Draft Environmental Impact Report

VEGA SES 2, 3, and 5 Solar Energy Project

SCH No. 2021050013

Imperial County, California

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Prepared for

County of Imperial

801 Main Street

El Centro, CA 92243

Prepared by

HDR

591 Camino de la Reina

Suite 300

San Diego, CA 92108

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Executive Summary

This Environmental Impact Report (EIR) has been prepared in compliance with the California Environmental Quality Act (CEQA) Public Resources Code [PRC] Section 21000 et seq., the CEQA Guidelines (Section 15000 et seq.) as promulgated by the California Resources Agency and the Governor's Office of Planning and Research (OPR). The purpose of this environmental document is to assess the potential environmental effects associated with the VEGA SES 2, 3 & 5 Solar Energy Projects and to propose mitigation measures, where required, to reduce significant impacts.

Project Overview

The VEGA SES 2, 3 & 5 Solar Energy Projects are located on approximately 1,963 acres of privately-owned land in the unincorporated area of Imperial County, CA. The project area is located approximately 5.67 miles southeast of the unincorporated community of Niland between the unincorporated communities of Iris and Slab City. The project area is transected by the Coachella and East Highline Canals and the Union Pacific Railway.

Three separate Conditional Use Permits (CUPs) have been filed with the County, which together define the project sites. The three CUP applications or individual site locations consist of the following:

- CUP 20-0021: VEGA SES 2
- CUP 20-0022: VEGA SES 3
- CUP 20-0023: VEGA SES 5

Table ES-1 identifies the individual assessor parcel numbers (APN) associated with the VEGA SES 2, 3, and 5 sites with their respective acreage and zoning.

Collectively, the proposed projects involve the construction of up to 350 megawatt (MW) alternating current (AC) photovoltaic (PV) solar energy facility with an integrated 350 MW battery storage system (not to exceed 700 MW). The projects propose to utilize either thin film or crystalline solar PV technology modules mounted either on fixed frames or horizontal single-axis tracker systems. The projects would include electronic/electrical equipment, on-site substations, interconnection facilities, access roads and fencing. The electrical energy produced by the projects would be conducted through the projects' interconnection facilities to the following:

- VEGA SES 2 – Imperial Irrigation District's (IID) KN/KS Line
- VEGA SES 3 - IID 161 kilovolt (kV) "F" Transmission Line
- VEGA SES 5 - IID 92 kV Midway Substation

Table ES-1. Solar Energy Facility Site Assessor Parcel Numbers, Acreages, and Zoning

Project	APN	Acreage	Zoning
VEGA SES 2 (CUP 20-0021)	025-010-006 (partial)	410	S-2-RE
	025-260-011 (partial	288	S-2-RE
	025-270-023	625	S-2-RE

Table ES-1. Solar Energy Facility Site Assessor Parcel Numbers, Acreages, and Zoning

Project	APN	Acreage	Zoning
	Subtotal	***1,323***	**--**
VEGA SES 3 (CUP 20-0022)	025-010-006 (partial)	230	S-2-RE
	Subtotal	***230***	**--**
VEGA SES 5 (CUP 20-0023)	025-260-011 (partial)	160	S-2-RE
	025-260-019	90	S-2-RE
	025-260-022	160	A-2-RE, A-3-RE, S-2-RE
	Subtotal	***410***	**--**
Total Gross Acres		**1,963**	**--**

Notes:
APN = assessor parcel number; A-2-RE = General Agriculture with a Renewable Energy Zone Overlay A-3-RE = Heavy Agriculture with a Renewable Energy Zone Overlay; S-2-RE = Open Space/Preservation with a Renewable Energy Zone Overlay

Purpose of an EIR

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

Eliminated from Further Review in Notice of Preparation

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

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

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

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use Planning
- Noise
- Transportation
- Tribal Cultural Resources
- Utilities/Service Systems

Table ES-2 summarizes the environmental impacts that were determined to be potentially significant, mitigation measures, and level of significance after mitigation associated with the projects.

Areas of Controversy and Issues to be Resolved

Areas of Concern

Section 15123(b)(2) of the CEQA Guidelines requires that an EIR identify areas of controversy as well as issues to be resolved known to the Lead Agency, including issues raised by other agencies and the public. A primary issue associated with this solar farm project, and other solar facility projects that are proposed in the County, is the corresponding land use compatibility and fiscal/economic impacts to the County. Through the environmental review process for this project, other areas of concern and issues to be resolved include water supply; relocation, modification, or reconstruction of IID facilities; and access.

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

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Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Agricultural Resources			
Impact 3.3-3 (VEGA SES 5 project only): Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.	Potentially Significant	This mitigation measure is applicable to the VEGA SES 5 project only. **AG-1** Prior to the issuance of a grading permit or building permit (whichever occurs first), a Pest Management Plan shall be developed by the project applicant and approved by the County of Imperial Agricultural Commissioner. The project applicant shall maintain a Pest Management Plan until reclamation is complete. The plan shall provide the following: 1. Monitoring, preventative, and management strategies for weed and pest control during construction activities at any portion of the project (e.g., transmission line); 2. Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows: • Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. The assistance of a licensed pest control advisor is recommended. All treatments must be performed by a qualified applicator or a licensed pest control business; • All treatments must be performed by a qualified applicator or a licensed pest control operator; • "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, bio control, cultural control, or chemical treatments; • Use of "permanent" soil sterilants to control weeds or other pests is prohibited because this would interfere with reclamation; • Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species as defined by the California Department of	Less than Significant

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

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

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		4. Maintenance and management of project site conditions to reduce the potential for a significant increase in pest-related nuisance conditions on surrounding agricultural lands. 5. The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources.	
Air Quality			
Impact 3.4-1: Conflict with or obstruct implementation of the applicable air quality plan.	Potentially Significant	**AQ-1** **Fugitive Dust Control.** During construction activities, the constructor contractor shall employ the following PM_{10} reducing measures: 1. All unpaved roads associated with construction shall be effectively stabilized of dust emissions using Imperial County Air Pollution Control District-approved chemical stabilizers/suppressant before the commencement of construction, and every 30 days thereafter until the end of all construction activities. Unpaved roads associated with construction include: • The 1.65 miles of unpaved road on Weist Road and Flowing Wells Road to the VEGA SES 2 and 3 project sites. Monthly application of Imperial County Air Pollution Control District-approved chemical stabilizers/suppressant shall be applied at a rate of 0.1 gallon/square yard of chemical dust suppressant. 2. Prior to any earthmoving activity, the applicant shall submit a construction dust control plan and obtain Imperial County Air Pollution Control District and Imperial County Planning and Development Services Department (ICPDS) approval. 3. Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained	Less than significant

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		within Regulation VIII – Fugitive Dust Control Measures. Whereas these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the ICAPCD CEQA Handbook's required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. ICAPCD will verify implementation and compliance with these measures as part of the grading permit review/approval process. **ICAPCD Standard Measures for Fugitive Dust (PM_{10}) Control** • All disturbed areas, including bulk material storage, which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative ground cover. • All on-site and off-site unpaved roads will be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		• The transport of bulk materials shall be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material. • All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area. • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line. • The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved road shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants, and/or watering. **ICAPCD "Discretionary" Measures for Fugitive Dust (PM_{10}) Control** • Water exposed soil only in those areas where active grading and vehicle movement occurs with adequate frequency to control dust. • Replace ground cover in disturbed areas as quickly as possible.	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		• Automatic sprinkler system installed on all soil piles. • Vehicle speed for all construction vehicles shall not exceed 15 miles per hour on any unpaved surface at the construction site. • Develop a trip reduction plan to achieve a 1.5 average vehicle ridership for construction employees. • Implement a shuttle service to and from retail services and food establishments during lunch hours. • Standard Mitigation Measures for Construction Combustion Equipment • Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel-powered equipment. • Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum. • Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use. • Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). **Enhanced Mitigation Measures for Construction Equipment** To help provide a greater degree of reduction of PM emissions from construction combustion equipment, ICAPCD recommends the following enhanced measures. • Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		construction activity during the peak hour of vehicular traffic on adjacent roadways. • Implement activity management (e.g., rescheduling activities to reduce short-term impacts). **AQ-2** **Construction Equipment.** Construction equipment shall be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). A list of the construction equipment, including all off-road equipment utilized at the project sites by make, model, year, horsepower and expected/actual hours of use, and the associated EPA Tier shall be submitted to the County Planning and Development Services Department and ICAPCD prior to the issuance of a grading permit. The equipment list shall be submitted periodically to ICAPCD to perform a NO_x analysis. ICAPCD shall utilize this list to calculate air emissions to verify that equipment use does not exceed significance thresholds. The Planning and Development Services Department and ICAPCD shall verify implementation of this measure. **AQ-3** **Dust Suppression.** The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. The project applicant shall apply chemical stabilization as directed by the product manufacturer to control dust between the panels as approved by ICAPCD, and other non-used areas (exceptions will be the paved entrance and parking area, and Fire Department access/ emergency entry/exit points as approved by Fire/Office of Emergency Services [OES] Department). **AQ-4** **Operational Dust Control Plan.** Prior to issuance of a Certificate of Occupancy, the applicant shall submit an operations dust control plan and obtain ICAPCD and ICPDS approval. ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		are submitted for the proposed projects, ICAPCD shall review the project to determine if Rule 310 fees are applicable to the projects.	
Impact 3.4-2: Result in 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.	Potentially Significant	Implement Mitigation Measures AQ-1 through AQ-4.	Less than Significant
Biological Resources			
Impact 3.5-1: Potential impacts on special-status species.	Potentially Significant	**BIO-1a** **Rare Plant Surveys.** Prior to initiating ground disturbance, rare plant surveys shall be conducted within suitable habitat on the VEGA SES 2 and 3 project sites during the appropriate blooming period as follows for gravel milk-vetch, Wiggins' croton, glandular ditaxis, sand food, and Munz's cholla. The surveys shall be conducted by a botanist or qualified biologist in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996); the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018); and the CNPS Botanical Survey Guidelines (CNPS 2001). If any special-status species are observed during the rare plant surveys, the location of the individual plant or population will be recorded with a submeter GPS device for mapping purposes. If project-related impacts to rare plants on the project sites are unavoidable, then consultation with CDFW may be required to develop a mitigation plan or additional avoidance and minimization measures. Mitigation measures that may be implemented if the species is observed include establishing a	Less than Significant

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		no-disturbance buffer around locations of individuals or a population and additional monitoring requirements. **BIO-1b** **Rare Plant Surveys.** Prior to initiating ground disturbance, rare plant surveys shall be conducted within suitable habitat on the VEGA SES 5 project site during the appropriate blooming period for Salton milk-vetch, Borrego milk-vetch, gravel milk-vetch, spiny abrojo, glandular ditaxis, Abram's spurge, ribbed cryptantha, slender-spined all thorn, slender cottonheads, sand food, and Mecca-aster. The surveys shall be conducted by a botanist or qualified biologist in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996); the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018); and the CNPS Botanical Survey Guidelines (CNPS 2001). If any special-status species are observed during the rare plant surveys, the location of the individual plant or population will be recorded with a submeter GPS device for mapping purposes. If project-related impacts to rare plants on the project sites are unavoidable, then consultation with CDFW may be required to develop a mitigation plan or additional avoidance and minimization measures. Mitigation measures that may be implemented if the species is observed include establishing a no-disturbance buffer around locations of individuals or a population and additional monitoring requirements. **BIO-2** **General Impact Avoidance and Minimization Measures.** The following measures will be applicable throughout the life of the projects: • To reduce the potential indirect impact on migratory birds, bats and raptors, the project shall comply with the APLIC 2012 Guidelines for overhead utilities, as appropriate, to	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		minimize avian collisions with transmission facilities (APLIC 2012) • All electrical components on the project sites shall be either undergrounded or protected so that there will be no exposure to wildlife and therefore no potential for electrocution. • The project proponent shall designate a Project Biologist who shall be responsible for overseeing compliance with protective measures for biological resources during vegetation clearing and work activities within and adjacent to areas of native habitat. The Project Biologist shall be familiar with the local habitats, plants, and wildlife. The Project Biologist shall also maintain communications with the Contractor to ensure that issues relating to biological resources are appropriately and lawfully managed and shall monitor construction. The Project Biologist shall monitor activities within construction areas during critical times, such as vegetation removal, the implementation of Best Management Practices (BMPs), and installation of security fencing to protect native species. The Project Biologist shall ensure that all wildlife and regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed. • The boundaries of all areas to be newly disturbed (including solar facility areas, staging areas, access roads, and sites for temporary placement of construction materials and spoils) shall be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment shall be confined to the flagged areas. • No potential wildlife entrapments (e.g., trenches, bores) shall be left uncovered overnight. Any uncovered pitfalls	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		will be excavated to 3:1 slopes at the ends to provide wildlife escape ramps. Alternatively, man-made ramps may be installed. Covered pitfalls will be covered completely to prevent access by small mammals or reptiles. • To avoid wildlife entrapment (including birds), all pipes or other construction materials or supplies shall be covered or capped in storage or laydown areas, and at the end of each work day in construction, quarrying and processing/handling areas. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches shall be left open either temporarily or permanently. • No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), shall be used within the project sites, on off-site project facilities and activities, or in support of any other project activities. • Avoid wildlife attractants. All trash and food-related waste shall be placed in self-closing containers and removed regularly from the sites to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater or floodwater within retention basins shall be removed to avoid attracting wildlife to the active work areas. • To minimize the likelihood for vehicle strikes on wildlife, speed limits shall not exceed 15 miles per hour when driving on access roads. All vehicles required for O&M must remain on designated access/maintenance roads. • Avoid nighttime construction lighting or if nighttime construction cannot be avoided, use shielded directional	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		lighting pointed downward and towards the interior of the project sites, thereby avoiding illumination of adjacent natural areas and the night sky. • All construction equipment used for the projects shall be equipped with properly operating and maintained mufflers. • Hazardous materials and equipment stored overnight, including small amounts of fuel to refuel hand-held equipment, shall be stored within secondary containment when within 50 feet of open water to the fullest extent practicable. Secondary containment shall consist of a ring of sand bags around each piece of stored equipment/structure. A plastic tarp/visqueen lining with no seams shall be placed under the equipment and over the edges of the sandbags, or a plastic hazardous materials secondary containment unit shall be utilized by the Contractor. • The Contractor will be required to conduct vehicle refueling in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species. Any fuel containers, repair materials, including creosote-treated wood, and/or stockpiled material that is left on site overnight, shall be secured in secondary containment within the work area and staging/assembly area and covered with plastic at the end of each work day. • In the event that no activity is to occur in the work area for the weekend and/or a period of time greater than 48 hours, the Contractor shall ensure that all portable fuel containers are removed from the project sites. • All equipment shall be maintained in accordance with manufacturer's recommendations and requirements.	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		• Equipment and containers shall be inspected daily for leaks. Should a leak occur, contaminated soils and surfaces will be cleaned up and disposed of following the guidelines identified in the Stormwater Pollution Prevention Plan or equivalent, Materials Safety Data Sheets, and any specifications required by other permits issued for the projects. • The Contractor shall utilize off-site maintenance and repair shops as much as possible for maintenance and repair of equipment. • If maintenance of equipment must occur onsite, fuel/oil pans, absorbent pads, or appropriate containment will be used to capture spills/leaks within all areas. Where feasible, maintenance of equipment shall occur in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species. • Appropriate BMPs shall be used by the Contractor to control erosion and sedimentation and to capture debris and contaminants from construction to prevent their deposition in waterways. • Erosion and sediment control devices used for the proposed projects, including fiber rolls and bonded fiber matrix, shall be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard. • Firearms, open fires, and pets shall be prohibited at all work locations and access roads. Smoking shall be prohibited along the project alignment. • Cross-country vehicle and equipment use outside of approved designated work areas and access roads shall	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		be prohibited to prevent unnecessary ground and vegetation disturbance. • Any injured or dead wildlife encountered during project-related activities shall be reported to the project biologist, biological monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the best course of action. For special-status species, the Project Biologist shall notify the County, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery. • Stockpiling of material shall only be allowed within established work areas. • The Contractor shall actively manage the spread of noxious weeds. • The ground beneath all parked equipment and vehicles shall be inspected for wildlife before moving. **BIO-3 Worker Environmental Awareness Program.** Prior to project construction, a Worker Environmental Awareness Program shall be developed and implemented by a qualified biologist and shall be available in both English and Spanish. Handouts summarizing potential impacts on special-status biological resources and the potential penalties for impacts on these resources shall be provided to all construction personnel. At a minimum, the education program shall including the following: • the purpose for resource protection; • a description of special-status species including representative photographs and general ecology; • occurrences of USACE, RWQCB, and CDFW regulated features in the project study area; • regulatory framework for biological resource protection and consequences if violated	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		• sensitivity of the species to human activities; • avoidance and minimization measures designed to reduce the impacts on special-status biological resources • environmentally responsible construction practices; • reporting requirements; • the protocol to resolve conflicts that may arise at any time during the construction process; and • workers sign acknowledgement form indicating that the Environmental Awareness Training and Education Program that has been completed, which shall be kept on record. **BIO-4** **Burrowing Owl Avoidance and Minimization.** Take avoidance (pre-construction) surveys for burrowing owl shall be completed prior to project construction. Surveys shall be conducted as detailed within Appendix D of the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012). If burrowing owl is not detected, construction may proceed. • If burrowing owl is identified during the non-breeding season (September 1 through January 31), then a 50-meter buffer will be established by the biological monitor. Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until a CDFW-approved exclusion plan has been implemented. The buffer distance may be reduced if noise attenuation buffers such as hay bales are placed between the occupied burrow and construction activities. If burrowing owl is identified during the breeding season (February 1 through August 31), then an appropriate buffer will	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		be established by the biological monitor in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until young have fledged. The buffer distance may be reduced in consultation with CDFW if noise attenuation buffers such as hay bales are placed between the occupied burrow and construction activities.	
		BIO-5 **Pre-Construction Nesting Bird Survey.** If construction or other project activities are scheduled to occur during the bird breeding season (typically February 1 through August 31 for raptors and March 15 through August 31 for the majority of migratory bird species), a pre-construction nesting-bird survey shall be conducted by a qualified avian biologist to ensure that active bird nests, including those for loggerhead shrike, black-tailed gnatcatcher, and burrowing owl, will not be disturbed or destroyed. The survey shall be completed no more than three days prior to initial ground disturbance. The nesting-bird survey shall include the project site and adjacent areas where project activities have the potential to affect active nests, either directly or indirectly, due to construction activity or noise. If an active nest is identified, the biologist shall establish an appropriately sized disturbance limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance limit buffer zones until the nest is deemed inactive by the qualified biologist. If construction activities cease for a period of greater than three days during the bird breeding season, a pre-construction nesting bird survey shall be conducted prior to the commencement of activities. Final construction buffers or setback distances shall be determined by the qualified biologist in coordination with USFWS and CDFW on a case-by-case basis, depending on the species, season in which disturbance shall occur, the type of disturbance, and other factors that could influence susceptibility	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		to disturbance (e.g., topography, vegetation, existing disturbance levels, etc.). **BIO-6a** **Pre-Construction Survey for Special-Status Species.** A pre-construction survey shall be conducted for special-status wildlife species within all areas of potential permanent and temporary disturbance. The pre-construction survey shall take place no more than 14 days prior to the start of ground-disturbing activities. The pre-construction surveys shall take place regardless of breeding season timing and shall focus on identifying the presence of special-status wildlife species present on the VEGA SES 2 and 3 project sites or that were identified as having a high potential to occur on the sites. These species include, but are not limited to, burrowing owl, loggerhead shrike, and black-tailed gnatcatcher. Should any special-status species be identified during the pre-construction survey, consultation to develop suitable avoidance and minimization measures with the appropriate agency (USFWS, CDFW) may need to be undertaken. **BIO-6b** **Pre-Construction Survey for Special-Status Species.** A pre-construction survey shall be conducted for special-status wildlife species within all areas of potential permanent and temporary disturbance. The pre-construction survey shall take place no more than 14 days prior to the start of ground-disturbing activities. The pre-construction surveys shall take place regardless of breeding season timing and shall focus on identifying the presence of special-status wildlife species present on the VEGA SES 5 project site or that were identified as having a high potential to occur on the site. These species include, but are not limited to, mountain plover, California black rail, merlin, Yuma hispid cotton rat, burrowing owl, black-tailed gnatcatcher, and loggerhead strike. Should any special-status species be identified during the pre-construction survey, consultation to develop suitable avoidance and minimization	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
			measures with the appropriate agency (USFWS, CDFW) may need to be undertaken.	
		BIO-7a	**Sensitive Habitat Avoidance.** To the greatest extent possible, plans should avoid impacts on blue palo verde-ironwood woodland, bush seepweed scrub, and tamarisk thickets habitats within the VEGA SES 2 and 3 project sites to minimize potential impacts on special-status species. Excluding these habitats from the projects should also minimize mitigation and permitting requirements to meet the less-than-significance threshold.	
		BIO-7b	**Sensitive Habitat Avoidance.** To the greatest extent possible, plans should avoid impacts on bush seepweed scrub and tamarisk thicket habitats within the VEGA SES 5 project site to minimize potential impacts to special-status species. Excluding these habitats from the project should also minimize mitigation and permitting requirements to meet the less-than-significance threshold.	
Impact 3.5-2: Impact on riparian habitat or other sensitive natural communities.	Potentially Significant	**BIO-7a**	**Sensitive Habitat Avoidance.**	Less than Significant
		BIO-7b	**Sensitive Habitat Avoidance.**	
		BIO-8	**Aquatic Resources Regulatory Permitting.** If project-related impacts occur to the riparian areas that may also fall under the jurisdiction of the USACE, CDFW, or RWQCB a regulatory permit with those agencies will be needed prior to the impact occurring. Refer to the ECORP Jurisdiction Delineation Report (2022) for preliminary determination of regulatory limits of areas that may be regulated by the USACE, CDFW, or RWRCB. Permitting includes preparation and submittal of a Pre-Construction Notification under Section 404 of the federal CWA, an Application for Water Quality Certification under Section 401 of the federal CWA, and a Notification of Lake or Streambed Alteration under Section 1600 of the California Fish and Game Code. A completed CEQA document, and Notice of Determination, will be necessary to submit along with the applications. Other items such as finalized project plans, quantities of fill material, supporting technical studies, etc., are also submitted along with the applications. As a part of this	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
			process, the projects must also identify and approve mitigation through the respective agencies. Mitigation can include onsite or offsite options or could include purchase of credits from an existing mitigation or conservation bank or payment of an in-lieu fee to a conservation organization. Types of mitigation can include restoration, creation, rehabilitation, enhancement, or other types of habitat improvement. Typically, the type of mitigation and acreage of mitigation is negotiated with the regulatory agencies during the permitting process.	
		BIO-9	**Minimization of Impacts to Wetland/Riparian Habitat.** Solar panels, structures, and new access roads should not be placed within 50 feet of wetland and riparian habitat boundaries. A construction buffer of 300 feet shall be established around the wetlands and riparian habitat during the bird breading season (February 1 – August 31). Prior to construction, fencing should be installed approximately 10 feet from the wetland and riparian habitat boundaries within 50 feet of the projects. Fencing should be easily visible to construction. The extensive alluvial fan systems should not be used as access roads between the projects.	
Impact 3.5-3: Impact on state or federally-protected wetlands.	Potentially Significant	**BIO-7a**	**Sensitive Habitat Avoidance.**	Less than Significant
		BIO-7b	**Sensitive Habitat Avoidance.**	
		BIO-8	**Aquatic Resources Regulatory Permitting**	
		BIO-9	**Minimization of Impacts to Wetland/Riparian Habitat.**	
Impact 3.5-4: Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Potentially Significant	**BIO-2**	**General Impact Avoidance and Minimization Measures.**	Less than Significant
		BIO-4	**Burrowing Owl Avoidance and Minimization**	
		BIO-5	**Pre-Construction Nesting Bird Survey.**	
		BIO-6a	**Pre-Construction Survey for Special-Status Species.**	
		BIO-6b	**Pre-Construction Survey for Special-Status Species.**	
		BIO-7a	**Sensitive Habitat Avoidance.**	
		BIO-7b	**Sensitive Habitat Avoidance.**	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
Cultural Resources				
Impact 3.6-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.	Potentially Significant	**CR-1**	**Cultural Resources Management Plan.** Project proponent will develop a cultural resources management plan (CRMP) to outline the process for compliance with applicable cultural resources laws, management of resources during operation, and consideration of the effect of decommissioning., the CRMP should include the following: identification of California Native American tribes, identification of long and short term management goals for cultural resources within the project area, evaluation of eligibility for the CRHR and NRHP for all resources within the project area, description of measures to avoid, minimize, or significant impacts to historical resources and historic properties, unanticipated discovery procedures, monitoring needs, curation procedures, anticipated personnel requirements and qualifications. The draft CRMP should be reviewed and approved by the lead agency.	Less than Significant
		CR-2	**Cultural Resources Training.** Project proponent will provide cultural resources training for all project personnel regarding the laws protecting cultural resources, appropriate conduct in the field, and other project-specific issues identified in the CRMP.	
		CR-3	**Construction Monitoring.** A qualified Archaeologist shall be present on site for ground disturbing activities within 100-feet of all unevaluated or sites eligible for inclusion to the NRHP or CRHR. Ground disturbing activities include grubbing, trenching, and grading. Monitoring will be limited to natural surfaces and undisturbed sediments. Monitoring is not required for previously disturbed areas or fill. Monitors will complete daily monitoring reports documenting activities and results of the day. After construction activities have finished a comprehensive monitoring report shall be prepared.	
		CR-4	**Unanticipated Discovery Procedures.** In the event of the discovery of previously unidentified archaeological materials,	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
			the contractor shall immediately cease all work activities within approximately 100 feet of the discovery. After cessation of excavation, the contractor shall immediately contact the Imperial County Department of Planning and Development Services. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act, the discovery of any cultural resource within the project area shall not be grounds for a "stop work" notice or otherwise interfere with the project's continuation except as set forth in this paragraph. In the event of an unanticipated discovery of archaeological materials during construction, the applicant shall retain the services of a qualified professional archaeologist, meeting the Secretary of the Interior's Standards for a Qualified Archaeologist, to evaluate the significance of the materials prior to resuming any construction related activities in the vicinity of the find. If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the applicant shall implement an archaeological data recovery program.	
Impact 3.6-3: Disturb human remains.	Potentially Significant	**CR-5**	**Human Remains.** If subsurface deposits believed to be human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist who meets the Secretary of the Interior's Standards for prehistoric and historic archaeology and is familiar with the resources of the region, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find: • If the find includes human remains, or remains that are potentially human, the professional archaeologist shall ensure reasonable protection measures are taken to	Less than Significant

