less than the proposed Project.

Cultural Resources

The Project includes ground-disturbing activities that will extend approximately 4 feet below the ground surface. As such, the Project has the potential to disturb previously undocumented cultural resources that could qualify as historical resources or unique archaeological resources pursuant to CEQA. The proposed Project also has the potential to impact paleontological resources. 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 on cultural resources and paleontological resources. The impact on cultural resources would be less than the proposed Project.

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 impacts on Project-related facilities as a result of local seismic or liquefaction hazards or unstable or expansive soils. In contrast, the proposed Project would require the incorporation of mitigation measures to minimize impacts to a less than significant level. Compared to the proposed Project, this alternative would avoid significant impacts related to local geological and soil conditions. The impact on geology and soils would be less than the proposed Project.

Greenhouse Gas Emissions (GHG)

Under the No Project/No Development Alternative, there would be no greenhouse gas (GHG) emissions resulting from Project construction or operation. Therefore, no impact on global climate change would result from Project-related GHG emissions, primarily associated with construction activities. For the proposed Project, a less than significant impact was identified for construction-related GHG emissions, and in the long-term, the Project would result in an overall beneficial impact on global climate change as the result of creation of renewable energy. While this alternative would not further implement policies 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 on global climate change. Compared to the proposed Project, while the No Project/No Development Alternative would not result in new GHG emissions during construction, it would be less beneficial to global climate change as compared to the proposed Project. Because no significant GHG impact has been identified associated with the proposed Project, this alternative would not avoid or reduce a significant impact related to this issue and would not help California meet its RPS requirements by creating new renewable energy resources.

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 existing site conditions and on-site pervious surfaces would remain unchanged. In addition, no changes with regard to water quality would occur under this alternative. However, in the context of existing sediment total maximum daily loads (TMDLs) for local drainages, this alternative would not realize the benefits that could be attributed to the Project in terms of reductions in exposed soil surfaces which are identified as a principle contributor to existing water quality impairments. In this context, this alternative would not contribute to any real reduction in the potential for water quality impacts especially, since the Project would require additional mitigation, which would not otherwise be required under this alternative to address existing water quality impairments. Compared to the proposed Project, from a drainage perspective, this alternative would avoid changes to existing hydrology. Similar to the proposed Project, this alternative would not result in the placement of structures within a 100-year flood zone. This alternative would have less of an impact associated with hydrology/water quality as compared to the proposed Project.

Land Use/Planning

The No Project/No Development Alternative would not result in the modification of the existing land use on the Project site. Under the No Project/No Development Alternative, the Project site would not be developed and continue to be undeveloped agricultural land. Similar to the proposed Project, the No Project/No Development Alternative would not divide an established community. As with the proposed Project, this alternative would not conflict with any applicable habitat conservation plan or natural community conservation plan. 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.

Noise and Vibration

This alternative would not require construction or operation of the Project facilities; therefore, this alternative would not increase ambient noise levels within the vicinity of the Project site. For this reason, no significant noise impacts would occur. As discussed in Section 4.11, Noise and Vibration, the proposed Project would not result in significant noise impacts on sensitive receptors during construction and operation. Compared to the proposed Project, this alternative would not generate noise and would result in a similar impact related to noise.

Public Services

The No Project/No Development Alternative would not increase the need for public services which would otherwise be required for the proposed Project (additional police or fire protection services). Therefore, no impact on public services is identified for this alternative. The proposed Project will result in less than significant impacts on public services; subject to payment of law enforcement and fire service fees. Compared to the proposed Project, this alternative would overall, result in less of an impact related to public services as there would be no change in demand for these services.

Transportation and Traffic

Because there would be no new development under the No Project/No Development Alternative, no increase in vehicular trips during construction or operation would result under this alternative. For these reasons, no impact would occur and this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, conflict with an applicable congestion management program, change air traffic patterns, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Although the proposed Project would result in less than significant transportation and traffic impacts, compared to the proposed Project, this alternative would avoid an increase in vehicle trips on local roadways, and any safety related hazards that could occur in conjunction with the increase vehicle trips and truck traffic.