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Imperial County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. • If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC may mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 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 reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the Imperial County Planning and Development Services Department, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.	
Geology and Soils			
Impact 3.6-2: Possible risks to people and structures	Potentially Significant	**GEO-1** **Prepare Geotechnical Report(s) as Part of Final Engineering for the Project and Implement Required Measures.** Facility design for all project components shall	Less than Significant

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
caused by strong seismic ground shaking.		comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by the project applicant. The final geotechnical and/or civil engineering report shall address and make recommendations on the following: ▪ Site preparation ▪ Soil bearing capacity ▪ Appropriate sources and types of fill ▪ Potential need for soil amendments ▪ Structural foundations ▪ Grading practices ▪ Soil corrosion of concrete and steel ▪ Erosion/winterization ▪ Seismic ground shaking ▪ Liquefaction ▪ Expansive/unstable soils In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include subsurface testing of soil and groundwater conditions and shall determine appropriate foundation designs that are consistent with the version of the CBC that is applicable at the time building and grading permits are applied for. All recommendations contained in the final geotechnical engineering report shall be implemented by the project applicant. The final geotechnical and/or civil engineering report shall be submitted to Imperial County Public Works Department, Engineering Division for review and approval prior to issuance of building permits.	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Impact 3.6-3: Possible risks to people and structures caused by seismic-related ground failure, including liquefaction.	Potentially Significant	Implement Mitigation Measure GEO-1.	Less than Significant
Impact 3.6-5: Substantial soil erosion or the loss of topsoil.	Potentially Significant	Implement Mitigation Measure GEO-1 and Mitigation Measure HYD-1.	Less than Significant
Impact 3.6-6: Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project.	Potentially Significant	Implement Mitigation Measure GEO-1.	Less than Significant
Impact 3.6-7: Be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.	Potentially Significant	Implement Mitigation Measure GEO-1.	Less than Significant
Impact 3.5-9: Impact on paleontological resources.	Potentially Significant	**GEO-2** **Paleontological Resources.** In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing activities, work must cease within 50 feet of the discovery and a paleontologist shall be hired to assess the scientific significance of the find. The consulting paleontologist shall have knowledge of local paleontology and the minimum levels of experience and expertise as defined by the Society of Vertebrate Paleontology's Standard Procedures (2010) for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. If any paleontological resources or unique geologic features are found within the project sites, the consulting paleontologist shall prepare a paleontological Treatment and Monitoring Plan to include the methods that will	Less than Significant

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
			be used to protect paleontological resources that may exist within the project sites, as well as procedures for monitoring, fossil preparation and identification, curation of specimens into an accredited repository, and preparation of a report at the conclusion of the monitoring program.	
Hydrology/Water Quality				
Impact 3.8-1: Violation of water quality standards.	Potentially Significant	**HYD-1**	**Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration.** The project applicant or its contractor shall prepare a SWPPP specific to the projects and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the projects. The SWPPP shall incorporate control measures in the following categories: ▪ Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching) ▪ Sediment control practices (e.g., temporary sediment basins, fiber rolls) ▪ Temporary and post-construction on- and off-site runoff controls ▪ Special considerations and BMPs for water crossings and drainages	Less than Significant

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		▪ Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity ▪ Waste management, handling, and disposal control practices ▪ Corrective action and spill contingency measures ▪ Agency and responsible party contact information ▪ Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure. **HYD-2** **Incorporate Post-Construction Runoff BMPs into Project Drainage Plan.** The project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County	

Table ES-2. Summary of Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.	
Impact 3.10-3: Result in erosion or siltation on- or off-site.	Potentially Significant	Implement Mitigation Measure HYD-1.	Less than Significant
Impact 3.10-4: Increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.	Potentially Significant	Implement Mitigation Measure HYD-2.	Less than Significant
Impact 3.10-5: 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.	Potentially Significant	Implement Mitigation Measure HYD-1.	Less than Significant
Impact 3.10-8: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Potentially Significant	Implement Mitigation Measures HYD-1 and HYD-2.	Less than Significant

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Statement of Overriding Considerations

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

Project Alternatives

Alternatives Considered but Rejected

Alternative Site

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

The proponent does not have control of an alternate site; if control were viable, the proponent would have to re-initiate the application process as a new project. Similar to the proposed project site, an alternate site would require environmental review once the proponent has prepared sufficient project description information. At present, the proponent does not have control of an alternate site. This alternative would be the most complex, costly, and time-consuming alternative to implement. It is unknown if the environmental impacts associated with this Alternative would be less than the proposed project because it would be speculative to evaluate an unsecured alternate site. This is primarily due to the fact that the proponent does not have control of an alternate site. Therefore, an alternative site was eliminated from further consideration in this EIR.

Alternatives Evaluated

The environmental analysis for the proposed project evaluated the potential environmental impacts resulting from implementation of the proposed project, as well as alternatives to the project. The alternatives include Alternative 1: No Project/No Development and Alternative 2: Reduced Project Site. A detailed discussion of the alternatives considered is included in Chapter 7. Table ES-3 summarizes the impacts resulting from the proposed projects and the identified alternatives.

Alternative 1: No Project/No Development Alternative

The CEQA Guidelines require analysis of the No Project Alternative (PRC Section 15126). According to Section 15126.6(e), “the specific alternative of ‘no project’ shall also be evaluated along with its impacts. The ‘no project’ analysis shall discuss the existing conditions at the time the Notice of Preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.”

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

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

Alternative 2: Reduced Project Site

The purpose of this alternative is to reduce the size of the project sites to minimize impacts on sensitive vegetation communities and riparian habitat. Iodine bush scrub, bush seepweed scrub, tamarisk thickets, and blue palo verde-ironwood woodland occur within the project sites and are considered sensitive natural communities by CDFW.

In addition, riparian habitat associated with the drainage systems throughout the VEGA SES 2 and 3 project sites consists of blue palo verde-ironwood woodland and tamarisk thickets. Riparian habitat associated with the drainage systems throughout the VEGA SES 5 project site consists of tamarisk thickets.

This alternative would remove the portion of VEGA SES 2 that is located on APN 025-010-006 and remove APN 025-260-019 and a portion of APN 025-260-011 from VEGA SES 5. Therefore, the project site would be reduced by 660 acres from a total of 1,963 acres to 1,303 acres. Figure 7-1 depicts this alternative.

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 350 MW of renewable solar energy, as there would be less area available for the placement of PV structures.

Environmentally Superior Alternative

Table ES-3 provides a qualitative comparison of the impacts for each alternative compared to the proposed projects. As noted on Table ES-3, the No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the projects. However, CEQA Guidelines Section 15126.6(e)(2) states that “if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” As shown on Table ES-3, Alternative 2 would be the environmental superior alternative because it would reduce impacts for the following environmental issue areas as compared to the proposed projects: air quality, biological resources, cultural resources, hydrology/water quality, and utilities/service systems.

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Table ES-3. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
Aesthetics	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Agricultural Resources	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Similar Impact
Air Quality	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Less Impact
Biological Resources	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact (Avoid)	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Less Impact
Cultural Resources	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact (Avoid)	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* *Less Impact*

Table ES-3. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
Geology and Soils	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact (Avoid)	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Similar Impact
GHG Emissions	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Hazards and Hazardous Materials	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Hydrology/ Water Quality	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact (Avoid)	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Less Impact
Land Use/Planning	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Similar Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact

Table ES-3. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
Noise	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Transportation	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Tribal Cultural Resources	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Similar Impact	*CEQA Significance:* *Less than Significant* *Comparison to Proposed Project:* Similar Impact
Utilities/Service Systems	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Less Impact

1 Introduction

This environmental impact report (EIR) has been prepared to meet the requirements of the California Environmental Quality Act (CEQA) for purposes of evaluating the potential environmental impacts, mitigation measures, and alternatives associated with the proposed VEGA SES 2, 3, and 5 Solar Energy Project. This EIR describes the existing environment that would be affected by, and the environmental impacts which could potentially result from the construction and operation of the proposed projects as described in detail in Chapter 2.0 of this EIR.

1.1 Overview of the Proposed Project

The project applicant, Apex Energy Solutions, LLC, proposes to construct and operate an expansive photovoltaic (PV) solar energy facility and associated infrastructure on approximately 1,963 acres of privately-owned land in the unincorporated area of Imperial County, CA. The project area is located approximately 5.67 miles southeast of the unincorporated community of Niland between the unincorporated communities of Iris and Slab City. The project area is transected by the Coachella and East Highline Canals and the Union Pacific Railway.

Three separate Conditional Use Permits (CUPs) have been filed with the County, which together define the project sites. The three CUP applications or individual site locations consist of the following:

- CUP 20-0021: VEGA SES 2
- CUP 20-0022: VEGA SES 3
- CUP 20-0023: VEGA SES 5

Table 1-1 identifies the individual assessor parcel numbers (APN) associated with the VEGA SES 2, 3, and 5 sites with their respective acreage and zoning.

Table 1-1. Solar Energy Facility Site Assessor Parcel Numbers, Acreages, and Zoning

Project	APN	Acreage	Zoning
VEGA SES 2 (CUP 20-0021)	025-010-006 (partial)	410	S-2-RE
	025-260-011 (partial)	288	S-2-RE
	025-270-023	625	S-2-RE
	Subtotal	***1,323***	**--**
VEGA SES 3 (CUP 20-0022)	025-010-006 (partial)	230	S-2-RE
	Subtotal	***230***	**--**
VEGA SES 5 (CUP 20-0023)	025-260-011 (partial)	160	S-2-RE
	025-260-019	90	S-2-RE
	025-260-022	160	A-2-RE, A-3-RE, S-2-RE
	Subtotal	***410***	**--**

Table 1-1. Solar Energy Facility Site Assessor Parcel Numbers, Acreages, and Zoning

Project	APN	Acreage	Zoning
Total Gross Acres		**1,963**	**--**

Notes:
APN = assessor parcel number; A-2-RE = General Agriculture with a Renewable Energy Zone Overlay A-3-RE = Heavy Agriculture with a Renewable Energy Zone Overlay; S-2-RE = Open Space/Preservation with a Renewable Energy Zone Overlay

Collectively, the proposed projects involve the construction of up to 350 megawatt (MW) alternating current (AC) photovoltaic (PV) solar energy facility with an integrated 350 MW battery storage system (not to exceed 700 MW). The projects propose to utilize either thin film or crystalline solar PV technology modules mounted either on fixed frames or horizontal single-axis tracker systems. The projects would include electronic/electrical equipment, on-site substations, interconnection facilities, access roads and fencing. The electrical energy produced by the projects would be conducted through the projects' interconnection facilities to the following:

- VEGA SES 2 – Imperial Irrigation District's (IID) KN/KS Line
- VEGA SES 3 - IID 161 kilovolt (kV) "F" Transmission Line
- VEGA SES 5 - IID 92 kV Midway Substation

The only motorized access to the VEGA SES 2 and 3 project sites, and corresponding Imperial IID utilities is Flowing Wells Road, which is a County maintained road situated on Bureau of Land Management (BLM) public lands. Rights-of-Ways (ROW) grants from the BLM would be required for site access and for interconnection to the IID system. No portion of the VEGA SES 2 and 3 projects, other than access road(s), power lines, and access to IID infrastructure would be located on BLM public lands.

Access would also be required across Bureau of Reclamation (BREC) land for the VEGA SES 3 project, crossing the Coachella Canal. Applications for this ROW have been filed directly with the BREC office.

1.1.1 Agency Roles and Responsibilities

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

County of Imperial

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

1. **Approval of Conditional Use Permits (CUPs) – Solar Energy Facility.** Implementation of the projects would require the approval of CUPs by the County to allow for the construction and operation of the proposed solar energy facilities with an integrated battery storage system. The following CUPs are under consideration for approval as evaluated in this EIR:
    - CUP 20-0021: VEGA SES 2
    - CUP 20-0022: VEGA SES 3
    - CUP 20-0023: VEGA SES 5

The project parcels are currently zoned as A-2-RE (General Agriculture with a Renewable Energy Zone Overlay), A-3-RE (Heavy Agriculture with a Renewable Energy Zone Overlay), and S-2-RE (Open Space/Preservation with a Renewable Energy Zone Overlay).

Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County:

> *j) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)*
>
> *s) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *z) Electrical substations in an electrical transmission system (500 kv/230 kv/161 kv)*
>
> *bb) Facilities for the transmission of electrical energy (100-200 kv)*
>
> *ww) Resource extraction and energy development as per Division 17*
>
> *aaa) Solar energy electrical generator*

Pursuant to Title 9, Division 5, Chapter 9, the following uses are permitted in the A-3 zone subject to approval of a CUP from Imperial County:

> *i) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)*
>
> *o) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *oo) 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 or Federal government, and provided such facilities shall be approved subsequent to coordination review of the Imperial Irrigation District for electrical matters, meeting the requirements in Division 17.*
>
> *zz) Solar energy plants meeting the requirements in Division 17*

Pursuant to Title 9, Division 5, Chapter 19, the following uses are permitted in the S-2 zone subject to approval of a CUP from Imperial County:

> *d) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *i) Major facilities relating to the generation and transmission of electrical energy provide[d] such facilities are not under State or Federal law, to [be] 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*

- *Facilities for the transmission of electrical energy (100-200 kV)*
- *Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV)*

2. **Approval of CUPs (CUP 22-0025 and -0026) – Groundwater Wells.** Pursuant to Title 9 Division 21: Water Well Regulations, §92102.00, the Applicant will be required to obtain a CUP for each proposed on-site groundwater well. As required by §92102.00, no person shall (1) drill a new well, (2) activate a previously drilled but unused well, (unused shall mean a well or wells that have not been used for a 12 month) period by installing pumps, motors, pressure tanks, piping, or other equipment necessary or intended to make the well operational, (3) increase the pumping capacity of a well, or (4) change the use of a well, without first obtaining a CUP through the County Planning & Development Services Department.
3. **Certification of the EIR.** After the required public review for the Draft EIR, the County will respond to written comments, edit the document, and produce a Final EIR to be certified by the Planning Commission and Board of Supervisors prior to making a decision on the project.

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

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

Other Agencies Reviews and/or Consultations

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

Federal

UNITED STATES FISH AND WILDLIFE SERVICE

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

UNITED STATES ARMY CORPS OF ENGINEERS

- Section 404 Permit (Clean Water Act [CWA]). The CWA establishes a program to regulate the discharge of dredge and fill material into waters of the U.S. including wetlands. Activities regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Either an individual 404b permit or authorization to use an existing USACE Nationwide Permit will need to be obtained if any portion of the construction requires fill into a river, stream, or stream bed that has been determined to be a jurisdictional waterway.

BUREAU OF LAND MANAGEMENT (BLM)

- Right-of-way easement to use Flowing Wells Road for access during construction and maintenance
- Right-of-way grant for the off-site gen-tie lines to be located on federal lands under the jurisdiction of the BLM

BUREAU OF RECLAMATION

- Right-of-way easement to cross the Coachella Canal to access the project site (APN 025-010-006)

State

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (TRUSTEE AGENCY)

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

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

- **National Pollution Discharge Elimination System Construction General Permit Order No. 2009-009-DWQ.** Requires the applicant to file a public Notice of Intent to discharge stormwater and to prepare and implement a stormwater pollution prevention plan (SWPPP).
- **Jurisdictional Waters.** Agencies and/or project proponents must consultant with the California Regional Water Quality Control Board (RWQCB) regarding, when applicable, regarding compliance with the CWA Section 401 Water Quality Certification or permitting under California Porter-Cologne Act.

Local

IMPERIAL COUNTY FIRE DEPARTMENT

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

IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT

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

1.2 Relationship to Statutes, Regulations, and Other Plans

1.2.1 County of Imperial General Plan and Land Use Ordinance

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

1.2.2 Renewables Portfolio Standard Program

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

In the ongoing effort to codify the ambitious 33 percent by 2020 goal, SB X12 was signed by Governor Brown, in April 2011. This new RPS preempts the CARB's 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities had to adopt the new RPS goals of 20 percent of retails sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020.

Governor Brown signed into legislation SB 350 in October 2015, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible RE resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

1.2.3 Senate Bill 32

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by 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.

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

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

1.2.5 Federal Clean Air Act

The legal authority for federal programs regarding air pollution control is based on the 1990 Clean Air Act (CAA) Amendments. These are the latest in a series of amendments made to the CAA. This legislation modified and extended federal legal authority provided by the earlier Clean Air Acts of 1963 1970, and 1977.

The Air Pollution Control Act of 1955 was the first Federal legislation involving air pollution. This Act provided funds for federal research in air pollution. The CAA of 1963 was the first Federal legislation regarding air pollution control. It established a federal program within the U.S. Public Health Service and authorized research into techniques for monitoring and controlling air pollution. In 1967, the Air

Quality Act was enacted in order to expand Federal government activities. In accordance with this law, enforcement proceedings were initiated in areas subject to interstate air pollution transport. As part of these proceedings, the Federal government for the first time conducted extensive ambient monitoring studies and stationary source inspections.

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

1.2.6 Imperial County Air Pollution Control District

The ICAPCD enforces rules and regulations regarding air emissions associated with various activities, including construction and farming, and operational activities associated with various land uses, in order to protect the public health.

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

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

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

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

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

1.2.9 Federal Endangered Species Act

The ESA (16 USC 1531-1544) provides protection for plants and animals whose populations are dwindling to levels that are no longer sustainable in the wild. The Act sets out a process for listing species, which allows for petition from any party to list a plant or animal. Depending on the species, USFWS or the National Marine Fisheries Service (NMFS) will determine whether listing the species is warranted. If it is warranted, the species will be listed as either threatened or endangered. The

difference between the two categories is one of degree, with endangered species receiving more protections under the statute.

1.2.10 National Historic Preservation Act

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

1.2.11 California Endangered Species Act

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

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

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

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

1.3 Purpose of an EIR

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

1.4 EIR Process

1.4.1 Availability of Reports

This Draft EIR has been distributed to various federal, state, regional, local agencies and interested parties for a 50-day public review period, from December 14, 2022, through February 2, 2023, in accordance with Section 15087 of the CEQA Guidelines. This Draft EIR and documents incorporated by reference are available for public review at the County of Imperial Planning and Development

Services Department, 801 Main Street, El Centro, California 92243. Documents may be reviewed during regular business hours.

David Black, Planner IV

County of Imperial, Planning and Development Services Department

801 Main Street

El Centro, California 92243

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

1.4.2 Public Participation Opportunities/Comments and Coordination

Notice of Preparation

The County of Imperial issued a notice of preparation (NOP) for the preparation of an EIR for the VEGA SES 2, 3, and 5 Solar Energy Project on May 4, 2021. The NOP was distributed to city, county, state, and federal agencies, other public agencies, and various interested private organizations and individuals in order to define the scope of the EIR. The NOP was also published in the Imperial Valley Press and The Desert Review on May 4, 2021. The purpose of the NOP was to identify public agency and public concerns regarding the potential impacts of the projects, and the scope and content of environmental issues to be addressed in the EIR. Correspondence in response to the NOP was received from the following entities and persons:

- California Department of Transportation
- Native American Heritage Commission
- V&V Farms, LLC

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

Scoping Meeting and Environmental Evaluation Committee

During the NOP public review period, the VEGA SES 2, 3 and 5 Solar Energy Project was discussed as an informational item at the County's Environmental Evaluation Committee meeting on May 13, 2021.

Additionally, a virtual scoping meeting for the general public as well public agencies was held on May 13, 2021 at 6:00 p.m., to further obtain input as to the scope of environmental issues to be examined in the EIR. The NOP, which included the scoping meeting date and location, was published in the Imperial Valley Press and The Desert Review on May 4, 2021. A virtual meeting was held by the Imperial County Planning & Development Services Department. At the scoping meeting, members of the public were invited to ask questions regarding the proposed projects and the environmental review process, and to comment both verbally and in writing on the scope and content of the EIR. No written or verbal comments were received during the scoping meeting.

1.4.3 Environmental Topics Addressed

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

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

Eliminated from Further Review in Notice of Preparation

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

1.4.4 Areas of Controversy and Issues to be Resolved

Section 15123(b)(2) of the CEQA Guidelines requires that an EIR identify areas of controversy known to the Lead Agency, including issues raised by other agencies and the public as well as issues to be resolved. A primary issue associated with this solar farm project, and other solar facility projects that are proposed in the County, is the corresponding land use compatibility and fiscal/economic impacts to the County. Through the environmental review process for this project, other areas of concern and issues to be resolved include water supply; relocation, modification, or reconstruction of IID facilities; and access.

1.4.5 Document Organization

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

- The **Executive Summary** provides a summary of the proposed projects, including a summary of project impacts, mitigation measures, and project alternatives.
- **Chapter 1 Introduction** provides a brief introduction of the proposed projects; relationship to statutes, regulations and other plans; the purpose of an EIR; public participation opportunities; availability of reports; and comments received on the NOP.
- **Chapter 2 Project Description** provides a description of the VEGA SES 2, 3 & 5 Solar Energy Projects. This chapter also defines the goals and objectives of the proposed projects, provides details regarding the individual components that together comprise the project, and identifies the discretionary approvals required for implementation of the project.
- **Chapter 3 Environmental Analysis** provides a description of the existing environmental setting and conditions, an analysis of the environmental impacts of the project for the following

environmental issues: aesthetics; agricultural resources; air quality; biological resources; cultural resources; geology and soils; GHG emissions; hydrology/water quality; land use and planning; noise and vibration; transportation; tribal cultural resources; and utilities/service systems. This chapter also identifies mitigation measures to address potential impacts to the environmental issues identified above.

- **Chapter 4 Analysis of Long-Term Effects** provides an analysis of growth inducing impacts, significant irreversible environmental changes, and unavoidable adverse impacts.
- **Chapter 5 Cumulative Impacts** discusses the impact of the proposed projects in conjunction with other planned and future development in the surrounding areas.
- **Chapter 6 Effects Found Not to be Significant** lists all the issues determined to not be significant as a result of the preparation of this EIR.
- **Chapter 7 Alternatives** analyzes the alternatives to the proposed projects.
- **Chapter 8 References** lists the data references utilized in preparation of the EIR.
- **Chapter 9 EIR Preparers and Organizations Contacted** lists all the individuals and companies involved in the preparation of the EIR, as well as the individuals and agencies consulted and cited in the EIR.

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2 Project Description

Chapter 2 provides a description of the VEGA SES 2, 3, and 5 Solar Energy Projects. This chapter also defines the goals and objectives of the proposed projects, provides details regarding the individual components that together comprise the projects, and identifies the discretionary approvals required for project implementation of each of the projects.

2.1 Project Location

The project applicant, Apex Energy Solutions, LLC, proposes to construct and operate an expansive photovoltaic (PV) solar energy facility, battery energy storage system (BESS), and associated infrastructure on approximately 1,963 acres of privately-owned land in the unincorporated area of Imperial County, CA. The project area is located approximately 5.67 miles southeast of the unincorporated community of Niland between the unincorporated communities of Iris and Slab City. The project area is transected by the Coachella and East Highline Canals and the Union Pacific Railway.

Three separate Conditional Use Permits (CUPs) have been filed with the County for the construction and operation of the solar facilities, which together define the project sites. The three CUP applications or individual site locations consist of the following:

- CUP 20-0021: VEGA SES 2
- CUP 20-0022: VEGA SES 3
- CUP 20-0023: VEGA SES 5

Table 2-1 identifies the individual assessor parcel numbers (APN) associated with the VEGA SES 2, 3, and 5 sites with their respective acreage and zoning.

Table 2-1. Solar Energy Facility Site Assessor Parcel Numbers, Acreages, and Zoning

Project	APN	Acreage	Zoning
VEGA SES 2 (CUP 20-0021)	025-010-006 (partial)	410	S-2-RE
	025-260-011 (partial)	288	S-2-RE
	025-270-023	625	S-2-RE
	Subtotal	***1,323***	**--**
VEGA SES 3 (CUP 20-0022)	025-010-006 (partial)	230	S-2-RE
	Subtotal	***230***	**--**
VEGA SES 5 (CUP 20-0023)	025-260-011 (partial)	160	S-2-RE
	025-260-019	90	S-2-RE
	025-260-022	160	A-2-RE, A-3-RE, S-2-RE
	Subtotal	***410***	**--**

Table 2-1. Solar Energy Facility Site Assessor Parcel Numbers, Acreages, and Zoning

Project	APN	Acreage	Zoning
Total Gross Acres		**1,963**	**--**

Notes:
APN = assessor parcel number; A-2-RE = General Agriculture with a Renewable Energy Zone Overlay A-3-RE = Heavy Agriculture with a Renewable Energy Zone Overlay; S-2-RE = Open Space/Preservation with a Renewable Energy Zone Overlay

2.1.1 VEGA SES 2

The VEGA SES 2 project site is located on three non-contiguous parcels (APNs 025-010-006 [partial], 025-260-011 [partial], and 025-270-023).

The northernmost parcel, APN 025-010-006, comprises 640 acres. The VEGA SES 2 project site is located on the southern 410 acres of the 640-acre parcel. This parcel is approximately 2.31 miles northeast of the East Highline Canal Road/Wiest Road/Flowing Wells Road intersection. This parcel is transected by Coachella Canal Road (intersected by Flowing Wells Road approximately halfway through the parcel) and the Coachella Canal, which runs southeast parallel to the roadway.

The southwestern parcel, APN 025-260-011, comprises 488 acres. The VEGA SES 2 project is located on the northern 288 acres of the 488-acre parcel.

The southeastern parcel, APN 025-270-023, encompasses approximately 625 acres and is adjacent to the southeast corner of APN 025-010-006. An approximately 934-foot segment of the Coachella Canal traverses the southwestern corner of the parcel. This parcel is transected by Niland Pegleg Well Road and Ted Kipf Road in the northern half of the parcel.

2.1.2 VEGA SES 3

The VEGA SES 3 project site is located on the northern portion of APN 025-010-006, comprising the remaining 230 acres of the 640-acre parcel.

2.1.3 VEGA SES 5

The VEGA SES 5 project site is located on three parcels (APNs 025-260-011 [partial], 025-260-019 and 025-260-022) encompassing approximately 410 acres. A portion of the VEGA SES 5 project site is located on the southern 160 acres of APN 025-260-011. APN 025-260-019 is adjacent to the Union Pacific Railway and Noffsinger Road to the northeast. APN 025-260-022 is adjacent to Wiest Road to the west and McDonald Road to the north and transected by East Highline Canal Road and the East Highline Canal.

The agricultural portion of VEGA SES 5 (APN 025-260-022) that is west of the East Highline Canal contains fallow agricultural land with scattered dry crop residue. The agricultural field is bounded by McDonald Road to the north, Schrimpf Road to the south, and Weist Road to the west. The East Highline Canal cuts across APN 025-260-022 diagonally in a northwest to southeast direction. Within the agricultural portion of the VEGA SES 5 project site, there are subsurface tile drainage pipelines that are generally aligned north to south and carry irrigation wastewater to the N Drain at the southwest corner of the field.

Figure 2-1. Regional Location

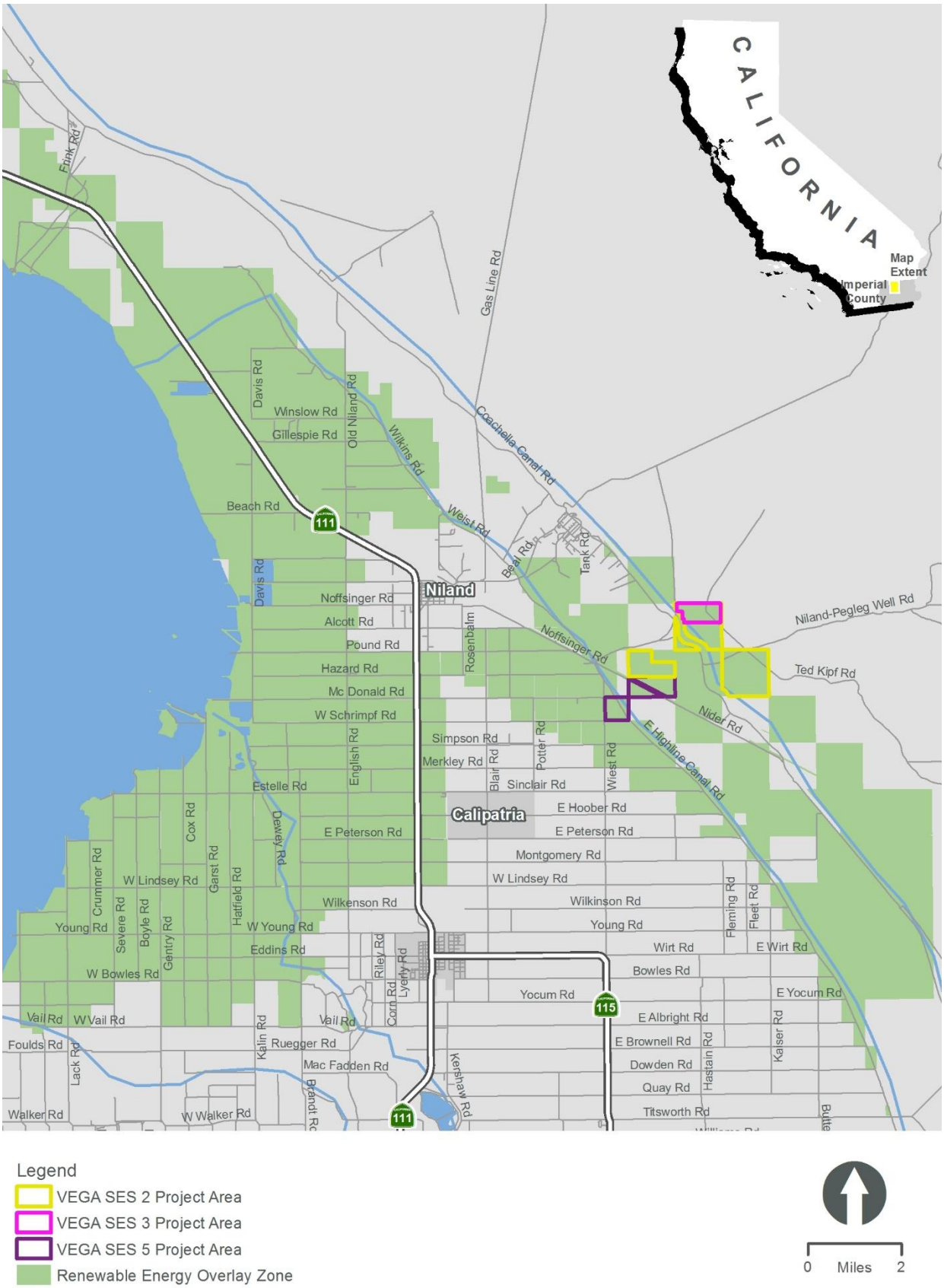
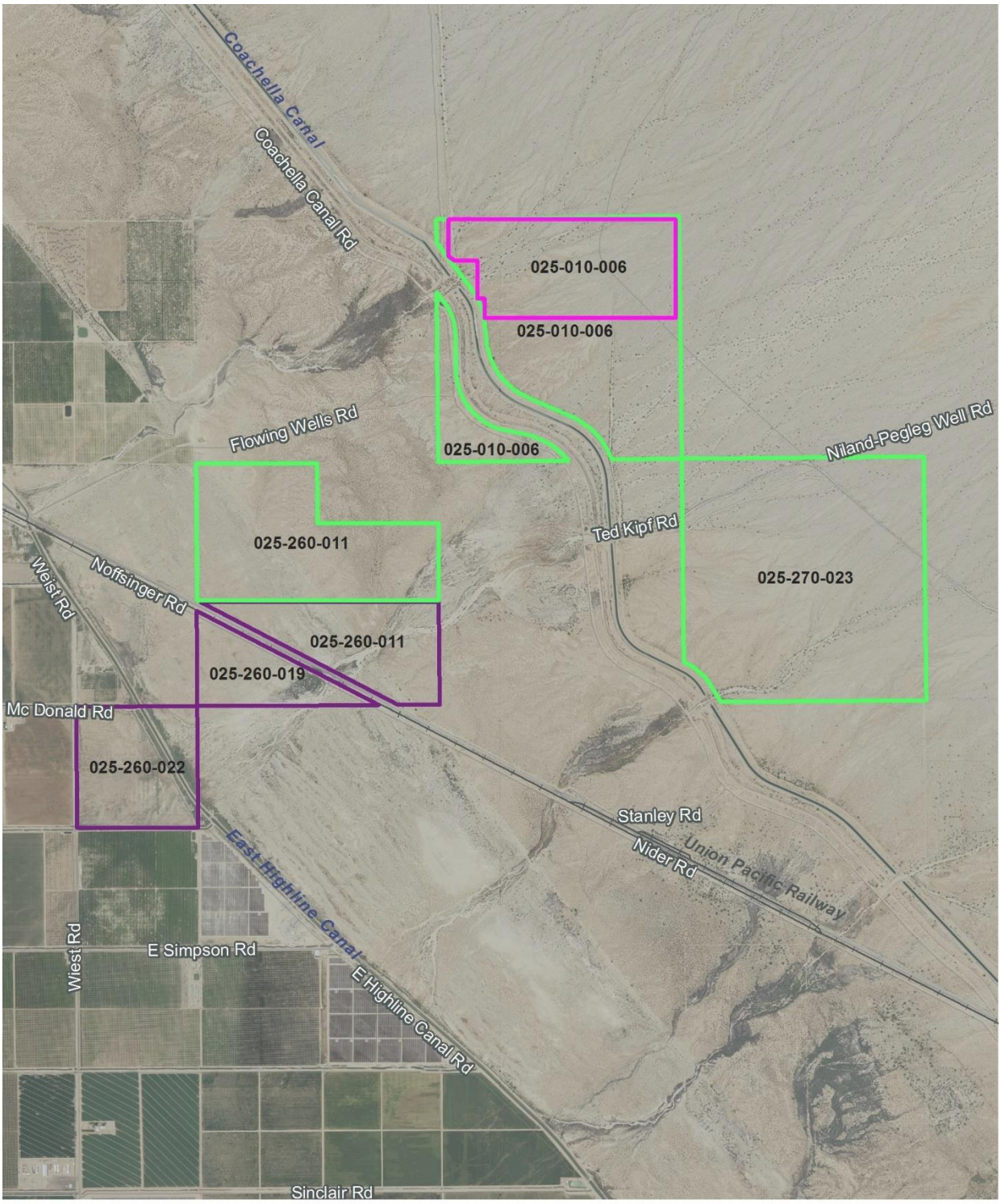


Figure 2-2. Project Sites



2.1.4 Renewable Energy Overlay Zone

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

The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of renewable energy projects with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of renewable energy facilities while minimizing the impact on other established uses. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone.

As shown on Figure 2-1, the project sites are located within the RE Overlay Zone. Therefore, no General Plan Amendment or Rezone would be required to implement the proposed projects.

2.2 Project Objectives

- Construct and operate a solar energy facility capable of producing up to 350 megawatt (MW) alternating current (AC) of electricity to assist the State of California in achieving its 60 percent renewable portfolio standard by 2030.
- Provide a 700 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.
- Interconnect directly to IID's existing electrical transmission system.
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Senate Bill 32.
- Minimize and mitigate any potential impact to sensitive environmental resources within the project area.

2.3 Project Characteristics

The proposed projects (VEGA SES 2, 3, and 5) would involve the construction and operation of an expansive PV solar energy facility and associated infrastructure on approximately 1,963 acres of privately-owned land. The project sites would be developed with a ground mounted PV solar power generating system, supporting structures, on-site substations, battery energy storage system (BESS), interconnection facilities, and internal access roads. The projects would employ the use of PV power systems to convert solar energy into electricity using non-reflective technology.

Collectively, the proposed projects involve the construction of up to 350 megawatt (MW) alternating current (AC) photovoltaic (PV) solar energy facility (Table 2-2) with an integrated battery storage system (not to exceed 700 MW).

Table 2-2. Megawatt Output

Solar Facility	Proposed Megawatt Output	Battery Storage
VEGA SES 2	240 MW	480 MW
VEGA SES 3	60 MW	120 MW
VEGA SES 5	50 MW	100 MW
Total	**350MW**	**700 MW**

2.3.1 Photovoltaic Panels/Solar Arrays

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

The projects propose to utilize either thin film or crystalline solar photovoltaic (PV) technology modules mounted either on fixed frames or horizontal single-axis tracker (HSAT) systems.

The fixed frame PV module arrays would be mounted on racks that would be supported by driven piles. The depth of the piles would be dependent on the recommendations of the geotechnical report prepared for the projects. The fixed-frame racks would be secured at a fixed tilt of 20-30 degrees from horizontal facing a southerly direction. Current project designs would have individual PV modules, mounted two high on a fixed frame, providing a two-foot ground clearance and resulting in the tops of the panels at approximately 7.5 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. These arrays would be separated from each other and the perimeter security fence by up to 30-foot wide interior roads.

If HSAT technology is used, 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 9 feet above 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 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 10 feet apart to maximize operational performance and to allow access for panel cleaning and maintenance. Current project designs would have individual HSAT PV modules, each approximately two feet wide by four feet long (depending on the specific PV technology selected), mounted on a frame which is attached to an HSAT system. The HSAT arrays would be separated from each other and the perimeter security fence by up to 30-foot-wide roads, consistent with Imperial County Fire Department emergency access requirements.

2.3.2 Electrical Power System

Electricity generated by the PV modules would be collected by a direct current (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 alternating current (AC). The inverters could be connected to AC interconnection facilities which, if needed, would raise the voltage to 34.5 kilovolt (kV), or the interconnection voltage selected by the projects. Underground or overhead 12.5 kV or 34.5 kV collection lines would transmit the electricity to the new substations.

2.3.3 Substations, Distribution/Electrical Collection and Transmission

VEGA SES 2

Substations

As shown in Figure 2-3, two new substations would be constructed on the VEGA SES 2 project site. The first substation would be constructed in the northwestern corner of APN 025-260-011 on approximately two acres. The substation would take the delivery of up to 60 kV electricity 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 KN/KS Line. The substation would include two transformers, circuit breakers, disconnect switches, microwave or other communication facilities, and an electrical control building.

The second substation would be located in the northwestern corner of APN 025-270-023 on approximately two acres. This substation would be comprised of an underground combiner box used to connect all of the low voltage AC outputs of the inverters, a medium voltage transformer to increased the voltage up to 60 kV, a protective relay system and associated circuit breakers and disconnect switches. This substation would take delivery of the energy generated on APN 025-270-023 and transmit it through the proposed 34.5 kV or 60 kV lines to the primary project substation on APN 025-260-011. The substation would include a transformer, circuit breaker, meters, disconnect switches, and microwave or other communication facilities.

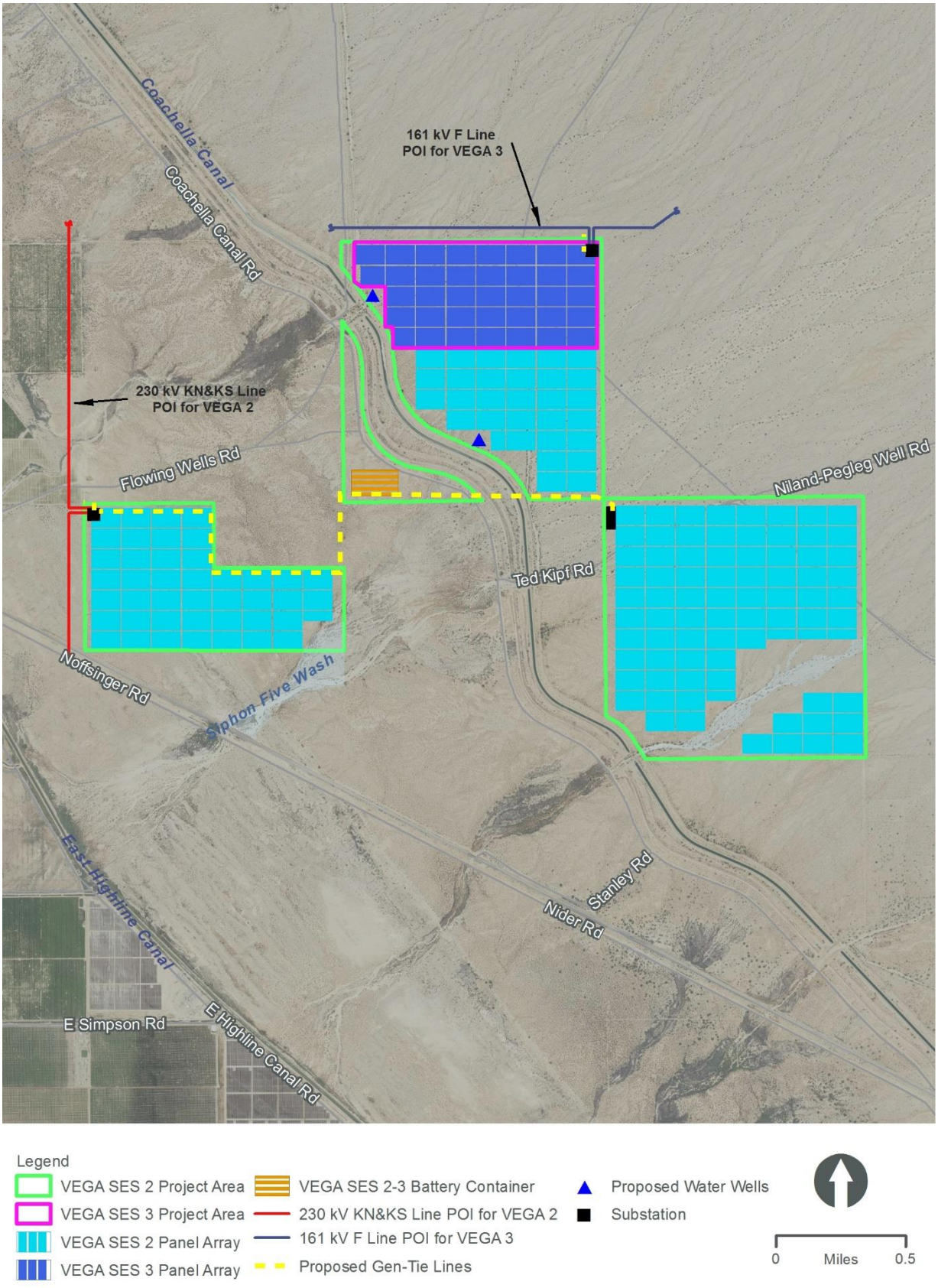
One new interconnection switching station would be constructed on APN 025-260-011, immediately adjacent to the substation. The interconnection switching station and substation would be connected via a single overhead 230 kV line. The switching station would include circuit breakers, switches, overhead bus work, protective relay equipment and an electrical control building. The switching station would operate at 230 kV and be configured in a Breaker-And-A-Half arrangement. This would allow for looping in of one or two of the IID 230 kV lines as well as connection of the total project output at 230 kV. The switching station would be enclosed within its own fence.

To connect the project's 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 design of the project's interconnection facilities 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.

Distribution and Interconnection

The VEGA SES 2 project's distribution and interconnection would be as follows: the medium voltage power would be conveyed underground or aboveground via 34.5 kV or 60 kV distribution circuits from the substation located in the northwest corner of 025-270-023 to the substation located in the northwest corner of APN 025-260-011. The height of the proposed gen-tie transmission structures would be 40 feet. The electrical energy produced by the VEGA SES 2 project would be delivered to the IID through the project's interconnection switching station to the IID's 230 kV KN/KS Line.

Figure 2-3. VEGA SES 2 and 3 Site Plan



BLM Right-of-Way Request – VEGA SES 2

60-Foot-Wide ROW for Gen-Tie Interconnection

As shown in Figure 2-4, there is a portion of the VEGA SES 2 gen-tie line, from the southwest corner of APN 025-010-006 to the northeast corner of APN 025-260-011, that would traverse BLM land. The project applicant is requesting a 60-foot-wide ROW from BLM to construct a portion of the gen-tie line on BLM land.

30-Foot-Wide ROW for Gen-Tie Interconnection

A triangular ROW would be required at the southeastern corner of APN 025-010-006 to the northwestern corner of APN 025-270-023 for overhead powerlines that would span the two corners of these parcels. No power poles would be set within this ROW.

Additionally, BLM approval of two aerial easements would also be required to allow gen-tie connections between the facilities. No ground disturbance would occur associated with the aerial easements.

VEGA SES 3

Substation

A new substation would be constructed on the northwestern corner of the VEGA SES 3 project site. The substation site will comprise approximately two acres. Medium voltage power electricity generated from the site would be conveyed underground, or above ground where necessary, to cross over any sensitive site features, to connect to the substation.

Interconnection

A new interconnection switching station would be constructed immediately adjacent to the substation. The interconnection switching station and substation would be connected via a single overhead 161 kV line. The switching station would include circuit breakers, switches, overhead bus work, protective relay equipment and an electrical control building. The switching station would operate at 161 kV and be configured in a Breaker-And-A-Half or three breaker ring bus arrangement. This would allow for looping in of the IID 161 kV “F” transmission line as well as connection of the project gen-tie line. The switching station would be enclosed within its own fence. As shown in Figure 2-3, the electrical energy produced by the VEGA SES 3 project would be connected to the existing utility approved point of interconnection at the northeast corner of the site to the IID’s 161 kV “F” Line.

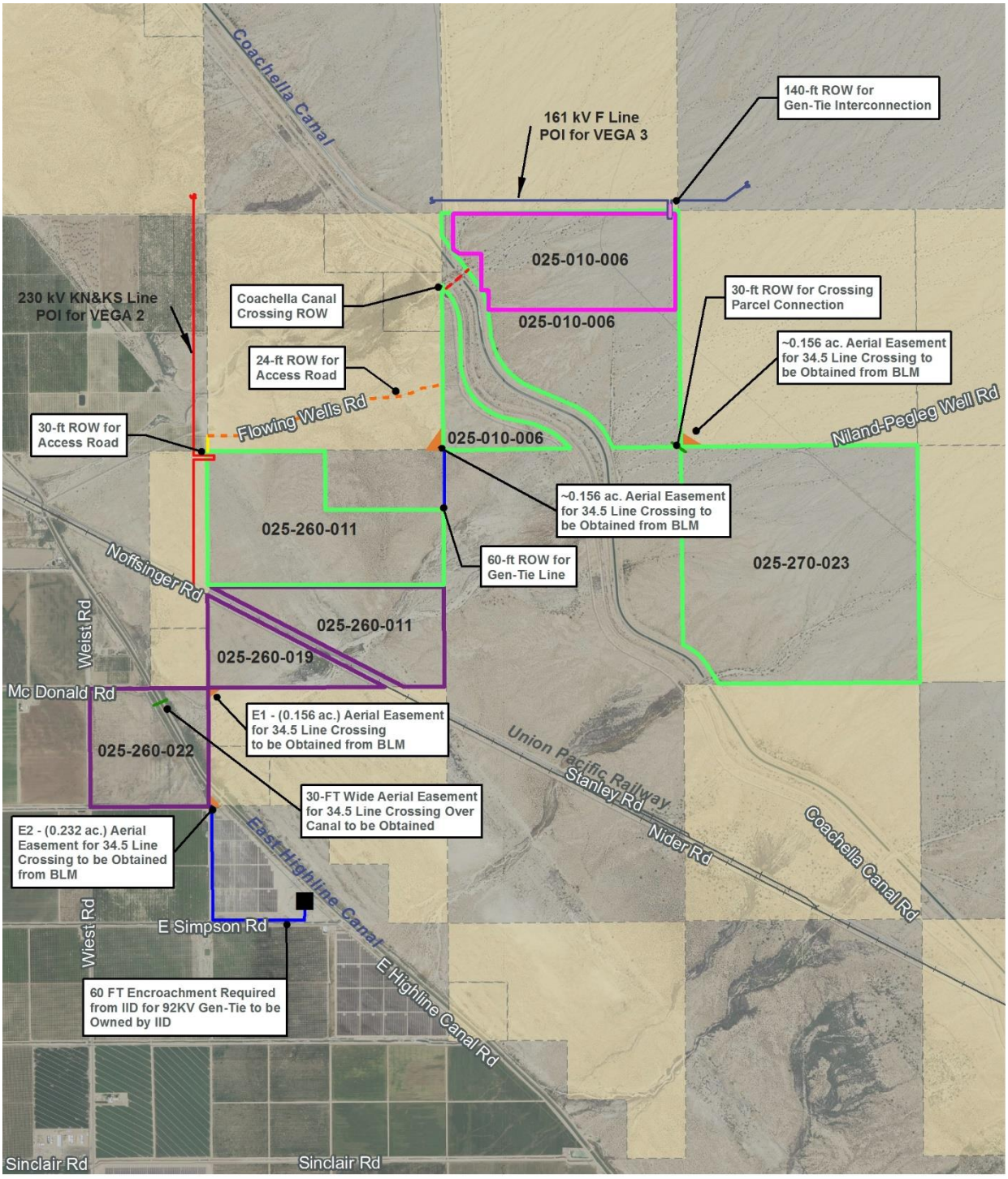
The design of the project’s interconnection facilities would meet all necessary utility standards and requirements. As required, surge arrestors would be used to protect facilities and auxiliary equipment from lightning strikes or other disturbances. Distribution from the site would be via an overhead connection.