Utilities/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. The proposed Project would not result in any significant impacts on existing utilities. Compared to the proposed Project, this alternative would have less of an impact related to utilities.

Conclusion

Implementation of the No Project/No Development Alternative would generally result in reduced impacts for a majority of the environmental issues areas considered in Chapter 4, Environmental Analysis, when compared to the proposed Project. A majority of these reductions are realized in terms of significant impacts that are identified as a result of Project construction. However, this alternative would not realize the benefits of reduced GHG emissions associated with energy use, which are desirable benefits that are directly attributable to the proposed Project.

Comparison of the No Project/No Development Alternative to Project Objectives

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

8.5.2. Alternative 2: Reduced Site Acreage Alternative (Avoid Prime Farmland)

The purpose of this alternative is to avoid prime farmland which is located within the Project site. Under Alternative 2, the overall size of the solar energy facility would be reduced by 18.1 acres by avoiding development on the Prime Farmland within Assessor's Parcel Number (APN) 018.

Environmental Impact of Alternative 2: Reduced Site Acreage Alternative (Avoid Prime Farmland)

Aesthetics and Visual Resources

Under Alternative 2, the overall size of the solar energy facility would be reduced. No significant visual aesthetic impact associated with the proposed Project has been identified as the Project facilities would not impact scenic resources, result in the substantial degradation of the existing visual character of the Project site, or result in light/glare impacts. In this context, Alternative 2 would not reduce or avoid an impact related to aesthetics and visual resources, and would result in less than significant impacts similar to the proposed Project.

Agricultural Resources

Under Alternative 2, the overall size of the solar energy facility would be reduced by 18.1 acres by avoiding development on the prime farmland within of APN 018. Under Alternative 2, APN 018 would not be developed and would continue to be open desert land. However, this alternative would still include development of APN 019 and 021 for the solar facility. Therefore, similar mitigation would be required for this alternative to reduce significant farmland impacts to a less than significant level. Impacts associated with contributing to the conversion of other agricultural lands or otherwise affecting agricultural operations would still occur, but would be slightly less as compared to the

proposed Project. Compared to the proposed Project, this alternative would reduce the significant impacts associated with these agricultural issues.

Air Quality

Under Alternative 2, air emissions during construction would be less than the proposed Project because of the reduced site development. As discussed in Section 4.3, Air Quality, the proposed Project would not exceed the ICAPCD's significance thresholds for ROG, CO, NO_x, and PM₁₀ during construction and operation with mitigation. 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. The same mitigation measures would be required for this alternative as with the proposed Project. This alternative would be consistent with existing air quality attainment plans and would not result in the creation of objectionable odors. Compared to the proposed Project, while Alternative 2 would result in less air quality impacts, it would likely provide less desirable benefits to overall regional air quality as attributable to the proposed Project.

Biological Resources

As discussed in Section 4.4, Biological Resources, burrowing owls were observed within the boundaries of the Project site. Although this alternative would reduce the number of burrowing owls that could potentially be directly and indirectly impacted with implementation of the Project, this alternative still has the potential to impact burrowing owl on the other portions of the Project site. Mitigation would still be required for impacts on burrowing owl; however, the overall number of burrowing owl locations potentially impacted would be less. Impacts on wetlands, migratory corridors, and other wildlife and habitats would be similar to that described for the Project. Compared to the proposed Project, this alternative would result in a reduction in impacts on biological resources but would still require mitigation. Overall, the impact on biological resources would be less as compared to the proposed Project.