BLM Right-of-Way Request – VEGA SES 3

140-Foot-Wide ROW for Gen-Tie Interconnection

As shown in Figure 2-3, the electrical energy produced by the VEGA SES 3 project would be connected to the existing utility approved point of interconnection at the northeastern corner of the site to the IID's 161 kV "F" Line. Because the "F" Line is located on BLM land, the project applicant is requesting a 140-foot-wide ROW from BLM to construct a gen-tie line from the northeastern corner of the site to IID's 161 kV "F" Line to the north (Figure 2-4).

Figure 2-4. Right-of-Way Requests



VEGA SES 5

Substation

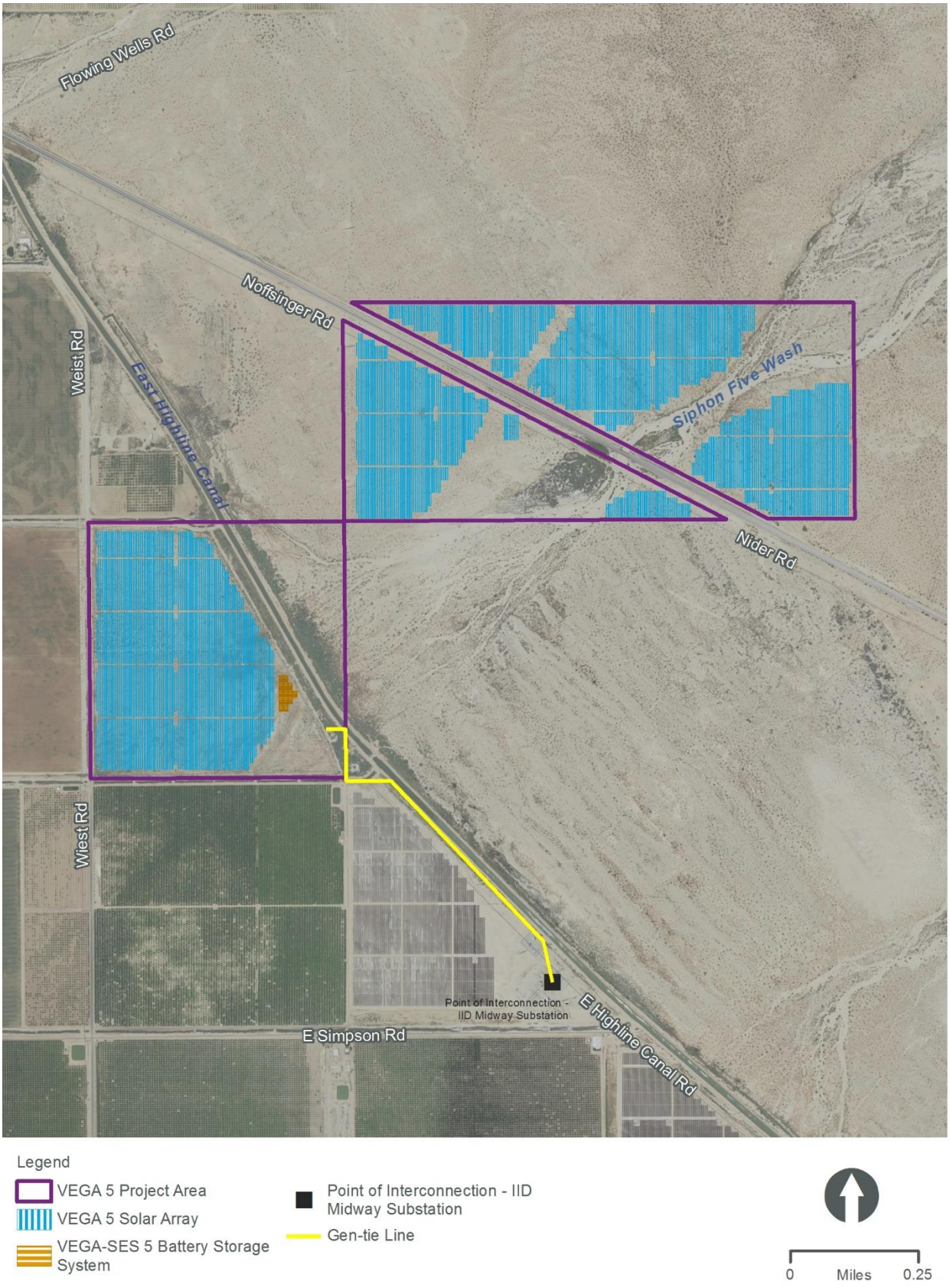
A new substation would be constructed on the VEGA SES 5 project site, on the southeastern boundary of APN 025-260-022. This substation would take the delivery of the up to 34.5 kV power generated on the site and increase the voltage of the electricity to 92 kV, where it would be delivered to the IID 92 kV Midway Substation.

Interconnection

The proposed gen-tie line alignment for VEGA SES 5 is depicted on Figure 2-5. The substation would include a transformer, circuit breakers, meters, disconnect switches, and microwave or other communication facilities. The medium voltage power electricity generated from the project would be conveyed underground, or above ground where necessary, to cross over any sensitive site features, to connect to the projects' interconnection facilities.

The design of the project's interconnection facilities 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.

Figure 2-5. VEGA SES 5 Site Plan



2.3.4 Battery Energy Storage System

A BESS is proposed on an approximately 5-acre site within the VEGA SES 2 project site in the southwestern corner of APN 025-010-006. The BESS on the VEGA SES 5 project site is proposed to be located in the southeastern corner of APN 025-260-022. The proposed BESS would consist of either lithium ion or flow batteries. The batteries will 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. Figure 2-6 depicts representative examples of a typical BESS.

Figure 2-6. Representative Example of Battery Energy Storage Systems

2.3.5 Security

Six-foot high security fencing would be installed around the perimeter of each of the project sites 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.

2.3.6 Site Access

VEGA SES 2 and 3

The VEGA SES 2 and 3 project sites would include both a primary and secondary access driveway (if required) off adjacent public roads. No new access across IID lateral canals or drains is expected. The project driveways would 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 facilities. To accommodate emergency access, PV panels would be spaced to maintain proper clearance. Internal access roads, up to 30-foot wide, would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles.

BLM Right-of-Way Requests

The proposed access to both VEGA SES 2 and 3 is through the use of Flowing Wells Road. This existing dirt road, although occasionally maintained by the County of Imperial, is on BLM land and a right-of-way (ROW) approval from the BLM is required. There is no alternative route that either exists or can be used to gain access to the VEGA SES 2 and 3 project sites that do not cross some Federal lands, hence Flowing Wells Road, is the only viable route.

24-Foot-Wide ROW for Access Road

The VEGA SES 2 and 3 projects intend to use Flowing Wells Road for access during construction of the facilities which upon being permitted will take approximately one year of actual construction. As shown in Figure 2-4, the projects propose to obtain a 24-foot-wide ROW for the length of Flowing Wells Road starting approximately 575 feet north of the northwest corner of APN 025-260-011 to APN 025-010-006.

The VEGA SES 2 and 3 projects would not require changes to Flowing Wells Road either in terms of alignment, cross section, width or length. The project applicant is requesting a 24-foot-wide ROW given that the road currently has no designated width. The VEGA SES 2 and 3 projects, if required as part of the permitting or ROW approval, would grade and maintain Flowing Wells Road during construction as required by the BLM, County and/or Air District, including future years maintenance for safe access to the sites. A maintenance agreement with the County/BLM will be included in the conditions of approval.

The use of Flowing Wells Road for construction is considered temporary as it would be used primarily during construction of the VEGA SES 2 and 3 projects. During operation, the sites will be controlled remotely and will not have any on site employees. The solar facilities would require occasional onsite maintenance. Therefore, Flowing Wells Road could require occasional maintenance. Either the County or applicant could perform the maintenance of Flowing Wells Road under an agreement.

30-Foot-Wide ROW for Access Road

The project applicant is requesting a 30-foot-wide ROW from BLM for an access road to connect the northwest corner of the VEGA SES 2 site (APN 025-0260-011) to Flowing Wells Road (Figure 2-4).

Bureau of Reclamation Right-of-Way Request

Access will be needed across Bureau of Reclamation (BREC) land for VEGA SES 3, crossing the Coachella Canal (Figure 2-4). Applications for this ROW have been filed directly with the BREC office.

VEGA SES 5

The VEGA SES 5 site would include two primary driveways and a secondary driveway (if required). The primary driveway on APN 025-260-19 would be located in the northwestern corner of the parcel off of Noffsinger Road, while the driveway on APN 025-260-022 would be located along Weist Road which runs parallel to the western boundary of the parcel.

The project driveways would 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 facilities. To accommodate emergency access, PV panels would be spaced to maintain proper clearance. Internal access roads, up to 30-foot wide, would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles.

2.3.7 Fire Protection/Fire Suppression

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

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

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

2.4 Site Construction

2.4.1 Construction Activities

Construction activities would primarily involve demolition and grubbing, grading of the project sites to establish access roads and pads for electrical equipment, trenching for underground electrical

collection lines, and the installation of solar equipment and security fencing. Construction of each solar energy facility is estimated to take 12-18 months and would begin in late 2022/early 2023.

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).

A temporary, portable construction supply container would be located at each project site at the beginning of construction and removed at the end of construction.

The number of on–site construction workers for the VEGA SES 2 and 3 solar facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the VEGA SES 2 and 3 battery storage facility and substations is not expected to exceed 100 workers at any one time. The number of on–site construction workers for the VEGA SES 5 solar facility is not expected to exceed 75 workers at any one time. The number of on-site construction workers for the VEGA SES 5 battery storage facility and substation is not expected to exceed 50 workers at any one time. Onsite parking would be provided for all construction workers.

2.4.2 Construction Access

As shown in Figure 2-7, primary access to the VEGA SES 2 and 3 project sites will be from SR-111 along McDonald Road to Weist Road. Construction-related traffic would cross the East Highline Canal at Noffsinger Road. Weist Road continues to Flowing Wells Road. The crossing of the Union Pacific (UP) Railroad tracks is at an unsignalized crossing on Weist Road. The VEGA SES 2 and 3 project sites will be accessed from Flowing Wells Road. Weist Road, Noffsinger Road and Flowing Well Roads are unpaved roadways.

For the VEGA SES 5 project, access to and from the site will be from SR-111 along McDonald Road (Figure 2-8). A portion of the site construction traffic will travel to the east side of the East Highline Canal, by using Weist Road and Noffsinger Road. To access the portion of the site east of the UP Railroad tracks, access across the tracks will be made at Flowing Wells Road, and access to the property will be made via an easement that will be acquired. The easement will be a direct vertical south from Flowing Wells Road at the western boundary of APN 025-260-011.

Delivery trucks are expected to follow the same travel route as construction workers. An estimated two trucks would arrive at each project site each day during the first few weeks of construction of each solar facility.

2.4.3 Water Use

The area served by IID is located in the Imperial Valley, which is generally contiguous with IID's Imperial Unit, lies south of the Salton Sea, north of the U.S./Mexico International Border, and generally in the 658,942-acre area between IID's Westside Main and East Highline Canals.

APN 025-260-011 and parts of APN 025-010-006 and APN 025-270-023 are located within IID's East Mesa Unit service area where water is only available for agricultural uses. Thus, there is not a public water system that will serve the VEGA SES 2 and 3 project sites. The water supply will be provided by new onsite groundwater supply wells (see Figure 2-3) to be drilled and installed as part of the VEGA SES 2 and 3 projects.

VEGA SES 5 APN 025-260-011, APN 025-260-019, and the area of APN 025-260-022 east of the East Highline Canal are located within IID's East Mesa Unit, while 114.4 acres of the area of APN 025-

260-022 west of the East Highline Canal is within IID's Imperial Unit. The VEGA SES 5 parcel areas in the East Mesa Unit do not currently have water service from IID. Although water service from IID is currently available for the area of APN 025-260-022 within the Imperial Unit, the project applicant does not plan to use surface water from IID to supply any area of the project. Thus, there are no public water systems that will serve the project. The water supply will be provided by a new onsite groundwater supply well to be drilled and installed as part of the VEGA SES 5 project.

Table 2-3 identifies the estimated water needed during construction of each project.

Table 2-3. Construction Water Use

Project	Construction Water Use (acre feet)
VEGA SES 2 & 3	630 AF
VEGA SES 5	365 AF
Total	**995 AF**

Figure 2-7. VEGA SES 2 and 3 Access Route

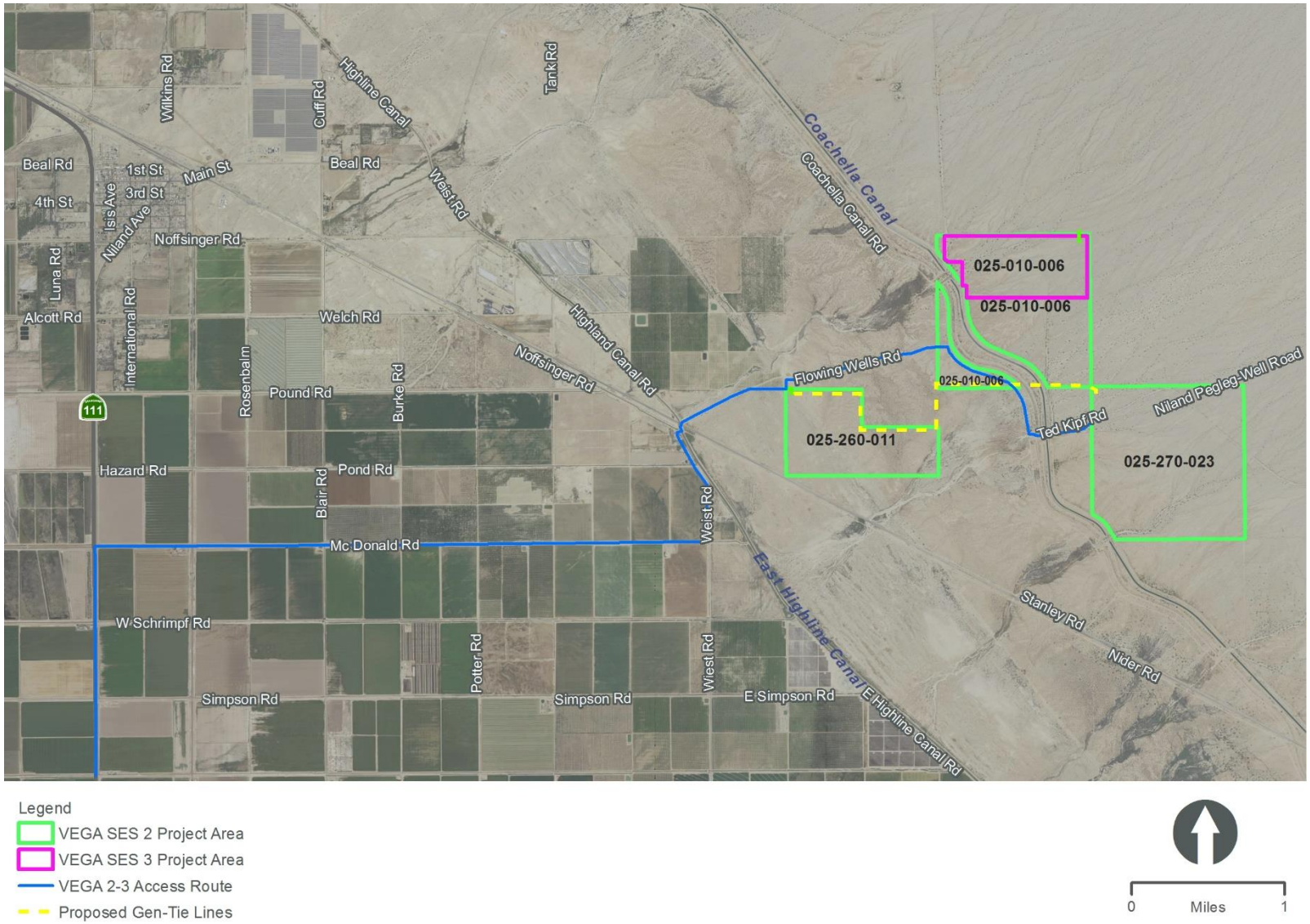
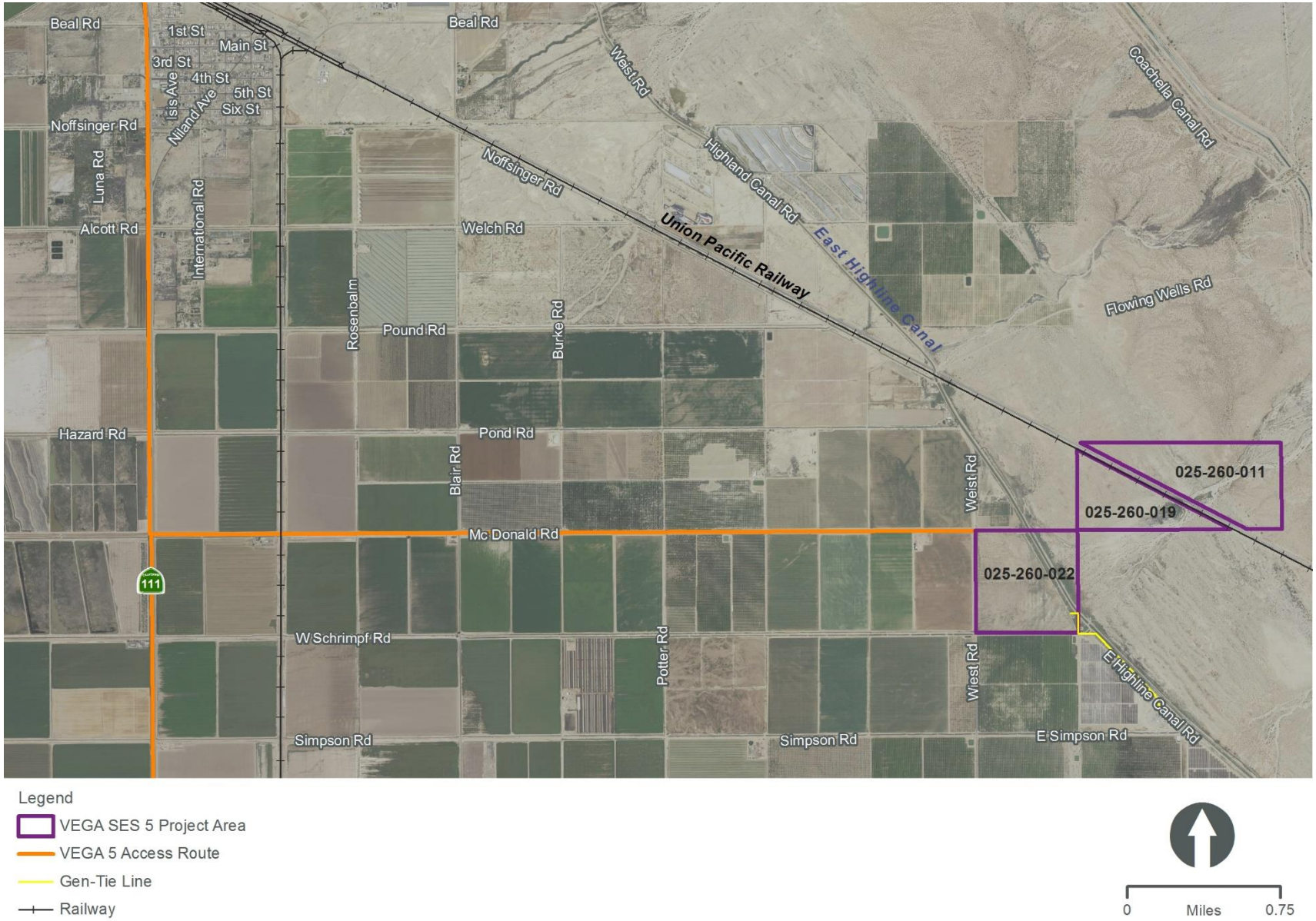


Figure 2-8. VEGA SES 5 Access Route



2.5 Operations and Maintenance

Once construction is completed, the facilities would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Security personnel may conduct unscheduled security rounds and would be dispatched to the project site in response to a fence breach or other alarm.

Up to two to three people would be contracted (part-time) to perform all routine and emergency operational and maintenance activities. Such activities include inspections, equipment servicing, site and landscape clearing, and periodic washing of the PV modules if needed (up to two times per year) to maintain power generation efficiency. Vegetation growing on the project sites would periodically (approximately every 3 months) be removed manually and/or treated with herbicides.

2.5.1 Water Use

Water for washing the PV modules on the project sites would be obtained from proposed on-site water wells (Figure 2-3). Table 2-4 identifies the estimated water needed during operation of each project.

Table 2-4. Operational Water Use

Project	Operational Water Use (acre feet per year)
VEGA SES 2	10 AF
VEGA SES 3	2 AFY
VEGA SES 5	20 AFY
Total	**32 AFY**

2.6 Restoration of the Project Sites

Electricity generated by the projects could be sold under the terms of a PPA with a power purchaser (i.e., utility service provider). The projected life of the projects is 30 years. At the end of the PPA term, the owner of the projects may choose to enter into a subsequent PPA, update technology and re-commission, or decommission and remove the generating facility and its components. Upon decommissioning, the sites could be converted to other uses in accordance with applicable land use regulations in effect at that time. A collection and recycling program will be executed to promote recycling of project components and minimize disposal in landfills. All permits related to decommissioning would be obtained, where required.

Project decommissioning may include the following activities:

- The facility would be disconnected from the utility power grid.
- Project components would be dismantled and removed using conventional construction equipment and recycled or disposed of safely.
- PV panel support steel and support posts would be removed and recycled off-site by an approved metals recycler.
- All compacted surfaces within the project site and temporary on-site haul roads would be de-compacted.

- Electrical and electronic devices, including inverters, transformers, panels, support structures, lighting fixtures, and their protective shelters would be recycled off-site by an approved recycler.
- All concrete used for the underground distribution system would be recycled off-site by a concrete recycler or crushed on-site and used as fill material.
- Fencing would be removed and recycled off-site by an approved metals recycler.
- Gravel roads would be removed; filter fabric would be bundled and disposed of in accordance with all applicable regulations. Road areas would be backfilled and restored to their natural contour.
- Soil erosion and sedimentation control measures would be re-implemented during the decommissioning period and until the site is stabilized.

Prior to issuance of the initial grading permit for the projects, a Site Reclamation Plan in conformance with County of Imperial requirements would be prepared for review and approval by the Imperial County Planning and Development Services Department. 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.

2.7 Required Project Approvals

2.7.1 Imperial County

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

1. **Approval of CUPs.** Implementation of the projects would require the approval of CUPs by the County to allow for the construction and operation of the proposed solar energy facilities with an integrated battery storage system. The following CUPs are under consideration for approval as evaluated in this EIR:
    - CUP 20-0021: VEGA SES 2
    - CUP 20-0022: VEGA SES 3
    - CUP 20-0023: VEGA SES 5

Table 2-5. VEGA SES 2, 3, and 5 CUPs – Solar Facilities

Project	APN	Acreage	Zoning
VEGA SES 2 (CUP 20-0021)	025-010-006 (partial)	410	S-2-RE
	025-260-011 (partial)	288	S-2-RE
	025-270-023	625	S-2-RE
	Subtotal	***1,323***	**--**
VEGA SES 3 (CUP 20-0022)	025-010-006 (partial)	230	S-2-RE
	Subtotal	***230***	**--**
VEGA SES 5 (CUP 20-0023)	025-260-011 (partial)	160	S-2-RE
	025-260-019	90	S-2-RE
	025-260-022	160	A-2-RE, A-3-RE, S-2-RE

Table 2-5. VEGA SES 2, 3, and 5 CUPs – Solar Facilities

Project	APN	Acreage	Zoning
	Subtotal	***410***	**--**
Total Gross Acres		**1,963**	**--**

The project parcels are currently zoned as A-2-RE, A-3-RE, and S-2-RE.

Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County:

> *j) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)*
>
> *s) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *z) Electrical substations in an electrical transmission system (500 kv/230 kv/161 kv)*
>
> *bb) Facilities for the transmission of electrical energy (100-200 kv)*
>
> *ww) Resource extraction and energy development as per Division 17*
>
> *aaa) Solar energy electrical generator*

Pursuant to Title 9, Division 5, Chapter 9, the following uses are permitted in the A-3 zone subject to approval of a CUP from Imperial County:

> *i) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)*
>
> *o) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *oo) 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 or Federal government, and provided such facilities shall be approved subsequent to coordination review of the Imperial Irrigation District for electrical matters, meeting the requirements in Division 17.*
>
> *zz) Solar energy plants meeting the requirements in Division 17*

Pursuant to Title 9, Division 5, Chapter 19, the following uses are permitted in the S-2 zone subject to approval of a CUP from Imperial County:

> *d) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *i) Major facilities relating to the generation and transmission of electrical energy provide[d] such facilities are not under State or Federal law, to [be] 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*
- *Facilities for the transmission of electrical energy (100-200 kV)*
- *Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV)*

2. **Approval of CUPs (CUP 22-0025 and -0026) – Groundwater Wells.** Pursuant to Title 9 Division 21: Water Well Regulations, §92102.00, the Applicant will be required to obtain a CUP for each proposed on-site groundwater well. As required by §92102.00, no person shall (1) drill a new well, (2) activate a previously drilled but unused well, (unused shall mean a well or wells that have not been used for a 12 month) period by installing pumps, motors, pressure tanks, piping, or other equipment necessary or intended to make the well operational, (3) increase the pumping capacity of a well, or (4) change the use of a well, without first obtaining a CUP through the County Planning & Development Services Department.
3. **Certification of the EIR.** After the required public review for the Draft EIR, the County will respond to written comments, edit the document, and produce a Final EIR to be certified by the Planning Commission and Board of Supervisors prior to making a decision on approval or denial of the project.

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

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

2.7.2 Discretionary Actions and Approvals by Other Agencies

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

- California RWQCB – Notice of Intent for General Construction Permit, CWA 401 Water Quality Certification
- ICAPCD – Fugitive Dust Control Plan, Rule 801 Compliance
- CDFW (Trustee Agency) – ESA Compliance, Section 1600 Streambed Alteration Agreement
- USFWS – ESA Compliance
- USACE – Section 404 of the CWA Permit
- Bureau of Land Management

  - Right-of-way easement to use Flowing Wells Road for access during construction and maintenance
  - Right-of-way grant for the off-site gen-tie lines to be located on federal lands under the jurisdiction of the BLM
  - Aerial easements to allow gen-tie connections between the facilities
- Bureau of Reclamation
  - Right-of-way easement to cross the Coachella Canal to access the project site (APN 025-010-006)

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3 Environmental Analysis, Impacts, and Mitigation

3.1 Introduction to Environmental Analysis

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

3.1.1 Organization of Issue Areas

Chapter 3 provides an analysis of impacts for those environmental topics that the County determined could result in "significant impacts," based on preparation of an Initial Study and review by the County's Environmental Evaluation Committee and responses received during the scoping process, including the NOP review period and public scoping meeting. Sections 3.1 through 3.15 discuss the environmental impacts that may result with approval and implementation of the projects, and where impacts are identified, recommends mitigation measures that, when implemented, would reduce significant impacts to a level less than significant. Each environmental issue area in Chapter 3 contains a description of the following:

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

3.1.2 Format of the Impact Analysis

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

Changes that would result from the project were evaluated relative to existing environmental conditions within the project sites as defined in Chapter 2. Existing environmental conditions are based on the time at which the NOP was published on May 4, 2021. In evaluating the significance of these changes, this EIR applies thresholds of significance that have been developed using: (1) criteria discussed in the CEQA Guidelines; (2) criteria based on factual or scientific information; and (3) criteria based on

regulatory standards of local, state, and/or federal agencies. Mechanisms that could cause impacts are discussed for each issue area.

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

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

3.2 Aesthetics

This section provides a description of the existing visual and aesthetic resources within the project area and relevant state and local plans and policies regarding the protection of scenic resources. Effects to the existing visual character of the project area as a result of project-related facilities are considered and mitigation is proposed based on the anticipated level of significance. The information provided in this section is summarized from the Visual Impact Assessment Letter Report – VEGA SES 2 and VEGA SES 3 Projects and Visual Impact Assessment Letter Report – VEGA SES 5 Project (Appendix B1 and B2 of this EIR, respectively) prepared by ECORP Consulting, Inc.

3.2.1 Existing Conditions

Regional

Imperial County encompasses 4,597 square miles in the southeastern portion of California. The County is bordered by Riverside County on the north, the international border of Mexico on the south, San Diego County on the west and Arizona on the east. The length and breadth of the County provide for a variety of visual resources ranging from desert, sand dunes, mountain ranges, and the Salton Sea (County of Imperial 2016).

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

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

Project Sites and Vicinity

The project sites are located on approximately 1,963 acres of privately-owned land in the unincorporated area of Imperial County, CA. The project area is located approximately 5.67 miles southeast of the unincorporated community of Niland between the unincorporated communities of Iris and Slab City.

VEGA SES 2 and 3

Topography within the VEGA SES 2 and 3 project sites consist of gentle slopes with a gradual increase in elevation from west to east and elevations range between -7 and 182 feet above mean sea level (amsl). Adjacent land uses include active agriculture and the Coachella Canal. BLM open space areas exist to the north, east, and south. Further away, approximately 3 miles to the northwest and just slightly higher in elevation than the project sites, are Slab City and Salvation Mountain. Slab City is a former military facility that now serves as the site of an informal community for artists, travelers, and winter-timer recreational vehicle (RV) campers. Salvation Mountain is an outdoor art project as the western entrance to Slab City. Both attract tourists and sightseers. However, topography, intervening

structures, and distance limit and obscure visibility of the project sites in direct views from publicly accessible portions of these areas.

The VEGA SES 2 and 3 project sites contain scattered desert vegetation. The majority of the project sites consist of creosote bush scrub and palo verde/ironwood woodland; and some bush seepweed scrub, disturbed creosote bush scrub, four-wing saltbush scrub, and tamarisk thickets. A small portion of the area adjacent to the proposed gen-tie alignment along Flowing Wells Road is active agriculture. The remainder of the project area consists of the canal and existing unpaved roadways.

VEGA SES 5

The VEGA SES 5 project site's topography is relatively flat with elevations ranging between -65 and 22 feet amsl. The majority of the VEGA SES 5 project site consists of fallow agricultural land (west of the East Highline Canal), creosote bush scrub, bush seepweed scrub, and tamarisk thickets. Other vegetation types present include iodine bush scrub. The surrounding land uses are observed to be mostly active agriculture land uses west of the East Highline Canal, vacant desert land east of the East Highline Canal, and the IID 92 kV Midway Substation which is approximately 0.50 mile southeast of the VEGA SES 5 project site.

Scenic Vista

Scenic vistas are typically expansive views from elevated areas. They may or may not be part of a designated scenic overlook or other area providing a static vista view of a landscape. The project sites are located in a rural portion of Imperial County and are not located within an area containing a scenic vista designated by the State or the County's General Plan.

Scenic Highways

According to the Conservation and Open Space Element, no State scenic highways have been designated in Imperial County (County of Imperial 2016). The project sites are not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project sites. The nearest road segment considered eligible for a State scenic highway designation is the portion of SR 111 from Bombay Beach to the County line. The project sites are located approximately 19 miles southeast of Bombay Beach; therefore, it would not be visible from the location of the proposed projects.

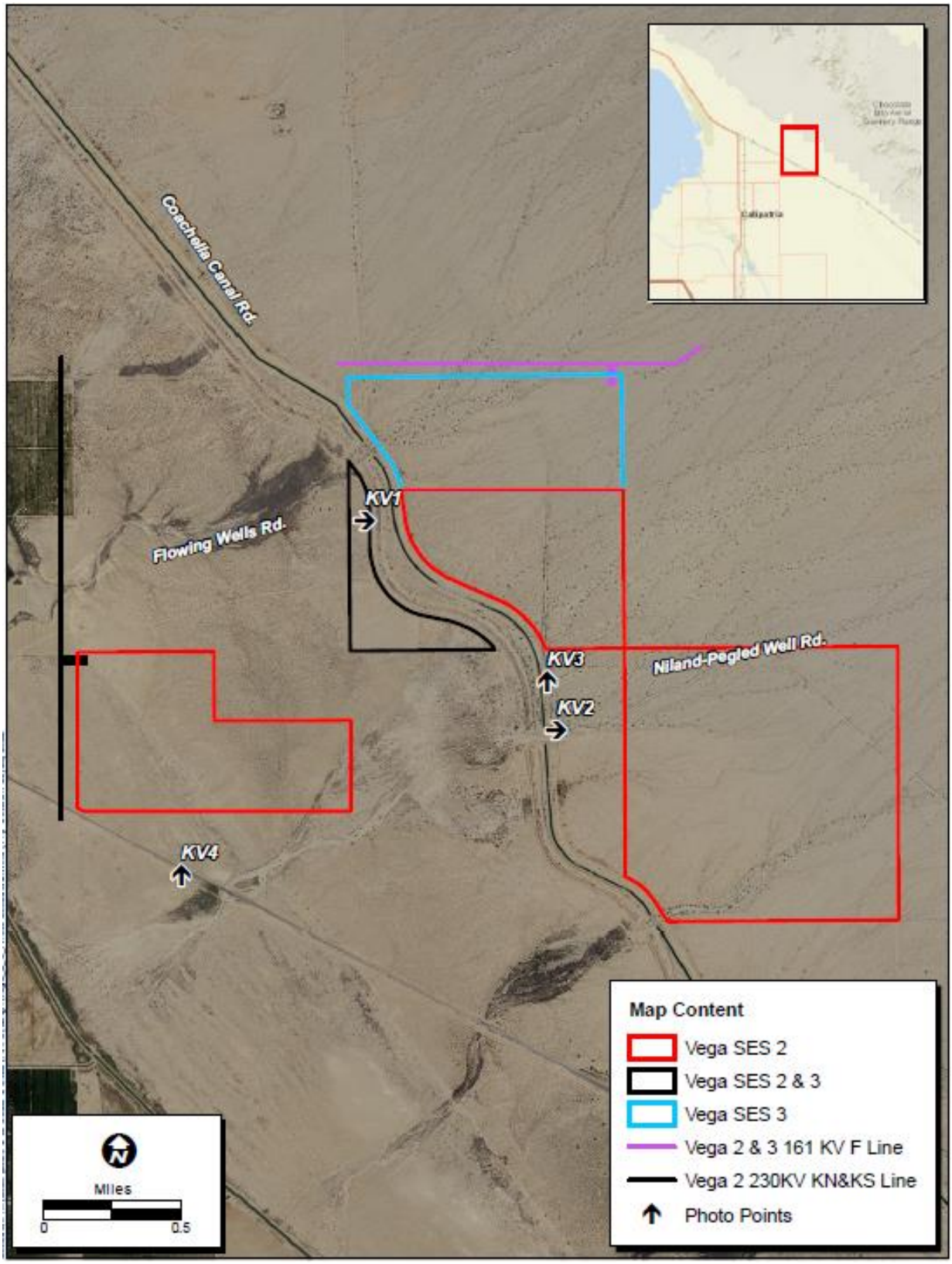
Visual Character

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

VEGA SES 2 and 3

Because it is not feasible to study every available view of the project sites, four key views that represent typical views with distinct visual characteristics in the project study area were selected. The key views reflect views of the project sites and were taken from locations within the public right-of-way. A description of the four KVs is provided below and KV locations are depicted in Figure 3.2-1.

Figure 3.2-1. Key Views - VEGA SES 2 and 3 Project Sites



Source: Appendix B1 of this EIR

KV 1 – COACHELLA CANAL ROAD, NORTH OF FLOWING WELLS ROAD

KV 1 is a view from Coachella Canal Road, north of Flowing Wells Road facing east (Figure 3.2-2). The dominant feature within KV 1 is the vegetation visible throughout the view. Also visible within this KV is the Coachella Canal berm in the middleground and the distant Chocolate Mountains in the background. This view does not exhibit any striking or distinctive visual patterns; however, the presence of the scenic mountains in the background provides an aesthetic resource, although somewhat obstructed, to the view. While the Coachella Canal is present and the berm along the edge of the canal is visible within this KV, it is free from encroaching man-made elements.

KV 2 – NILAND-PEGLEG WELL ROAD, EAST OF COACHELLA CANAL

KV 2 is a view from Niland-Pegleg Well Road, east of Coachella Canal facing east (Figure 3.2-3). Similar to KV 1, the dominant features within this KV are the vegetation visible throughout the view and the Chocolate Mountains in the background. Also visible within this KV is the Coachella Canal berm in the foreground. KV 2 does not exhibit any striking or distinctive visual patterns; however, the presence of the scenic mountains in the background provides aesthetic resources that are prominent and mostly unobstructed in the view. While a service road and the Coachella Canal berm along the edge of the canal is visible within this KV, it is mostly free from encroaching man-made elements.

KV 3 – COACHELLA CANAL ROAD, NORTH OF NILAND-PEGLEG WELL ROAD

KV 3 is a view from Coachella Canal Road, north of Niland-Pegleg Road facing north (Figure 3.2-4). The dominant features within this KV is Coachella Canal Road, the vegetation visible on either side of the road, and the Chocolate Mountains in the distant background. Also visible within this KV are apiary boxes on the east side of Coachella Canal Road. KV 3 does not exhibit any striking or distinctive visual patterns. The presence of the scenic mountains in the distant background are visible but are affected by atmospheric conditions (e.g., haze). However, the mountains do provide aesthetic resources that are somewhat obstructed in the view. Due to the presence of the roadway and apiary boxes within this KV, the view contains highly visible encroaching man-made elements.

KV 4 – NOFFSINGER ROAD

KV 4 is a view from Noffsinger Road facing north (Figure 3.2-5). The dominant features within this KV are the existing Union Pacific Yuma subdivision railroad track, sparse vegetation in the foreground with denser vegetation beyond the railroad track, and the Chocolate Mountains in the background. Also visible within this view are marker posts associated with an underground utility line. This view does not exhibit any striking or distinctive visual patterns; however, the presence of the scenic mountains in the background, although affected by atmospheric conditions (e.g., haze), provide aesthetic resources that are mostly unobstructed in the view. Due to the presence of the railroad track and marker posts visible within this KV, the view contains highly visible encroaching man-made elements.

Figure 3.2-2. Key View 1: Coachella Canal Road, North of Flowing Wells Road - VEGA SES 2 and 3

Source: Appendix B1 of this EIR

Figure 3.2-3. Key View 2: Niland-Pegleg Well Road, East of Coachella Canal - VEGA SES 2 and 3

Source: Appendix B1 of this EIR

Figure 3.2-4. Key View 3: Coachella Canal Road, North of Niland-Pegleg Road - VEGA SES 2 and 3

Source: Appendix B1 of this EIR

Figure 3.2-5. Key View 4: Noffsinger Road - VEGA SES 2

Source: Appendix B1 of this EIR

VEGA SES 5

Two KVs that represent typical views with distinct visual characteristics in the VEGA SES 5 project area were selected. The key views reflect views of the area and were taken from locations within the public right-of-way. A description of the two KVs is provided below and KV locations are depicted in Figure 3.2-6.

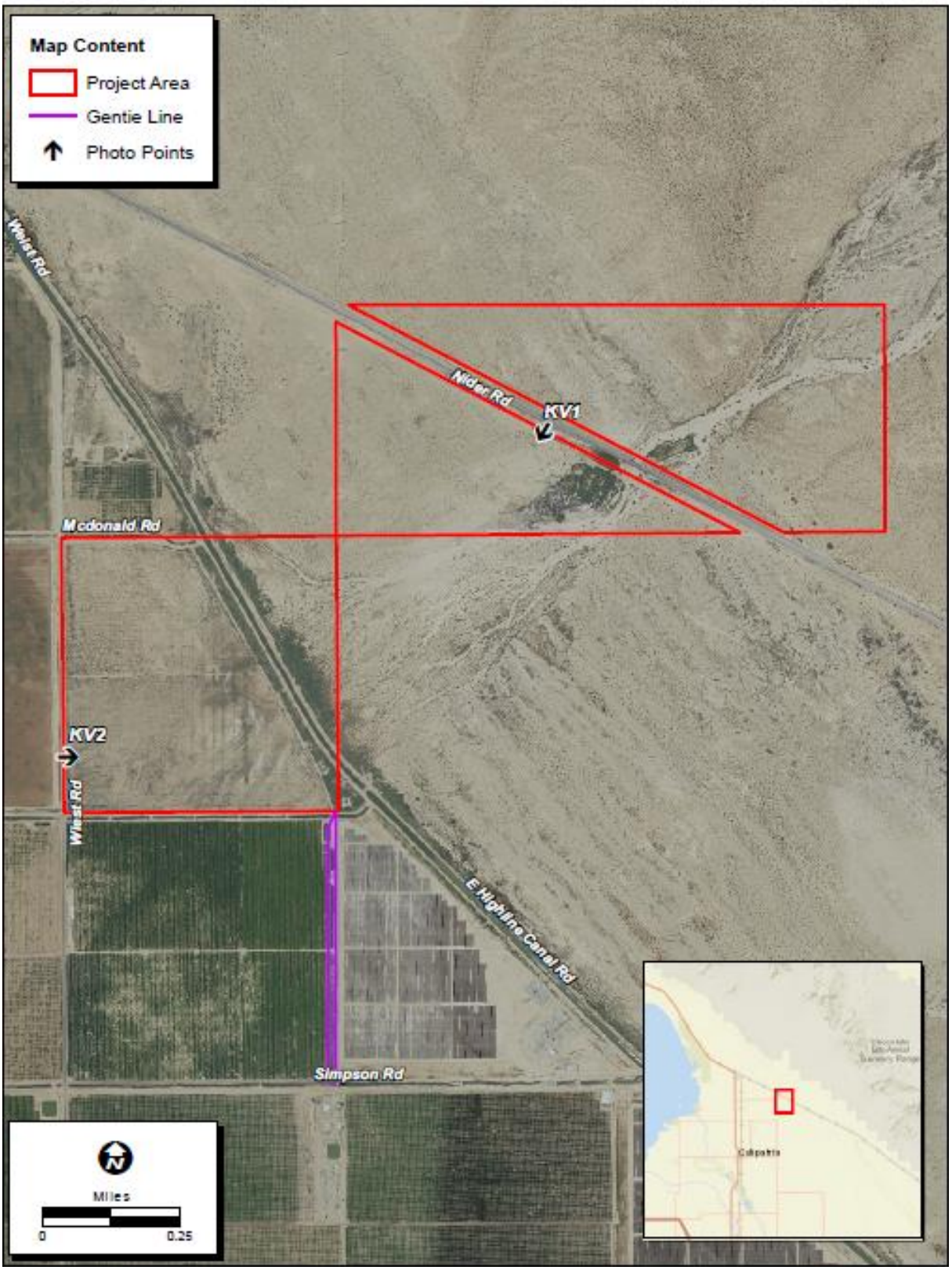
KEY VIEW 1 – NOFFSINGER ROAD, NORTH OF WASH AREA

KV 1 is a view from Noffsinger Road, north of the wash area facing south (Figure 3.2-7). The dominant feature within this KV is the vegetation visible throughout the view and Noffsinger Road in the immediate foreground. There are no distant topographic features in the background. This view does not exhibit any striking or distinctive visual patterns. The view is free from encroaching man-made elements.

KEY VIEW 2 – WIEST ROAD, SOUTH OF MCDONALD ROAD

KV 2 is a view from Wiest Road, south of McDonald Road facing east (Figure 3.2-8). The dominant features within this KV are the vegetation visible only in the foreground and a fallow agricultural field in the middleground. The Chocolate Mountains are barely visible in the background because they are masked by atmospheric conditions (e.g., haze). This view does not exhibit any striking or distinctive visual patterns; however, the presence of the scenic mountains in the background, although masked by haze, provides an aesthetic resource somewhat visible within the view. While overhead power lines are visible within this KV, it is mostly free from encroaching man-made elements.

Figure 3.2-6. Key Views - VEGA SES 5 Project Site



Source: Appendix B2 of this EIR

Figure 3.2-7. Key View 1: Noffsinger Road, North of Wash Area

Source: Appendix B2 of this EIR

Figure 3.2-8. Key View 2: Wiest Road, South of McDonald Road

Source: Appendix B2 of this EIR

Light, Glare, and Glint

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

The project sites are currently vacant and do not generate any light or glare. The majority of the light and glare in the project area is a result of motor vehicles traveling on surrounding roadways, airplanes, and farm equipment. Local roadways generate glare both during the night hours when cars travel with lights on, and during daytime hours because of the sun's reflection from cars and pavement surfaces.

The Chocolate Mountains are located to the north and east of the project site. The Chocolate Mountain Aerial Gunnery Range is used by the United States Marine Corps (USMC) for training purposes.

3.2.2 Regulatory Setting

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

State

California Department of Transportation

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

Local

Imperial County General Plan

The Imperial County General Plan contains policies for the protection and conservation of scenic resources and open spaces within the County. These policies also provide guidance for the design of new development. The Conservation and Open Space Element of the General Plan provides specific goals and objectives for maintaining and protecting the aesthetic character of the region. Table 3.2-1 provides an analysis of the proposed projects' consistency with the Conservation and Open Space Element Goal 5. Additionally, the Circulation and Scenic Highways Element of the General Plan provides policies for protecting and enhancing scenic resources within highway corridors in Imperial County, consistent with the Caltrans State Scenic Highway Program.

County of Imperial Land Use Ordinance, Title 9

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

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

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

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

General Plan Policies	Consistency with General Plan	Analysis
Goal 5: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.	Consistent	As described in Section 3.2.3, the proposed projects would result in changes to the existing visual character of the project sites. However, public views of the project site are limited, and the proposed projects would not result in a significant deterioration in the visual character of the project site or surrounding area from public viewpoints.
Objective 5.1: Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.	Consistent	The project sites are located on both sides of the East Highline Canal and occupy both active agricultural land and desert lands. As described in Section 3.2.3, proposed onsite apparatus would be approximately 7.5 feet in height and the proposed security fencing would be approximately 6 feet in height. Solar PV arrays would be spaced approximately 15 to 25 feet apart allowing for views of the Chocolate Mountains from the public right-of-way. Further, views from project adjacent roadways that are publicly accessible, would be partially to fully obscured by roadside vegetation or berms, and such views would likely be of short duration given the probability of the viewers being in moving vehicles.

Source: County of Imperial 2016

3.2.3 Impacts and Mitigation Measures

Thresholds of Significance

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

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

Methodology

This visual impact analysis is based on field observations conducted in January 2021, as well as a review of maps and aerial photographs for the project area. Evaluation of potential visual impacts and changes resulting from implementation of the proposed projects are based on the following criteria:

Change in Visual Quality

The difference in visual quality between the existing environmental setting and post-project condition is considered visual quality change. Those changes are identified by studying site plans, which provide information on the various elements that will be removed from and incorporated into the current viewshed and the degree of change in the existing setting.

Impacts to Visual Resources

Visual resources from both the natural and built environments can enhance the visual character and aesthetic quality of an area. The project areas were studied for visual resources. Visual resources can be associated with local events and history that represent and enhance the visual character of the local area. A project that substantially alters important visual resources can result in significant visual impacts. Mitigation is typically implemented to remove or minimize significant visual impacts.

Light, Glare, Shade, and Shadow

The existing light environment serves as a baseline to conduct light analysis and compare potential impacts caused by the introduction of the proposed projects. Impacts relating to light, glare, shade, and shadow were examined during field observations conducted in January 2021, and by the photographs to help establish light conditions during various times of the day and night and estimate the potential changes in the environment from implementation of the proposed projects. New light sources and reduction or elimination of light could be considered impacts that could change the natural environmental setting of the project sites. Impacts are evaluated based on how much existing conditions change, the degree of those changes, and the sensitivity of the affected environment.

Compatibility with Visual Policies

The Imperial County General Plan and other regulations or policies relating to visual resources and setting that are applicable to the proposed projects have been identified, reviewed, and used in the preparation of this analysis. Proposed visual changes that conflict with the adopted County guidelines could be considered a significant impact; however as shown in Table 3.2-1, the proposed projects would be consistent with the General Plan.

Impact Analysis

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

VEGA SES 2, 3, and 5

The Chocolate Mountains are located to the north and east of the project sites. The County has identified the Chocolate Mountains as a scenic resource; however, no scenic vista points are identified in the County General Plan and none of the roadways in the project area are designated as a scenic highway or roadways. During construction, the use of standard construction equipment including, but not limited to, trucks, cranes, and tractors would be required. The presence of this equipment within the project sites during construction would alter views of the area from undeveloped and fallow agricultural land to a construction site. However, the views of construction activity from the surrounding vicinity would be temporary and would not involve any designated scenic vistas. Therefore, no impacts to a scenic vista would occur during construction.