Cultural Resources

Based on the results of the records searches, the Project site is considered moderately sensitive for the presence of archaeological resources. Under Alternative 2, ground-disturbing activities will extend approximately 4 feet below the ground surface, similar to the proposed Project. As such, this alternative has the potential to disturb previously undocumented cultural resources that could qualify as unique archaeological resources pursuant to CEQA. Mitigation is required to ensure that should unanticipated discovery of cultural resources or human remains be encountered, proper measures are implemented to ensure these potential impacts are addressed. Compared to the proposed Project, this alternative would incur similar impacts on cultural and paleontological resources by virtue that

the Project site would still be developed with solar uses in the same general location as the proposed Project.

Geology and Soils

Under Alternative 2, while the overall Project footprint would be reduced, grading and construction of new facilities, such transmission facilities, battery storage, and solar arrays, would still occur. Therefore, this alternative would still be subject to potential impacts related to seismic or liquefaction hazards and unstable or expansive soils. Similar to the Project, this alternative would require the incorporation of mitigation measures identified for the proposed Project to minimize these impacts to a less than significant level. Compared to the proposed Project, this alternative would result in similar geological and soil impacts.

Greenhouse Gas Emissions

Under Alternative 2, the overall Project footprint would be reduced thereby contributing to reductions in GHG emissions during Project construction. However, as a consequence of the reduced size of the Project, 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. This alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Similar to the proposed Project, this alternative would not exceed South Coast Air Quality Management District (SCAQMD's) threshold of 3,000 million metric tons carbon dioxide equivalent (MT CO₂e). Compared to the proposed Project, this alternative would contribute to similar and desirable reductions in GHG emissions and associated contribution to global climate change through the production of renewable energy, although to a lesser degree. Because no significant GHG 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.

Hazards and Hazardous Materials

Similar to the proposed Project, potential exposure to hazardous materials would occur under this alternative. Impacts associated with wildfire hazards and airport safety would be similar to that described for the proposed Project. Compared to the proposed Project, this alternative would result in similar hazards and hazardous materials impacts.

Hydrology/Water Quality

Alternative 2 would result in modifications to the existing drainage patterns and the volume of storm water runoff, as this alternative would introduce impervious areas on site, although to a lesser degree than the proposed Project. Because the overall Project footprint would be reduced, this alternative would realize a minor reduction in the corresponding impacts on hydrology and on-site drainage;

however, the same mitigation measures would be applicable to this alternative. Similar to the proposed Project, no impacts would result from flooding and facilities will not be placed within floodplains. This alternative would result in less of an impact related to hydrology/water quality as compared to the proposed Project.

Land Use/Planning

Similar to the proposed Project, Alternative 2 would not divide an established community or result in incompatibilities with adjacent agricultural uses. Similar to the proposed Project, Alternative 2 would require the approval of a Conditional Use Permit (CUP) to maintain consistency with the County's General Plan. As with the proposed Project, this alternative would not conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan. Land use and planning impacts resulting from this alternative would be similar to those identified for the proposed Project. Because no significant Land Use/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.

Noise and Vibration

As with the proposed Project, Alternative 2 would not result in significant noise impacts associated with construction activities. As with the proposed Project, operational impacts associated with this alternative would not expose persons or generate noise levels in excess of applicable noise standards, exposure persons to, or generate excessive groundbourne vibration, or expose persons to excessive aircraft noise. Because no significant noise 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

Alternative 2 would require increased public services, specifically law enforcement and fire protection services. While the overall Project footprint would be slightly smaller, 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 and Traffic

This alternative would result in a lower level of vehicle and truck trips within the Project site as compared to the proposed Project. 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 and 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, conflict with an applicable congestion management program, change air traffic patterns, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Compared to the proposed Project, this alternative would result in a similar impact related to transportation and traffic.

Utilities/Service Systems

Similar to the proposed Project, Alternative 2 would require water service and energy for the operation of the solar facility. This alternative would allow agricultural operations to continue for a portion of the Project site which utilizes more water than solar farm activities. As a consequence, this alternative would result in slightly increased water demands when compared to the proposed Project, but would continue to experience desirable benefits related to the reductions in agricultural water demands. Compared to the proposed Project, this alternative would result in a similar impact related to utilities.

Conclusion

Implementation of Alternative 2 would result in reduced impacts for the following environmental issues areas as compared to the proposed Project: agricultural resources, air quality, biological resources, and hydrology/water quality. This alternative would not result in any greater environmental impacts when compared to the proposed Project.

Comparison of Alternative 2: Reduced Site Acreage Alternative (Avoid Prime Farmland) to Project Objectives

Alternative 2 would meet most of the basic objectives of the proposed projects and should remain under consideration. However, this alternative would make it more difficult to achieve the overall objective of providing a total of 150 MW of renewable solar energy, as there would be less area available for the placement of PV structures.

8.6. Environmentally Superior Alternative

As required by CEQA Guidelines, Section 15126.6, an EIR must identify an “environmentally superior alternative,” which is the alternative that has the least impact on the environment or would be capable of avoiding or substantially lessening any significant impacts of the Project. Table 8-1, Summary of Alternatives Compared to the Proposed Project, shows each alternative’s environmental impacts compared to the impacts of the proposed Project.

The alternative that results in the least environmental impact, considering both the frequency and magnitude of the impact, is the environmentally superior alternative. In cases where the No Project Alternative is environmentally superior, the EIR is required to identify the next environmentally

superior alternative among the others evaluated. Alternative A (No Project/No Development) is the alternative that results in the least environmental impact.

As shown in Table 8-1, Alternative 1 (No Project/No Expansion Alternative), would be environmentally superior to the proposed Project for the resource areas analyzed in this Draft EIR. As required by CEQA, the next environmentally superior alternative is Alternative B (Reduced Footprint) Alternative. Therefore, Alternative B would be environmentally superior to the proposed Project under two resource areas and environmentally similar to the Project under the remaining resource areas. However, Alternative B would not substantially lessen the significant resource effects of the Project; therefore, decision-makers are not obliged by CEQA to select this alternative.

TABLE 8-1: SUMMARY OF ALTERNATIVES COMPARED TO THE PROPOSED PROJECT

Environmental Resource	Proposed Project	No Project/ No Expansion (Alternative 1)	Modified Project Footprint (Alternative A)
1. Aesthetics	LTS-MM	NI / +	LTS-MM / =
2. Agriculture and Forestry Resources	LTS-MM	NI / +	LTS / +
3. Air Quality	LTS-MM	NI / +	LTS-MM / =
4. Biological Resources	LTS-MM	NI / +	LTS-MM / =
5. Cultural Resources	LTS-MM	NI / +	LTS-MM / =
6. Energy	LTS	NI / +	LTS
7. Geology and Soils	LTS-MM	NI / +	LTS-MM / =
8. Greenhouse Gas Emissions	LTS	NI / -	LTS / =
9. Hazards and Hazardous Materials	LTS-MM	NI / +	LTS-MM / =
10. Hydrology and Water Quality	LTS-MM	NI / +	LTS-MM / =
11. Land Use and Planning	LTS	NI / +	LTS / =
12. Minerals	LTS	NI / +	LTS / =
13. Noise	LTS	NI / +	LTS / =
14. Public Services	LTS-MM	NI / +	LTS-MM / =
15. Transportation and Traffic	LTS-MM	NI / +	LTS-MM / =
16. Tribal Cultural Resources	LTS-MM	NI / +	LTS-MM / =
		+ 15 - 1 = 0	+ 1 - 0 = 15
Meets Most of the Basic Project Objectives?	Yes	No	Yes

Notes:

NI: Finding of no environmental impact

LTS: Finding of less than significant environmental impact

LTS-MM: Finding of less than significant environmental impact with mitigation measure

SU: Finding of significant and unmitigable impact

+Alternative is superior (reduced impacts compared) to the proposed Project

-Alternative is inferior (greater impacts compared) to the proposed Project

=Alternative is environmentally similar to the proposed Project or there is not enough information to make a superior or inferior determination.

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9.0 PREPARERS

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None.

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3.0 Project Description

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None.

9.0 Preparers

None.