Upon project operation, and with implementation of the solar infrastructure, the overall visual character of the project sites would change. However, given that there are no scenic resources or vistas within proximity to the project sites, project operation would not have a substantial adverse effect on a scenic vista. Impacts are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

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

VEGA SES 2, 3, and 5

The project sites are not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project sites. The nearest road segment considered eligible for a State Scenic Highway designation is the portion of SR 111 from Bombay Beach to the County line. The project sites are located approximately 19 miles south of Bombay Beach. Therefore, no impacts to scenic resources within a designated state scenic highway would occur.

Mitigation Measure(s)

No mitigation measures are required.

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

VEGA SES 2 and 3

Short-term visual impacts would occur in association with construction activities, including introducing heavy equipment (e.g., cranes), staging and materials storage areas and potential dust and exhaust to the project area. While construction equipment and activity may present a visual nuisance, it would be temporary (approximately 12-18 months) and would not represent a permanent change in views. Therefore, impacts associated with degrading the existing visual character or quality of the project sites during construction are considered less than significant.

As described in Section 3.2.1, four KVs were selected that reflect views of the VEGA SES 2 and 3 project sites and were taken from locations within the public right-of-way. The Visual Impact Assessment (Appendix B1 of this EIR) evaluated the potential visual impacts within these four KVs as a result of the proposed projects. The potential impacts on these KVs are discussed below.

KV 1. From KV 1 (Figure 3.2-2), the overall character and experience for a viewer would change substantially with implementation of the projects. Vegetation removal and grading of the project sites to accommodate the construction of solar apparatus and security fencing would result in the greatest physical change. Other facilities proposed such as roads, pads, underground utilities, and stormwater facilities would not be visible from the public ROW. The County has identified the Chocolate Mountains as a scenic resource; however, no scenic vista points are identified in the County General Plan.

Additional visual changes within this KV would be the installation of poles and electrical lines associated with the gen-tie line.

The proposed PV module frames when installed on pads would be approximately 7.5 feet in height and the proposed security fencing would be approximately 6 feet in height. Currently, the existing vegetation on the project sites range from short shrubs to large bushes and views of the Chocolate Mountains in the background are already partially obstructed by the existing Coachella Canal berm and large bushes on the project sites. The installation of the new PV module frames would also result in the obstruction of the Chocolate Mountains as they are similar in height to existing large bushes on the site. PV module frames would be arranged in arrays spaced approximately 15 to 25 feet apart to maximize performance and allow access for maintenance and cleaning. As a result of the spacing of the arrays and relatively low-profile of the solar facility in general, view corridors of the Chocolate Mountains would be maintained throughout the site as a viewer travels along Coachella Canal Road. The construction of gen-tie poles and electrical lines would introduce manmade elements into the view; however, the profile of these structures and lines are slim and would not substantially obstruct existing views of the mountains.

KV 2. Similar to KV 1, the overall character and experience for the viewer would change substantially at KV 2 (Figure 3.2-3) with implementation of the proposed projects. The main physical change would be the removal of vegetation and grading of the project sites; as well as installation of poles and electrical lines associated with the gen-tie line.

The proposed onsite apparatus would be approximately 7.5 feet in height and the proposed security fencing would be approximately 6 feet in height. The installation of the new PV module frames would also result in the obstruction of the Chocolate Mountains as they are similar in height to existing large bushes on the site; however, from this key view vantage point, the Chocolate Mountains in the background are relatively unobstructed.

Similar to KV 1, given the spacing of the arrays (15 to 25 feet apart) and relatively low-profile of the solar facility in general, view corridors of the Chocolate Mountains would be maintained throughout the site as a viewer travels along Coachella Canal Road. The construction of gen-tie poles and electrical lines would introduce manmade elements into the view; however, the profile of these structures and lines are slim and would not substantially obstruct existing views of the mountains.

KV 3. The overall character and experience for the viewer from KV 3 (Figure 3.2-4) would change moderately with implementation of the proposed projects. The main physical change would be the removal of vegetation and grading of the project sites; as well as installation of poles and electrical lines associated with the gen-tie.

The installation of the new PV module frames would result in the obstruction of the Chocolate Mountains as they are similar in height to existing large bushes on the site. However, views of the Chocolate Mountains from Coachella Canal Road and the viewshed to the west of the road would be maintained as no project-related facilities would be constructed that would obstruct views in those areas. Similar to KV1 and KV 2, the construction of gen-tie poles and electrical lines would introduce manmade elements into the view; however, the profile of these structures and lines are slim and would not substantially obstruct existing views of the mountains.

KV 4. The overall character and experience for the viewer from KV 4 (Figure 3.2-5) would change slightly with implementation of the proposed projects. The main physical change that would occur within KV 4 is the complete removal of vegetation and grading of the project site which is beyond the railroad tracks to accommodate the construction of solar apparatus and security fencing. The installation of the new PV module frames would not result in the obstruction of the Chocolate

Mountains and would align with the existing horizon due to the distance away from the KV 4 vantage point. Therefore, the views of the Chocolate Mountains would be maintained throughout the site as a viewer travels along Noffsinger Road.

VEGA SES 5

As described in Section 3.2.1, two KVs were selected that reflect views of the VEGA SES 5 project site and were taken from locations within the public right-of-way. The Visual Impact Assessment (Appendix B2 of this EIR) evaluated the potential visual impacts within these two KVs as a result of the proposed projects. The potential impacts on these KVs are discussed below.

KV 1. From KV 1 (Figure 3.2-7), the overall character and experience for the viewer would change substantially with implementation of the proposed project. Vegetation removal and grading of the VEGA SES 5 project site to accommodate the construction of solar apparatus and security fencing would result in the greatest physical change. Other facilities proposed such as roads, pads, underground utilities, and stormwater facilities would not be visible from the public right-of-way. Additionally, no scenic resources are visible within this KV.

Onsite vegetation would be completely removed, and the site would be graded to accommodate the installation of the PV module frames in arrays, substation, and BESS. The construction of gen-tie poles and electrical lines would not be visible from this KV.

KV 2. The overall character and experience for the viewer would change substantially at KV 2 (Figure 3.2-8) with implementation of the proposed project. The main physical change that would occur within this view is the complete removal of vegetation and the fallow agricultural field and grading of the project site to accommodate the construction of solar equipment and security fencing. The installation of the new PV module frames would result in the obstruction of the Chocolate Mountains due to the distance away from this vantage point. However, PV module frames would be arranged in arrays spaced approximately 15 to 25 feet apart and as a result of the spacing of the arrays, view corridors of the Chocolate Mountains would be maintained throughout the site as a viewer travels along Wiest Road. The construction of gen-tie poles and electrical lines would not be visible from this KV.

Conclusion

Implementation of the proposed projects would convert the project sites from vacant and fallow agricultural lands to solar energy facilities. As discussed above, depending on the vantage point, the existing visual character of the sites and the quality of views in terms of visibility beyond the sites would change given the existing nature of the sites which contain fallow agricultural and vacant desert land. However, these open space vegetated areas and agricultural areas impacted by the proposed projects are not considered to be scenic resources by the County of Imperial.

In the context of topographical conditions and relatively low profile of the project components, the proposed projects would not create an adverse or permanent visual obstruction of the background views of the desert or mountain areas to the north and east of the project sites. Existing views of the Chocolate Mountains are already partially obstructed by existing tall vegetation and masked by atmospheric conditions (e.g., haze). Additionally, as previously identified, proposed onsite apparatus would be approximately 7.5 feet in height and the proposed security fencing would be approximately 6 feet in height. Solar PV arrays would be spaced approximately 15 to 25 feet apart allowing for views of the Chocolate Mountains from the public right-of-way. Further, views from project adjacent roadways that are publicly accessible, would be partially to fully obscured by roadside vegetation or

berms, and such views would likely be of short duration given the probability of the viewers being in moving vehicles. Therefore, impacts to visual character would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

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

VEGA SES 2, 3, and 5

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

NIGHTTIME LIGHTING

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

If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used. Based on these considerations, and the distance to potential viewers, the proposed projects are not anticipated to create a new source of substantial light which would adversely affect nighttime views in the project area, and the impact is considered less than significant.

GLARE AND GLINT

The proposed projects would involve the installation of PV solar arrays which have low reflectivity. Solar PV modules are specifically designed to reduce reflection as any reflected light cannot be converted into energy. Research has shown that reflectivity from PV panels are similar to reflections from water (Appendix B1 and B2 of this EIR). The projects would not use other reflective materials such a fiberglass, aluminum or vinyl/plastic siding, galvanized products, and brightly painted steel roofs that have the potential to create on- and off-site glare. Further, the proposed projects are located in an undeveloped area of Imperial County. There are also no established residential neighborhoods immediately adjacent to the project sites or airports within 2 miles of the project sites. Therefore, the PV panels would not create a new source of substantial light or glare that would affect day or nighttime views. This impact is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.2.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the proposed projects, the proposed projects will be decommissioned and dismantled. The project sites are relatively flat and primarily characterized by a level elevation. Therefore, no grading or significant landform modifications would be required during decommissioning activities upon site restoration in the future. Although the project sites would be visually disrupted in the short-term during decommissioning activities, because extensive grading is not required and these activities would be temporary, the visual character of the project sites would not be substantially degraded in the short-term and related impacts would be less than significant.

Residual

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

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3.3 Agricultural Resources

This section provides an overview of existing agricultural resources within the project sites and identifies applicable federal, state, and local policies related to the conservation of agricultural lands. This includes a summary of the production outputs, soil resources, and adjacent operations potentially affected by the projects. The impact assessment in Section 3.3.3 provides an evaluation of potential adverse effects on agricultural resources based on criteria derived from the CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description. Section 3.3.4 provides a discussion of residual impacts, if any.

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

3.3.1 Existing Conditions

Imperial County

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

Imperial County agriculture is a major producer and supplier of high-quality plant and animal foods and non-food products. In 2019, agriculture contributed a total of $2.01 billion to the county economy. Vegetable and melon crops were the single largest production category by dollar value ($799 million). Livestock represented the second largest category ($522 million) and consisted mostly of feedlot cattle ($449 million). Field crops ranked third with $498 million (Imperial County Agricultural Commissioner 2019).

Project Sites

The VEGA SES 2 and 3 and a portion of the VEGA SES 5 Project sites east of the East Highline Canal are not currently under cultivation and contain scattered desert vegetation. Meanwhile, the VEGA SES 5 Project site west of the East Highline Canal contains fallow agricultural land.

The agricultural portion of VEGA SES 5 (APN 025-260-022) that is west of the East Highline Canal contains fallow agricultural land with scattered dry crop residue. The agricultural field is bounded by McDonald Road to the north, Schrimpf Road to the south, and Weist Road to the west. The East Highline Canal cuts across APN 025-260-022 diagonally in a northwest to southeast direction. Within the agricultural portion of the VEGA SES 5 Project site, there are subsurface tile drainage pipelines that are generally aligned north to south and carry irrigation wastewater to the N Drain at the southwest corner of the field.

Important Farmland

According to the California Department of Conservation's (DOC) California Important Farmland Finder, the majority of the project sites are designated as Other Land (DOC 2021). As shown in Figure 3.3-1, a portion of the VEGA SES 5 Project site (APN 025-260-022) is designated as Farmland of Local Importance. Farmland of Local Importance is not considered an "agricultural land"

per CEQA Statute Section 21060.1(a). The project sites do not contain Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.

Soil types of the project site are provided in Section 3.7, Geology and Soils (see Figure 3.7-1).

Williamson Act Contract Land

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

3.3.2 Regulatory Setting

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

State

California Land Conservation Act

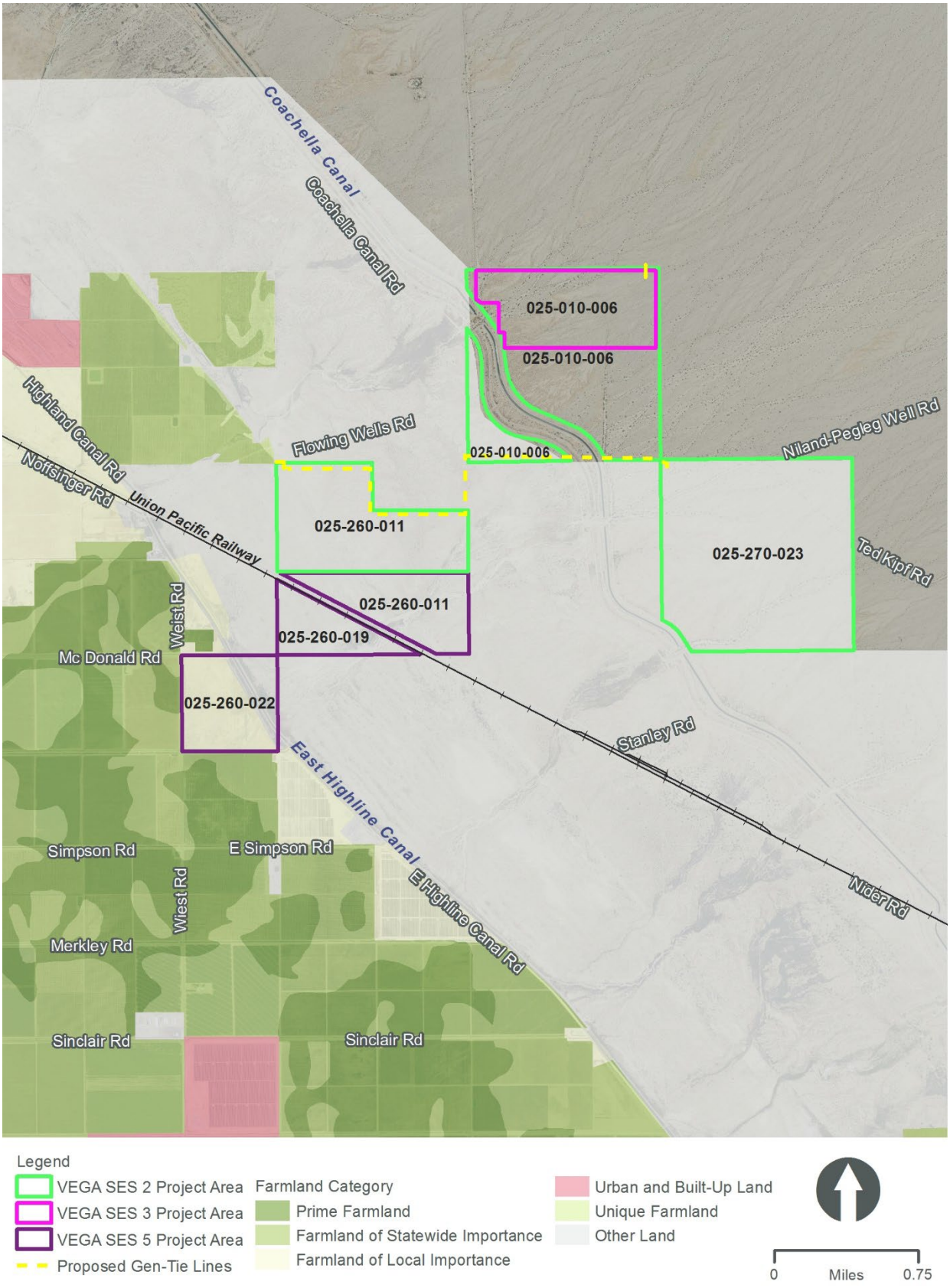
The Williamson Act (California Land Conservation Act, California Government Code, Section 51200 et seq.) is a statewide mechanism for the preservation of agricultural land and open space land. The Act provides a comprehensive method for local governments to protect farmland and open space by allowing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

Under the provisions of the Williamson Act (California Land Conservation Act 1965, Section 51200), landowners contract with the County to maintain agricultural or open space use of their lands in return for reduced property tax assessment. The contract is self-renewing and the landowner may notify the County at any time of intent to withdraw the land from its preserve status. Withdrawal involves a 10-year period of tax adjustment to full market value before protected open space can be converted to urban uses. Consequently, land under a Williamson Act Contract can be in either a renewal status or a nonrenewable status. Lands with a nonrenewable status indicate the farmer has withdrawn from the Williamson Act Contract and is waiting for a period of tax adjustment for the land to reach its full market value. Nonrenewable and cancellation lands are candidates for potential urbanization within a period of 10 years.

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

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

Figure 3.3-1. Important Farmland



California Farmland Mapping and Monitoring Program

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

- Prime Farmland has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- Unique Farmland consists of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- Farmland of Local Importance is land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
- Urban and Built-up Land is occupied by structures with a building density of at least one unit to 1.5 acres or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, prisons, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.
- Water is defined as perennial water bodies with an extent of at least 40 acres.
- Other Land is land not included in any other mapping category. Common examples include low-density rural developments, vegetative and riparian areas not suitable for livestock grazing, confined animal agriculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land. More detailed data on these uses are available in counties containing the Rural Land Use Mapping categories.

The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every 2 years. Table 3.3-1 provides a summary of agricultural land within Imperial County converted to non-agricultural uses during the time frame from 2016 to 2018.

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

Land Use Category	Total Acreage Inventoried		2016 to 2018 Acreage Changes			
	2016	2018	Acres Lost (-)	Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland	190,206	189,163	1,699	656	2,355	-1,043
Farmland of Statewide Importance	297,272	291,596	6,330	654	6,984	-5,676
Unique Farmland	2,071	1,905	190	24	214	-166
Farmland of Local Importance	38,923	39,711	1,587	2,375	3,962	788
Important Farmland Subtotal	***528,472***	***522,375***	***9,806***	***3,709***	***13,515***	***-6,097***
Grazing Land	0	0	0	0	0	0
Agricultural Land Subtotal	528,472	522,375	9,806	3,709	13,515	-6,097
Urban and Built-Up Land	37,412	41,764	301	4,653	4,954	4,352
Other Land	461,891	463,488	712	2,309	3,021	1,597
Water Area	749	897	125	273	398	148
Total Area Inventoried	**1,028,524**	**1,028,524**	**10,944**	**10,944**	**21,888**	**0**

Source: DOC 2018

Local

County of Imperial General Plan

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

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

The County's Agricultural Element identifies several Implementation Programs and Policies for the preservation of agricultural resources. The Agricultural Element recognizes that the County can and should take additional steps to provide further protection for agricultural operations and at the same time provide for logical, organized growth of urban areas. The County must be specific and

consistent about which lands will be maintained for the production of food and fiber and for support of the County's economic base. The County's strategy and overall framework for maintaining agriculture includes the following policy directed at the preservation of Important Farmland:

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

The following program is provided in the Agricultural Element:

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

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

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

Agricultural Element Programs that address "leapfrogging" or "checkerboard" development include:

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

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

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

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

General Plan Policies	Consistency with General Plan	Analysis
Goal 1. All Important Farmland, including the categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance, as defined by federal and state agencies, should be reserved for agricultural uses.	Consistent	The project sites do not contain Prime Farmland or Farmland of Statewide Importance. Therefore, the proposed projects would not convert land designated as Prime Farmland or Farmland of Statewide Importance to non-agricultural uses. A portion of the VEGA SES 5 Project site (APN 025-260-022) is designated as Farmland of Local Importance. The VEGA SES 5 Project would temporarily convert Farmland of Local Importance to non-agricultural uses. However, as part of the project, the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers, and other structures on the project site, as well as restoration of the site to pre-project condition. Therefore, the proposed VEGA SES 5 Project would not permanently convert 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.	Consistent	The project sites are located within the County's designated Renewable Energy zone and are, therefore, considered to be located within an area that has been determined to be appropriate for the development of solar facilities. The majority of the project sites are designated as Other Land. A portion of the VEGA SES 5 Project site (APN 025-260-022) is designated as Farmland of Local Importance. A reclamation plan would be prepared for the project, which, when implemented, would return the site to pre-project conditions after the solar use is discontinued.
Objective 1.6. Recognize and preserve unincorporated areas of the County, outside of city sphere of influence areas, for irrigation agriculture, livestock production, aquaculture, and other special uses.	Consistent.	The project sites are located within the County's designated Renewable Energy zone and is, therefore, considered to be located within an area that has been determined to be appropriate for the development of solar facilities. The VEGA SES 5 Project would temporarily convert land located in an unincorporated area to non-agricultural uses; however, with the approval of the CUP, the VEGA SES 5 Project would be considered an allowable use in an agricultural zone as a conditionally-allowed use.
Objective 1.8. Allow conversion of agricultural land to non-agricultural uses including renewable energy only where a clear and immediate need can be demonstrated, based on economic benefits, population projections and lack of other available land (including land within incorporated cities) for such non-agricultural uses. Such conversion shall also be allowed only where such	Consistent	The project sites are located within the County's designated Renewable Energy zone and are, therefore, consistent with the General Plan. Additionally, with the approval of the CUPs, the projects would be consistent with the County's Land Use Ordinance. Therefore, the projects are consistent with the County's General Plan land use designation.

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

General Plan Policies	Consistency with General Plan	Analysis
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.		
Objective 1.11. Control and prevent soil erosion when possible.	Consistent	The projects would implement BMPs within the site during construction and long-term operation of the project.
Goal 2. Adopt policies that prohibit "leapfrogging" or "checkerboard" patterns of nonagricultural development in agricultural areas and confine future urbanization to adopted Sphere of Influence area.	Consistent	The projects are located within the County's designated Renewable Energy zone, which identifies areas that are considered appropriate for the development of renewable energy. The projects do not include a residential component that would induce urbanization adjacent to the project. Furthermore, with the approval of the CUPs, the projects would be consistent with the County's Land Use Ordinance. Consistency with the Land Use Ordinance implies consistency with the General Plan land use designation.
Objective 2.1. Do not allow the placement of new non-agricultural land uses such that agricultural fields or parcels become isolated or more difficult to economically and conveniently farm.	Consistent	The projects are located within the County's designated Renewable Energy zone, which identifies areas that are considered appropriate for the development of renewable energy. Neither construction nor operation of the solar facility would not make it difficult to economically or conveniently farm.
Objective 2.2. Encourage the infilling of development in urban areas as an alternative to expanding urban boundaries.	Consistent	The projects are located within the County's designated Renewable Energy zone, which identifies areas that are considered appropriate for the development of renewable energy. The projects consist of the construction and operation of solar facilities. While the projects would introduce development in the area, it would not include residential uses that would, in turn, create a demand for other uses, such as commercial, employments centers, and supporting services.
Objective 2.3. Maintain agricultural lands in parcel size configurations that help assure that viable farming units are retained.	Consistent	The projects do not involve the subdivision of the property into smaller parcels. The projects are considered a temporary industrial use but would not induce growth in the area nor result in the expansion of urban boundaries. While the projects would temporarily convert agricultural land to non-agricultural uses; a reclamation plan would be prepared for the project sites, which, when implemented, would return the site to pre-project conditions after the solar uses are discontinued.
Objective 2.4. Discourage the parcelization of large holdings.	Consistent	The projects do not involve the subdivision of the property into smaller parcels. The size of the existing parcels would be retained for future agricultural use following site restoration.
Objective 2.6. Discourage the development of new residential or other non-agricultural areas outside of city "sphere of influence" unless	Consistent	The projects are located within the County's designated Renewable Energy zone, which identifies areas that are considered appropriate for the development of renewable energy.

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

General Plan Policies	Consistency with General Plan	Analysis
designated for non-agricultural use in the County General Plan, or for necessary public facilities.		
Goal 3. Limit the introduction of conflicting uses into farming areas, including residential development of existing parcels which may create the potential for conflict with continued agricultural use of adjacent property.	Consistent	Upon approval of the CUP, the VEGA SES 5 Project would be an allowable use within the applicable agricultural zone. Additionally, the projects do not include the development of housing. The solar development would be compatible with existing agricultural uses to the west.
Objective 3.2. Enforce the provisions of the Imperial County Right-to-Farm Ordinance (No. 1031).	Consistent	The Imperial County Right-to-Farm Ordinance would be enforced. Existing nuisance issues, such as noise, dust, and odors from existing agricultural use would not impact the projects given the general lack of associated sensitive uses (e.g., residences). Likewise, with mitigation measures proposed in other resource sections (e.g., air quality, and noise) project-related activities would not adversely affect adjacent agricultural operations.
Objective 3.3. Enforce the provisions of the State nuisance law (California Code Sub-Section 3482).	Consistent	The provisions of the state nuisance law would be incorporated into the projects. As discussed below, there is the potential that weeds or other pests may occur within the solar field if these areas are not properly maintained and managed to control weeds and pests. Mitigation Measure AG-1 requires the project applicant to develop a Pest Management Plan prior to the issuance of a grading permit or building permit (whichever occurs first).

Source: County of Imperial 2015
BMP – best management practice; CUP – conditional use permit; DOC – Department of Conservation; IID – Imperial Irrigation District

3.3.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.

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

Methodology

This analysis evaluates the potential for the projects, as described in Chapter 2, Project Description, to adversely impact agricultural resources within the project sites based on the applied significance criteria as identified above. The analysis prepared for this EIR relied on Important Farmland and Williamson Act maps for Imperial County produced by the California DOC's Division of Land Resource Protection. These sources were used to determine the agricultural significance of the land in the project sites. Per the County of Imperial General Plan, Farmland of Local Importance is also considered an important farmland.

Additionally, potential conflicts with existing agricultural zoning or other changes resulting from the implementation of the projects, which could indirectly remove Important Farmland from agricultural production or reduce agricultural productivity were considered. Sources used in this evaluation included, but were not limited to, the Imperial County General Plan and zoning ordinance. The conceptual site plans for the projects (Chapter 2) was also used to evaluate potential impacts.

Impact Analysis

Impact 3.3-1 Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use?

VEGA SES 2 and 3

According to the California DOC's California Important Farmland Finder, the VEGA SES 2 and 3 Project sites are designated as Other Land (DOC 2021). The VEGA SES 2 and 3 Project sites do not contain Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Therefore, the proposed projects would not convert land designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural uses and no impact is identified.

VEGA SES 5

According to the California DOC's California Important Farmland Finder, the majority of the VEGA SES 5 Project site is designated as Other Land (DOC 2021). A portion of the VEGA SES 5 Project site (APN 025-260-022) is designated as Farmland of Local Importance. It should be noted that analysis of Other Land and Farmland of Local Importance is not required under CEQA significance criteria, as these designations are not considered an "agricultural land" per CEQA Statute Section 21060.1(a). The VEGA SES 5 Project would temporarily convert Farmland of Local Importance to non-agricultural uses. However, as a condition of project approval (CUP condition), the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers, and other structures on the project site, as well as restoration of the site to pre-project conditions. The County is responsible for approving the reclamation plan for the projects and confirming that financial assurances for the projects are 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. Implementation of the

reclamation plan would reduce the impact associated with the temporary conversion of Farmland of Local Importance to non-agricultural uses to a level less than significant.

Mitigation Measure(s)

No mitigation measures are required.

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

VEGA SES 2, 3 and 5

Williamson Act. The VEGA SES 2 and 3 Project sites are not located on Williamson Act contracted land (DOC 2016). Therefore, the projects would not conflict with a Williamson Act contract and no impact would occur.

Agricultural Zoning. The VEGA SES 2 and 3 Project sites are zoned Open Space/Preservation with a Renewable Energy Zone Overlay (S-2-RE). The VEGA SES 2 and 3 Projects would not conflict with existing zoning for agricultural use and no impact is identified.

VEGA SES 5

Williamson Act. The VEGA SES 5 Project site is not located on Williamson Act contracted land (DOC 2016). Therefore, the project would not conflict with a Williamson Act contract and no impact would occur.

Agricultural Zoning. The VEGA SES 5 Project site is zoned as General Agriculture with a Renewable Energy Zone Overlay (A-2-RE), Heavy Agriculture with a Renewable Energy Zone Overlay (A-3-RE) and S-2-RE Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County:

j) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)

s) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.

z) Electrical substations in an electrical transmission system (500 kV/230 kV/161 kV)

bb) Facilities for the transmission of electrical energy (100–200 kV)

ww) Resource extraction and energy development as per Division 17

aaa) Solar energy electrical generator

Pursuant to Title 9, Division 5, Chapter 9, the following uses are permitted in the A-3 zone subject to approval of a CUP from Imperial County:

i) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)

o) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.

oo) 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 or Federal government, and provided such facilities shall be approved subsequent to coordination review of the Imperial Irrigation District for electrical matters, meeting the requirements in Division 17.

zz) Solar energy plants meeting the requirements in Division 17

Upon approval of the CUP, the project's use would be consistent with the Imperial County Land Use Ordinance and thus is also consistent with the General Plan land use designation of the site. Additionally, the operation of the solar generating facility is not expected to inhibit or adversely affect adjacent agricultural operations through the placement of sensitive land uses, generation of excessive dust or shading, or place additional development pressures on adjacent areas. Based on these considerations, the impact is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.3-3 Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

VEGA SES 2 and 3

As discussed under Impact 3.3-1, the VEGA 2 and 3 Project sites do not contain Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. Furthermore, the VEGA 2 and 3 Project sites are not zoned for agricultural uses. Therefore, the VEGA 2 and 3 Projects would not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use. No impact is identified.

VEGA SES 5

The Agricultural Element of the County's General Plan serves as the primary policy statement for implementing development policies for agricultural land use in Imperial County. The goals, objectives, implementation programs, and policies found in the Agricultural Element provide direction for private development as well as government actions and programs. A summary of the relevant Agricultural goals and objectives and the project's consistency with applicable goals and objectives is summarized in Table 3.3-2. As provided, the projects are generally consistent with certain Agricultural Element Goals and Objectives of the County General Plan.

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

As discussed under Impact 3.3-1, the VEGA SES 5 Project site does not contain Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Furthermore, the project site is located

within the Renewable Energy Zone and the project is, therefore, considered an appropriate use in this area. Additionally, as a condition of project approval (CUP condition), the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers, and other structures on the project site, as well as restoration of the site to pre-project conditions. The County is responsible for approving the reclamation plan for the project and confirming that financial assurances for the project are in conformance with Imperial County ordinances prior to the issuance of any building permits. This shall be made a condition of approval and included in the CUP.

The nature of the project warrants that it be located adjacent to existing electrical transmission infrastructure. The electrical energy produced by the VEGA SES 5 Project would be conducted through the project's interconnection facilities to the IID's 92 kV Midway Substation.

With the approval of the CUP, the project would be consistent with the County's Land Use Ordinance. Consistency with the Land Use Ordinance implies consistency with the General Plan land use designation.

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

With the implementation of the VEGA SES 5 Project, it is possible that the physical and chemical makeup of the soil materials within the upper soil horizon may change. For example, improper soil stockpiling and management of the stockpiles could result in increased decomposition of soil organic materials, increased leaching of plant available nitrogen, and depletion of soil biota communities (e.g., Rhizobium or Frankia). Any reductions in agricultural productivity could significantly limit the types of crops (deeper rooting crops, orchards, etc.) that may be grown within the project site in the future. However, as a condition of project approval (CUP condition), the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of their lifespan. The reclamation plan includes restoration of the site to pre-project conditions.

Additionally, there is the potential that weeds or other pests may occur within the solar fields if the area is not properly maintained and managed to control weeds and pests. This is considered a significant impact. Implementation of Mitigation Measure AG-1 would reduce this impact to a level less than significant.

Mitigation Measure(s)

This mitigation measure is applicable to the VEGA SES 5 project only.

AG-1 Prior to the issuance of a grading permit or building permit (whichever occurs first), a Pest Management Plan shall be developed by the project applicant and approved by the

County of Imperial Agricultural Commissioner. The project applicant shall maintain a Pest Management Plan until reclamation is complete. The plan shall provide the following:

1. Monitoring, preventative, and management strategies for weed and pest control during construction activities at any portion of the project (e.g., transmission line);
2. Control and management of weeds and pests in areas temporarily disturbed during construction where native seed will aid in site revegetation as follows:
    - Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. The assistance of a licensed pest control advisor is recommended. All treatments must be performed by a qualified applicator or a licensed pest control business.
    - All treatments must be performed by a qualified applicator or a licensed pest control operator.
    - "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, bio control, cultural control, or chemical treatments.
    - Use of "permanent" soil sterilants to control weeds or other pests is prohibited because this would interfere with reclamation.
    - Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species as defined by the California Department of Food Agriculture and the U.S. Department of Agriculture. Request a sample be taken by the Agricultural Commissioner's Office of a suspected invasive species. Eradication of exotic pests shall be done under the direction of the Agricultural Commissioner's Office and/or California Department of Food and Agriculture.
    - Obey all pesticide use laws, regulations, and permit conditions.
    - Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties.
    - Ensure all project employees that handle pest control issues are appropriately trained and certified, all required records are maintained and made available for inspection, and all required permits and other required legal documents are current.
    - Maintain records of pests found and treatments or pest management methods used. Records should include the date, location/block, project name (current and previous if changed), and methods used. For pesticides include the chemical(s) used, EPA Registration numbers, application rates, etc. A pesticide use report may be used for this.

- Submit a report of monitoring, pest finds, and treatments, or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report is required even if no pests were found or treatment occurred. It may consist of a copy of all records for the previous quarter, or may be a summary letter/ report as long as the original detailed records are available upon request.

3. A long-term strategy for weed and pest control and management during the operation of the proposed project. Such strategies may include, but are not limited to:
    - Use of specific types of herbicides and pesticides on a scheduled basis.
4. Maintenance and management of project site conditions to reduce the potential for a significant increase in pest-related nuisance conditions on surrounding agricultural lands.
5. The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources.

Significance after Mitigation

The project applicant would be required to adhere to the terms of the comprehensive reclamation plan that would restore the VEGA SES 5 Project site to preexisting (pre-project) conditions following decommissioning of the project (after its use for solar generation activities). In addition, the VEGA SES 5 Project would be required to implement a weed and pest management control plan per Mitigation Measure AG-1. Compliance with these measures would reduce this impact to a level less than significant.

3.3.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

In any land restoration project, it is necessary to minimize disruption to topsoil or stockpiled topsoil for later use during restoration following project decommissioning. With the implementation of the VEGA SES 5 Project, it is possible that the physical and chemical makeup of the soil materials within the upper soil horizon may change during construction and associated stockpiling operations. Improper soil stockpiling and management of the stockpiles could result in increased decomposition of soil organic materials, increased leaching of plant-available nitrogen, and depletion of soil biota communities (e.g., Rhizobium or Frankia). Each of these circumstances could have an adverse effect on the future productivity of the restored soils. Any reductions in agricultural productivity could significantly limit the types of crops (deeper rooting crops, orchards, etc.) that may be grown within the project site in the future. As a condition of project approval (CUP condition), the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan. The reclamation plan includes restoration of the site to pre-project conditions. With implementation of the site reclamation plan, this impact is considered less than significant.

Residual

The VEGA SES 5 Project would temporarily convert Farmland of Local Importance to non-agricultural uses. However, as a condition of project approval (CUP condition), the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers, and other structures on the project site, as well as restoration of the site to pre-project conditions. This shall be made a condition of approval and included in the CUP. Implementation of the reclamation plan would reduce the impact associated with the temporary conversion of Farmland of Local Importance to non-agricultural uses to a level less than significant. Based on these circumstances, the VEGA SES 5 Project would not result in any residual significant and unmitigable impacts to agricultural resources.

3.4 Air Quality

This section includes an overview of the existing air quality within the project area and identifies applicable local, state, and federal policies related to air quality. The impact assessment provides an evaluation of potential adverse effects on air quality based on criteria derived from the CEQA Guidelines and Imperial County Air Pollution Control District's (ICAPCD) Air Quality Handbook in conjunction with actions proposed in Chapter 2, Project Description, of this EIR. ECORP Consulting, Inc. prepared an *Air Quality and Greenhouse Gas Assessment* that evaluates the potential air quality and climate change impacts of the VEGA SES 2, 3 & 5 Solar Energy Projects. This report is included in Appendix D of this EIR.

3.4.1 Existing Conditions

Regional Setting

The project area is located in Imperial County within the Salton Sea Air Basin (SSAB). The SSAB consists of all of Imperial County and a portion of Riverside County. Both the ICAPCD and South Coast Air Quality Management District (SCAQMD) have jurisdiction within the SSAB. The ICAPCD has full jurisdiction within all Imperial County and SCAQMD only has jurisdiction within Riverside County. As an arid desert region, the SSAB's climate is largely governed by the large-scale sinking and warming of air within the semi-permanent subtropical high-pressure center over the Pacific Ocean. When the fringes of mid-latitude storms pass through the Imperial Valley in winter, the coastal mountains create a strong "rain shadow" effect that makes Imperial Valley the second driest location in the U.S.

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 4 times per year. The local area usually has three days of rain in winter and one thunderstorm day in August. The annual rainfall in this region is less than three inches per year (Appendix D of this EIR).

Temperature inversions and light nighttime winds trap any local air pollution emissions near the ground. As a result, the area is subject to frequent hazy conditions at sunrise, followed by rapid daytime dissipation as winds pick up and the temperature warms. During periods of strong solar heating and intense convection, turbulent motion creates good mixing and low levels of air pollution. The SSAB experiences surface inversions almost every day of the year. These inversions often last for long periods of time, which allows for air stagnation and buildup of pollutants, including ozone (O_3).

Winds in the area are driven by a complex pattern of local, regional, and global forces, but primarily reflect the temperature difference between the cool ocean to the west and the heated interior of the entire desert southwest. For much of the year, winds flow predominantly from the west to the east. In summer, intense solar heating in the Imperial Valley creates a more localized wind pattern, as air comes up from the southeast via the Gulf of California.

Imperial County is predominately agricultural land, which is a factor in the cumulative air quality of the SSAB. Agricultural production generates dust and small particulate matter through the use of agricultural equipment on unpaved roads, land preparation, and harvest practices. Imperial County

experiences unhealthful air quality from photochemical smog and from dust because of extensive surface disturbance and the very arid climate (Appendix D of this EIR).

Major Air Pollutants

Criteria Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone, coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 3.4-1.

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

Pollutant	Major Manmade Sources	Human Health and Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} and $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze)
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: Appendix D of this EIR

Toxic Air Contaminants

Toxic air contaminants (TAC) are substances that have the potential to be emitted into the ambient air and that have been determined to present some level of acute or chronic health risk (cancer or non-

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

Most recently, CARB identified DPM as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (U.S. EPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung (Appendix D of this EIR).

Total organic gases (TOG) emissions are compounds of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. Specifically, TOG emissions include all organic gas compounds emitted to the atmosphere, including the low reactivity compounds (methane, ethane, various chlorinated fluorocarbons, acetone, perchloroethylene, volatile methyl siloxanes, etc.). TOG emissions also include low volatility or "low vapor pressure" organic compounds (e.g., some petroleum distillate mixtures). TOG includes all organic compounds that can become airborne (through evaporation, sublimation, as aerosols, etc.), excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. Various subsets of TOG cause headaches, dizziness, upper respiratory tract irritation, nausea, and cancer. Vehicular traffic traveling on area roadways, such as SR 98, are sources of TOG (Appendix D of this EIR).

Attainment Status

The U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) designate air basins or portions of air basins and counties as being in “attainment” or “nonattainment” for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10} and $PM_{2.5}$ and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period.

The attainment status for the portion of the SSAB encompassing the project area is shown in Table 3.4-2. As shown in Table 3.4-2, the Imperial County portion of the SSAB is currently designated as nonattainment for O_3 and PM_{10} under State standards. Under federal standards, the Imperial County portion of the SSAB is in nonattainment for O_3, PM_{10}, and $PM_{2.5}$. The area is currently in attainment or unclassified status for CO, NO_2, and SO_2.

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

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: Appendix D of this EIR

Local Ambient Air Quality

Ambient air quality within the project area can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. Ozone, PM_{10} and $PM_{2.5}$ are the pollutants most potently affecting the project region. As described above, the project region is designated as a nonattainment area for the federal O_3, $PM_{2.5}$ and PM_{10} standards and is also a nonattainment area for the State standards for O_3 and PM_{10}. The Niland-English Road air quality monitoring station (7711 English Road, Niland), located approximately 7.27 miles west of the project area, monitors ambient concentrations of O_3 and PM_{10}. The Brawley-Main Street #2 air quality monitoring station (220 Main Street, Brawley), located approximately 17.8 miles southwest of the project area, monitors ambient concentrations of $PM_{2.5}$. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered “generally” representative of ambient concentrations in the project area.

Table 3.4-3 summarizes the published data concerning O_3, $PM_{2.5}$ and PM_{10} from the Niland-English Road and Brawley-Main Street #2 monitoring stations for monitoring years 2019-2021. As shown in Table 3.4-3, O_3, PM_{10} and $PM_{2.5}$ are the pollutants most potently affecting the project region.

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

Pollutant Standards	2019	2020	2021
O_3 – Niland-English Road			
Max 1-hour concentration (ppm)	0.060	0.054	0.065
Max 8-hour concentration (ppm) (state/federal)	0.055 / 0.054	0.046 / 0.045	0.055 / 0.055
Number of days above 1-hour standard (state/federal)	0/0	0/0	0/0
Number of days above 8-hour standard (state/federal)	0/0	0/0	0/0

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

Pollutant Standards	2019	2020	2021
PM_{10} – Niland-English Road			
Max 24-hour concentration (µg/m^3) (state/federal)	156.3 / 155.7	241.3 / 239.8	218.2 / 211.2
Number of days above 24-hour standard (state/federal)	49.3 / 1.0	68.9 / 1.0	86.0 / 4.0
$PM_{2.5}$ – Brawley-Main Street			
Max 24-hour concentration (µg/m^3) (state/federal)	28.9 / 28.9	23.7 / 23.7	24.4 / 24.4
Number of days above federal 24-hour standard	0	0	*

Source: Appendix D of this EIR
Notes:
µg/m^3 = micrograms per cubic meter; ppm = parts per million
** = Insufficient data available*

Sensitive Receptors

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

The nearest existing sensitive land use to the project area is a single-family residence located approximately 523 feet from the southwestern corner of the VEGA SES 5 project site (APN 025-260-022).

3.4.2 Regulatory Setting

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

Federal

Clean Air Act

The Federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, is the primary federal law that governs air quality. The Federal CAA delegates primary responsibility for clean air to the U.S. EPA. The U.S. EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. Under the act, the U.S. EPA has established the NAAQS for six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. Ozone, CO, NO_2, SO_2, Pb, and PM (Including both PM_{10}, and $PM_{2.5}$) are the six criteria air pollutants. Ozone is a secondary pollutant, nitrogen oxides (NO_x) and volatile organic compounds (VOCs) are of particular interest as they are precursors to ozone formation. In addition, national standards exist for Pb. The NAAQS

standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision.

The Federal CAA requires U.S EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table 3.4-4.

State

California Clean Air Act

The California Clean Air Act (CCAA) was adopted by CARB in 1988. The CCAA is responsible for meeting the state requirements of the Federal CAA and for establishing the CAAQS. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The CCAA, as amended in 1992, requires all air districts of the state to achieve and maintain the CAAQS by the earliest practical date.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous 3 calendar years. As shown in Table 3.4-4, the CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

California State Implementation Plan

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

Table 3.4-4. Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard
O_3	1-hour 8-hour	0.09 ppm 0.070 ppm	-- 0.070 ppm
PM_{10}	24-hour Mean	50 µg/m^3 20 µg/m^3	150 µg/m^3 --
$PM_{2.5}$	24-hour Mean	-- 12 µg/m^3	35 µg/m^3 12.0 µg/m^3
CO	1-hour 8-hour	20 ppm 9.0 ppm	35 ppm 9 ppm

Table 3.4-4. Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard
NO_2	1-hour Mean	0.18 ppm 0.030 ppm	100 ppb 0.053 ppm
SO_2	1-hour 24-hour	0.25 ppm 0.04 ppm	75 ppb --
Pb	30-day Rolling 3-month	1.5 µg/m^3	-- 0.15 µg/m^3
Sulfates	24-hour	25 µg/m^3	No federal standard
Hydrogen sulfide	1-hour	0.03 ppm	
Vinyl chloride	24-hour	0.01 ppm	
Visibility-reducing particles	8-hour	Extinction coefficient of 0.23 per kilometer, visibility of 10 miles or more because of particles when relative humidity is less than 70 percent	

Source: CARB 2016

Notes:

CO – carbon monoxide; mean – annual arithmetic mean; NO_2 – nitrogen dioxide; O_3 – ozone; Pb – lead; $PM_{2.5}$ – particulate matter less than 2.5 microns in diameter; PM_{10} - particulate matter less than 10 microns in diameter; ppb – parts per billion; ppm - parts per million; $S0_2$ – sulfur dioxide; µg/m^3 – micrograms per cubic meter

Toxic Air Contaminants Regulation

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

In August 1998, ARB identified DPM emissions from diesel-fueled engines as a TAC. In September 2000, ARB 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 PM_{10} (inhalable particulate matter) emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. The plan identified 14 measures that target new and existing on-road vehicles (e.g., heavy duty trucks and buses, etc.), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps, etc.), and stationary engines (e.g., stand-by power generators, etc.).

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

CARB's Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure

for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA) and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Regional

Imperial County Air Pollution Control District

The ICAPCD is the agency responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. ICAPCD is responsible for regulating stationary sources of air emissions in Imperial County. Stationary sources that have the potential to emit air pollutants into the ambient air are subject to the Rules and Regulations adopted by ICAPCD. ICAPCD is responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases. Monitoring of ambient air quality in Imperial County began in 1976. Since that time, monitoring has been performed by ICAPCD, CARB, and by private industry. There are six monitoring sites in Imperial County from Niland to Calexico. The ICAPCD has developed the following plans to achieve attainment for air quality ambient standards.

- 2009 Imperial County Plan for PM_{10}
- 2013 Imperial County Plan for 2006 24-hour $PM_{2.5}$ for Moderate Nonattainment Area
- 2017 Imperial County Plan for 2008 8-hour Ozone Standard
- 2018 Imperial County Plan for PM_{10}
- 2018 Redesignation Request and Maintenance Plan for PM_{10}
- 2018 Imperial County Plan for $PM_{2.5}$

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

the air quality monitoring network, emissions inventories, and air pollution transport modeling development, as well as the creation of programs and strategies to improve air quality.

Imperial County Air Pollution Control District Rules and Regulations

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

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

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

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

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

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

Rule 310 – Operational Development Fee. The purpose of this rule is to provide ICAPCD with a sound method for mitigating the emissions produced from the operation of new commercial and residential development projects throughout the County of Imperial and incorporated cities. All project proponents have the option to either provide off-site mitigation, pay the operational development fee, or do a combination of both. This rule will assist ICAPCD in attaining the state and federal ambient air quality standards for PM_{10} and O_3.

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[1] 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.

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

Rule 801 – Construction and Earthmoving Activities. Rule 801 aims to reduce the amount of PM_{10} entrained in the ambient air as a result of emissions generated from construction and other earthmoving activities by requiring actions to prevent, reduce, or mitigate PM_{10} emissions. This rule applies to any construction and other earthmoving activities, including, but not limited to, land clearing, excavation related to construction, land leveling, grading, cut and fill grading, erection or demolition of any structure, cutting and filling, trenching, loading or unloading of bulk materials, demolishing, drilling, adding to or removing bulk of materials from open storage piles, weed abatement through disking, back filling, travel on-site and travel on access roads to and from the site.

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

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

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

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

The Southern California Association of Governments (SCAG) is the designated metropolitan planning organization for Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. CEQA requires that regional agencies like SCAG review projects and plans throughout its jurisdiction. SCAG, as the region's "Clearinghouse," collects information on projects of varying size and scope to provide a central point to monitor regional activity. SCAG has the responsibility of reviewing dozens of projects, plans, and programs every month. Projects and plans that are regionally significant must demonstrate to SCAG their consistency with a range of adopted regional plans and policies.

On September 3, 2020, SCAG adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2020). The RTP/SCS or "Connect SoCal" includes a strong commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the NAAQS as set forth by the federal CAA. The following SCAG goal is applicable to the VEGA SES 2, 3 & 5 projects:

- Reduce greenhouse gas emissions and improve air quality

As a solar generation facility, the proposed projects would improve air quality by reducing the use of fossil fuels in energy production. With mitigation, construction of the proposed projects would not exceed any ICAPCD thresholds or result in significant impacts to air quality. Additionally, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. PM_{10} emissions associated with construction of the projects would be reduced through compliance with ICAPCD Regulation VIII. Operation of the proposed projects would not exceed any ICAPCD thresholds or result in significant impacts to air quality. Therefore, the proposed projects would be consistent with this SCAG goal.

Imperial County General Plan

The Imperial County General Plan serves as the overall guiding policy for the County. The Conservation and Open Space Element includes objectives for helping the County achieve the goal of improving and maintaining the quality of air in the region. Table 3.4-5 summarizes the projects' consistency with the applicable air quality goal and objectives from the Conservation and Open Space Element. While this EIR analyzes the projects' 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.

Table 3.4-5. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Conservation and Open Space Element		
Protection of Air Quality and Addressing Climate Change Goal 7: The County shall actively seek to improve the quality of air in the region.	Consistent	The proposed projects would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed projects would not significantly impact air quality and would reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from fossil fuel burning facilities. Therefore, the proposed projects are consistent with this goal.
Objective 7.1: Ensure that all project and facilities comply with current Federal, State and local requirements for attainment of air quality objectives.	Consistent	The proposed projects would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the projects would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures (Mitigation Measure AQ-1). Therefore, the proposed projects are consistent with this objective.

Table 3.4-5. Project Consistency with Applicable Plan Policies

Applicable Policies	Consistency Determination	Analysis
Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Consistent	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures (Mitigation Measure AQ-1). Therefore, the proposed projects are consistent with this objective.

Source: County of Imperial 2016

3.4.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

- Conflict with or obstruct implementation of the applicable air quality plan
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Imperial County Air Pollution Control District

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

Significance thresholds for evaluation of construction and operational air quality impacts are listed in Table 3.4-6.

Projects that are predicted to exceed Tier I thresholds require implementation of applicable ICAPCD standard mitigation measures to be considered less than significant. Projects exceeding Tier II thresholds are required to implement applicable ICAPCD standard mitigation measures, as well as applicable discretionary mitigation measures. Projects that exceed the Tier II thresholds after implementation of standard and discretionary mitigation measures would be considered to have a potentially significant impact to human health and welfare.

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual

emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Table 3.4-6. Imperial County Air Pollution Control District Significance Thresholds – Pounds per Day

Criteria Pollutant and Precursors	Construction Activities	Tier 2 Thresholds	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	
		Tier I Threshold	Tier II Threshold
ROG	75	<137	>137
NO_x	100	<137	>137
PM_{10}	150	<150	>150
$PM_{2.5}$	N/A	<550	>550
CO	550	<550	>550
SO_2	N/A	<150	>150

Source: ICAPCD 2017b

Notes:

CO – carbon monoxide; NO_x – nitrogen oxide; O_3 – ozone; Pb – lead; $PM_{2.5}$ – particulate matter less than 2.5 microns in diameter; PM_{10} - particulate matter less than 10 microns in diameter; ROG - reactive organic gas; S0x – sulfur oxide

Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the ICAPCD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2020.4.0.[2] Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Imperial County as well as timing and equipment identified by the project proponent. For instance, construction is estimated to take 12-18 months. According to the Traffic Impact Study prepared for the projects (Appendix K1 and K2 of this EIR), the number of on–site construction workers for the VEGA SES 2 and 3 solar facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the VEGA SES 2 and 3 battery storage facility and substations is not expected to exceed 100 workers at any one time. The number of on–site construction workers for the VEGA SES 5 solar facility is not expected to exceed 75 workers at any one time. The number of on-site construction workers for the VEGA SES 5 battery storage facility and substation is not expected to exceed 50 workers at any one time (Appendix D of this EIR).

Construction workers would access the project area from McDonald Road, a paved road off SR 111. The VEGA SES 5 project site is located at the eastern end of McDonald Road. As such, vehicle travel to the VEGA SES 5 project site would not occur on any unpaved roads. Access to the VEGA SES 2

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

and 3 project sites would require an additional 1.65 miles of travel on Wiest Road and Flowing Wells Road, both of which are unpaved.

Operational air pollutant emissions account for a conservative estimate of two worker trips per day. Such visits include inspections, equipment servicing, site and landscape clearing, and periodic washing of the PV modules if needed to maintain power generation efficiency.

Impact Analysis

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

The air quality attainment plan (AQAP) for the SSAB, through the implementation of the AQMP (previously AQAP) and SIP for PM_{10}, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections, meeting the land use designation set forth in the local General Plan, and comparing assumed emissions in the AQMP to proposed emissions.

The projects must demonstrate compliance with all ICAPCD applicable rules and regulations, as well as local land use plans and population projections. As the projects do not contain a residential component, the projects would not result in an increase in the regional population. While the projects would contribute to energy supply, which is one factor of population growth, the proposed projects are solar energy projects and would not significantly increase employment or growth within the region. Moreover, development of the proposed projects would increase the amount of renewable energy and help California meet its Renewable Portfolio Standard (RPS).

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

Furthermore, the thresholds of significance adopted by the air district (ICAPCD), determine compliance with the goals of the attainment plans in the region. As such, emissions below the ICAPCD thresholds presented in Table 3.4-6 would not conflict with or obstruct implementation of the applicable air quality plans. The following analysis is broken out by a discussion of potential impacts during construction of the projects followed by a discussion of potential impacts during operation of the projects.

Construction Emissions

Air emissions are generated during construction through activities. Two basic sources of short-term emissions will be generated through project construction: operation of heavy-duty equipment (i.e., excavators, loaders, haul trucks) and the creation of fugitive dust during clearing and grading, and committing on any exposed surfaces. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust

emissions and fugitive PM emissions that affect local air quality at various times during construction. Construction emissions vary from day-to-day depending on the number of workers, number, and types of active heavy-duty vehicles and equipment, level of activity, the prevailing meteorological conditions, and the length over which these activities occur.

The construction of each individual project is anticipated to take approximately 12 to 18 months from the commencement of the construction process to complete. Construction is anticipated to begin in 2023. Construction activities would primarily involve demolition and grubbing, grading of the project sites to establish access roads and pads for electrical equipment, trenching for underground electrical collection lines, and the installation of solar equipment and security fencing. The construction emissions were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements.

The total unmitigated emissions generated within each year of project construction are shown in Table 3.4-7.

Table 3.4-7. Unmitigated Project Construction-Generated Emissions

Construction Year	Pollutant (pounds per day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction of VEGA SES 2 and 3 (2023)	5.46	35.12	50.94	0.08	1,210.25	122.54
Construction of VEGA SES 5 (2024)	3.96	32.64	41.48	0.07	11.51	5.14
ICAPCD Significance Threshold	75	100	550	—	150	—
Exceed ICAPCD Significance Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**

Source: Appendix D of this EIR.
Notes:
Pounds per day taken from the season (summer or winter) with the highest output.

VEGA SES 2 AND 3

As shown in Table 3.4-7, the VEGA SES 2 and 3 projects' daily construction emissions would not exceed the ICAPCD thresholds for ROG, NOx, CO, SO_2, and $PM_{2.5}$. However, emissions of PM_{10} would exceed the ICAPCD significance threshold on the peak day(s). The predominant source of the projects' PM_{10} emissions is workers commuting to and from the project sites on unpaved roads. Commute vehicles traveling over the exposed soils of unpaved roads generates substantial amounts of fugitive PM_{10} emissions. The access route on McDonald Road leading to the VEGA SES 2 and 3 project sites are paved; however, there are approximately 1.65 miles of unpaved roadway that would be used by commuting workers and vendors, specifically Wiest Road and Flowing Wells Road.

Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. The project must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. Regulation VIII requires all unpaved roadways, on- and off-site, to be conditioned and maintained with soil stabilizers to reduce

dust opacity to no more than 20 percent; all unpaved disturbed surfaces, on- and off-site, to be stabilized with a dust suppressant, watering, or soil stabilizers to reduce opacity to no greater than 20 percent; and to reduce vehicle speed to no greater than 15 mph on all unpaved surfaces. Table 3.4-8 shows the projects' emissions with implementation of the Regulation VIII fugitive dust control measures (Mitigation Measure AQ-1). With implementation of Mitigation Measure AQ-1, the project would not exceed the ICAPCD's thresholds of significance for PM_{10} emissions.

In addition, as described in Mitigation Measure AQ-2, construction equipment shall be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). A list of the construction equipment, including all off-road equipment utilized at the project site by make, model, year, horsepower and expected/actual hours of use, and the associated EPA Tier shall be submitted to the County Planning and Development Services Department and ICAPCD prior to the issuance of a grading permit. The equipment list shall be submitted periodically to ICAPCD to perform a NO_x analysis. ICAPCD shall utilize this list to calculate air emissions to verify that equipment use does not exceed significance thresholds.

Table 3.4-8. Mitigated Project Construction-Generated Emissions

Construction Year	Pollutant (pounds per day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction of VEGA SES 2 and 3 (2023)	5.46	35.12	50.94	0.08	115.51	13.52
Construction of VEGA SES 5 (2024)	3.96	32.64	41.48	0.07	5.89	2.91
ICAPCD Significance Threshold	75	100	550	—	150	—
Exceed ICAPCD Significance Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix D of this EIR.
Notes:
Pounds per day taken from the season with the highest output.

VEGA SES 5

As shown in Table 3.4-7, the VEGA SES 5 project's daily construction emissions would not exceed the ICAPCD thresholds and a less than significant impact is identified. However, pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. The VEGA SES 5 must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. Therefore, implementation of the Regulation VIII fugitive dust control measures (Mitigation Measure AQ-1) is required for the VEGA SES 5 project.

In addition, as described in Mitigation Measure AQ-2, construction equipment shall be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). A list of the construction equipment, including all off-road equipment utilized at the project site by make, model, year, horsepower and expected/actual hours of use, and the associated EPA Tier shall be submitted to the County Planning and Development Services Department and ICAPCD prior to the issuance of a grading permit. The

equipment list shall be submitted periodically to ICAPCD to perform a NO_x analysis. ICAPCD shall utilize this list to calculate air emissions to verify that equipment use does not exceed significance thresholds.

Operational Emissions

VEGA SES 2, 3 AND 5

Although limited, implementation of the projects would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROG and NOx. Project-generated increases in emissions would be predominately associated with motor vehicle use for routine maintenance work and site security as well as panel upkeep and cleaning. Long-term combined operational emissions attributable to the projects are identified in Table 3.4-9 and compared to the operational significance thresholds promulgated by the ICAPCD.

Table 3.4-9. Project Operational Emissions

Emission Source	Pollutant (pounds per day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer Emissions						
Area	50.85	0.00	0.24	0.00	0.00	0.00
Energy	0.66	6.05	5.08	0.03	0.46	0.46
Mobile	0.01	0.01	0.10	0.00	3.54	0.35
Total	**51.52**	**6.06**	**5.42**	**0.03**	**4.00**	**0.81**
ICAPCD Significance Threshold	137	137	150	550	550	150
Exceed ICAPCD Significance Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	50.85	0.00	0.24	0.00	0.00	0.00
Energy	0.66	6.05	5.08	0.03	0.46	0.46
Mobile	0.00	0.01	0.08	0.00	3.54	0.35
Total	**51.51**	**6.06**	**5.42**	**0.03**	**4.00**	**0.81**
ICAPCD Significance Threshold	137	137	150	550	550	150

Table 3.4-9. Project Operational Emissions

Emission Source	Pollutant (pounds per day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Exceed ICAPCD Significance Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix D of this EIR.

Notes:

Operational emissions account for two vehicle trips per day. It is noted that this is a conservative estimate as many days will have no operational related vehicle trips. Additionally, it accounts for the energy usage used for the battery energy storage system and the pumping of 32-acre feet of water per year.

As shown in Table 3.4-9, the projects' combined operational emissions would not exceed the ICAPCD thresholds for CO, ROG, NO_x, $PM_{10,}$ SO_2 and $PM_{2.5}$. Although no significant air quality impact would occur during operation, the project applicant is required to submit a Dust Suppression Management Plan for both construction and operation in order to reduce fugitive dust emissions. Implementation of Mitigation Measures AQ-3, AQ-4, and AQ-5 would ensure that a Dust Suppression Management Plan is implemented, thereby ensuring that this potential impact would remain less than significant.

As solar generation facilities, the proposed projects would improve air quality by reducing the use of fossil fuels in energy production. The energy produced by the projects would displace the criteria pollutant emissions which would otherwise be produced by existing business-as-usual power generation resources (including natural gas and coal).

Table 3.4-10 shows the emissions that would potentially be displaced by the proposed projects. Displacement of fossil fuel emissions has a direct beneficial effect on human health for those receptors downwind of the location of the fossil fuel power plants. As shown in Table 3.4-10, the projects would potentially displace approximately 148 tons of NO_x, 11 tons of CO, 19 tons of SO_2, 18 tons of PM_{10}, and 8 tons of $PM_{2.5}$ over the course of 30 years.

Table 3.4-10. Proposed Project Displaced Criteria Pollutant Emissions (Tons)

Source of Displaced Emissions	Emissions (tons)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Emissions Displaced Annually (tons)						
Displaced Natural Gas-Source Emissions	0	0.61	0.19	0.42	0.58	0.23
Displaced Coal-Source Emissions	0	4.31	0.18	0.20	0.03	0.02
Total	**0**	**4.92**	**0.37**	**0.62**	**0.61**	**0.26**
Emissions Displaced over 30 Years (tons)						
Displaced Natural Gas-Source Emissions	0	18.36	5.56	12.61	17.43	7.05

Table 3.4-10. Proposed Project Displaced Criteria Pollutant Emissions (Tons)

Source of Displaced Emissions	Emissions (tons)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Displaced Coal-Source Emissions	0	129.38	5.39	6.15	0.91	0.65
Total	**0**	**147.74**	**10.95**	**18.76**	**18.34**	**7.69**

Source: Appendix D of this EIR.

As described above, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections and comparing assumed emissions in the AQMP to proposed emissions. Because the proposed projects comply with local land use plans and population projections and would not exceed ICAPCD's regional mass daily emissions thresholds during construction (with implementation of Mitigation Measure AQ-1) and operation, the proposed projects would not conflict with or obstruct implementation of the applicable air quality plan. Furthermore, the projects would also have a direct beneficial effect on human health by displacing criteria pollutants. Impacts would be than significant impact with mitigation incorporated.

Mitigation Measure(s)

AQ-1 **Fugitive Dust Control.** During construction activities, the constructor contractor shall employ the following PM_{10} reducing measures:

1. All unpaved roads associated with construction shall be effectively stabilized of dust emissions using Imperial County Air Pollution Control District-approved chemical stabilizers/suppressant before the commencement of construction, and every 30 days thereafter until the end of all construction activities. Unpaved roads associated with construction include:
    - The 1.65 miles of unpaved road on Weist Road and Flowing Wells Road to the VEGA SES 2 and 3 project sites. Monthly application of Imperial County Air Pollution Control District-approved chemical stabilizers/suppressant shall be applied at a rate of 0.1 gallon/square yard of chemical dust suppressant.
2. Prior to any earthmoving activity, the applicant shall submit a construction dust control plan and obtain Imperial County Air Pollution Control District and Imperial County Planning and Development Services Department (ICPDS) approval.
3. Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. Whereas these Regulation VIII measures are mandatory and are not considered project environmental mitigation measures, the ICAPCD CEQA Handbook's required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. ICAPCD will verify implementation and compliance with these measures as part of the grading permit review/approval process.

ICAPCD Standard Measures for Fugitive Dust (PM_{10}) Control

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

ICAPCD “Discretionary” Measures for Fugitive Dust (PM_{10}) Control

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

Standard Mitigation Measures for Construction Combustion Equipment

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

Enhanced Mitigation Measures for Construction Equipment

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

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

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

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

AQ-4 **Operational Dust Control Plan.** Prior to issuance of a Certificate of Occupancy, the applicant shall submit an operations dust control plan and obtain ICAPCD and ICPDS approval.

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

Significance After Mitigation

With implementation of the Regulation VIII fugitive dust control measures (Mitigation Measure AQ-1), the projects would not exceed the ICAPCD's thresholds of significance for PM_{10} emissions. Mitigation Measures AQ-2 through AQ-4 would provide additional reduction strategies to further improve air quality and reductions in criteria pollutants (O_3 precursors) and ensure that this potential impact would remain less than significant. Given the above, the proposed projects would not conflict with implementation of applicable air quality plans, and impacts would be less than significant impact.

Impact 3.4-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)?

VEGA SES 2, 3 AND 5

As shown in Table 3.4-2, the criteria pollutants for which the project area is in State non-attainment under applicable air quality standards are O_3 and PM_{10}. The ICAPCD's application of thresholds of significance for criteria air pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As discussed above in Impact 3.4-1, the projects' daily construction emissions would not exceed the ICAPCD thresholds for ROG, NOx, CO, SO_2, and $PM_{2.5}$. However, the VEGA SES 2 and 3 projects would exceed the ICAPCD threshold for PM_{10}. To mitigate the potential impacts associated with construction-generated emissions with regard to PM_{10}, the VEGA SES 2 and 3 projects would adhere to the requirements of ICAPCD Regulation VIII for the control of fugitive dust. As shown in Table 3.4-8, with implementation of the Regulation VIII fugitive dust control measures, the VEGA SES 2 and 3 projects would not exceed the ICAPCD's threshold of significance for PM_{10} emissions. Although, the VEGA SES 5 project's construction emissions would not exceed the ICAPCD thresholds, it must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. Therefore, implementation of the Regulation VIII fugitive dust control measures (Mitigation Measure AQ-1) is required for the VEGA SES 5 project. Furthermore, implementation of Mitigation Measures AQ-1 through AQ-4 will ensure compliance with ICAPCD rules and regulations and applicable air quality plan control measures. Therefore, the projects' potential to result in a cumulatively considerable net increase of any criteria pollutant is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

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

VEGA SES 2, 3 AND 5

The nearest existing sensitive land use to the project area is a single-family residence located approximately 523 feet from the southwestern corner of the VEGA SES 5 project site (APN 025-260-022).

Construction-Generated Air Contaminants. Construction of the projects would result in temporary, short-term project-generated emissions of DPM, ROG, NO_x, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment; soil hauling truck traffic; paving; and other miscellaneous activities.

The portion of the SSAB which encompasses the project area is designated as a nonattainment area for federal O_3, $PM_{2.5}$ and PM_{10} standards and is also a nonattainment area for the state standards for O_3 and PM_{10}. Thus, existing O_3 and PM_{10} levels in the SSAB are at unhealthy levels during certain periods. However, as shown in Table 3.4-8, the projects would not exceed the ICAPCD significance thresholds for construction emissions with mitigation incorporated.

The health effects associated with O_3 are generally associated with reduced lung function. Because the projects would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the ICAPCD thresholds, the projects are not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The projects would not involve activities that would result in CO emissions in excess of the ICAPCD thresholds. Thus, the projects' CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction-type activity, DPM is the primary TAC of concern. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM.

As with O_3 and NO_x, the projects would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the ICAPCD's thresholds with implementation of mitigation. Accordingly, the projects' PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

Operational Air Contaminants. Operation of the proposed projects would not result in the development of any substantial sources of air toxics. There would be no stationary sources associated project operations; nor would the projects attract additional mobile sources that spend long periods queuing and idling at the site. Onsite combined project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors as the predominant operational emissions associated with the proposed projects would be routine maintenance work and site security as well as panel upkeep and cleaning. Therefore, the projects would not be a substantial source of TACs. The proposed projects would not result in a high carcinogenic or non-carcinogenic risk during operation.

CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. CO concentration in the SSAB is designated as an attainment area. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

The proposed project is anticipated to result in no more than two daily traffic trips. It is noted that this is a conservative estimate, and many days will have no operational related vehicle trips. Thus, the proposed projects would not generate traffic volumes at any intersection of more than 100,000 vehicles

per day (or 44,000 vehicles per day) and there is no likelihood of the project traffic exceeding CO values.

In summary, project construction and operations would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

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

VEGA SES 2, 3 AND 5

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

Among possible physical harms is inhalation of VOCs that cause smell sensations in humans. These odors can affect human health in four primary ways:

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

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

During construction, the proposed projects present the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the sites. However, these emissions are short-term in nature and would rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the project area. Therefore, odors generated during project construction would not adversely affect a substantial number of people to odor emissions. Impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.4.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the projects, the projects will be decommissioned and dismantled. Similar to construction activities, decommissioning and restoration of the projects would generate air emissions. A summary of the daily combined mitigated construction emissions for the project is provided in Table 3.4-8. Solar equipment has a lifespan of approximately 30 years. The emissions from on- and off-road equipment during decommissioning are expected to be significantly lower than project construction emissions, as the overall activity would be anticipated to be lower than project construction activity. No significant air quality impacts are anticipated during decommissioning and restoration of the project sites. However, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. In addition, the ICAPCD's Air Quality Handbook lists additional feasible mitigation measures that may be warranted to control emissions of fugitive dust and combustion exhaust. Mitigation Measures AQ-1 through AQ-4 would provide additional reduction strategies to further improve air quality. Therefore, a less than significant impact is identified during decommissioning and site restoration of the project sites.

Residual

The proposed projects would not result in short-term significant air quality impacts during construction. Implementation of Mitigation Measure AQ-1 would reduce NO_x emissions to levels below the significance threshold. Implementation of Mitigation Measures AQ-1 and AQ-2 would provide additional reduction strategies to reduce ROG, NOx, PM_{10}, and CO emissions during construction. Operation of the projects, subject to the approval of CUPs, would be consistent with applicable federal, state, regional, and local plans and policies. Implementation of Mitigation Measures AQ-3, AQ-4, and AQ-5 would ensure that fugitive dust emissions would be reduced during construction and operations. The projects would not result in any residual operational significant and unavoidable impacts with regards to air quality.

The proposed project's daily construction emissions would not exceed the ICAPCD's thresholds for ROG, NOx, CO, SO_2, and $PM_{2.5}$. However, the VEGA SES 2 and 3 projects would exceed the ICAPCD's threshold for $PM_{10.}$ To mitigate the potential impacts associated with construction-generated emissions with regard to $PM_{10,}$ the projects would adhere to the requirements of ICAPCD Regulation VIII for the control of fugitive dust (Mitigation Measure AQ-1). Thus, the VEGA SES 2 and 3 projects would not result in short-term significant air quality impacts during construction. Although, the VEGA SES 5 project's construction emissions would not exceed the ICAPCD thresholds, it must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. Therefore, implementation of the Regulation VIII fugitive dust control measures (Mitigation Measure AQ-1) is required for the VEGA SES 5 project. Furthermore, implementation of Mitigation Measure AQ-2 would ensure construction equipment will be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). ICAPCD will utilize this list to calculate air emissions to verify that equipment use does not exceed significance thresholds. Operation of the projects, subject to the approval of CUPs, would be consistent with applicable federal, state, regional, and local plans and policies. Implementation of Mitigation Measures AQ-1, AQ-3, and AQ-4 would ensure that fugitive dust emissions would be reduced during construction and operations. The projects would not result in any residual operational significant and unavoidable impacts with regards to air quality.

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3.5 Biological Resources

This section identifies the biological and jurisdictional aquatic resources that may be impacted by the proposed VEGA SES 2, 3, and 5 projects. The following identifies the existing biological and jurisdictional aquatic resources in the project area, analyzes potential impacts of the proposed projects, and recommends mitigation measures to avoid or reduce potential impacts of the proposed projects.

The information for this section is summarized from the following technical reports:

- *Biological Resources Technical Report for the Vega SES 2 and 3 Solar Projects* prepared by ECORP Consulting, Inc. (Appendix E1 of this EIR)
- *Biological Resources Technical Report for the Vega SES 5 Solar Project* prepared by ECORP Consulting, Inc. (Appendix E2 of this EIR)
- *Aquatic Resources Delineation Report for the Vega SES 2 and 3 Solar Projects* prepared by ECORP Consulting, Inc. (Appendix F1 of this EIR)
- *Aquatic Resources Delineation Report for the Vega SES 5 Solar Project* prepared by ECORP Consulting, Inc. (Appendix F2 of this EIR)

The analysis of biological resources in this section is separated into two distinct segments: 1) the VEGA SES 2 and 3 project sites, and 2) the VEGA SES 5 project site, where applicable.

As part of the Biological Resources Technical Reports prepared for the projects, ECORP Consulting Inc. conducted a literature review, small unmanned aircraft system survey, and biological reconnaissance survey of the project sites to document existing biological resources, assess habitat suitability for sensitive plant and wildlife species, and determine potential impacts of the projects on biological resources.

For the purposes of this EIR, the term biological study area (BSA) refers to the project sites' boundaries and a 500-foot buffer around the project sites' boundaries.

The Aquatic Resources Delineation Reports identify the aquatic resources occurring within the project sites that may be regulated by the Porter-Cologne Water Quality Act, California Fish and Game Code Sections 1600 and 1602, and the U.S. Army Corps of Engineers (USACE) pursuant to Sections 401 and 404 of the federal Clean Water Act (CWA).

3.5.1 Existing Conditions

Project Location

VEGA SES 2 and 3

The VEGA SES 2 and 3 project sites consist of undeveloped land traversed by an extensive alluvial fan system and associated riparian community. This system begins at the Chocolate Mountains to the northeast and heads southwest across the VEGA SES 2 and 3 project sites. The BSA is bordered by an active railroad right-of-way to the southwest, agricultural land to the west, and undeveloped land to the north, south, and east.

Topography generally consists of gentle slopes with a gradual increase in elevation from the western extent to the eastern extent of the VEGA SES 2 and 3 project sites.

VEGA SES 5

The VEGA SES 5 project site consists of an old agricultural field and undeveloped land that appears to have been historically altered. The northeastern section is comprised of an ephemeral drainage and associated wetland and riparian habitats on undeveloped land. The northern border of the site appears to have been graded and/or filled in several areas near the railroad tracks. An intermittent drainage flows south under the railroad track via a concrete underpass and riparian habitat lines the banks and bed of the intermittent drainage directly north and east of the East Highland Canal. Wetlands exist within the riparian habitat directly south of the railroad right-of-way, abutting the ephemeral drainages, connected with Siphon 5. The southern portion of the VEGA SES 5 project site consists of a fallow agricultural field with ruderal vegetation. The fallow field is bordered to the north and south by two offshoot canals and a wetland associated with the East Highland Canal to the northeast. The site is surrounded to the west, south, and north by agricultural fields and undeveloped land to the east (Appendix E2 of this EIR).

Topography throughout the VEGA SES 5 project site is relatively flat, but gently slopes from northeast to southwest away from the railroad right-of-way.

Vegetation Communities and Land Cover Types

VEGA SES 2 and 3

The majority of vegetation communities and land cover types mapped within the VEGA SES 2 and 3 BSA consist of creosote bush scrub and blue palo verde/ironwood woodland. Vegetation communities and land cover types within the BSA for the VEGA SES 2 and 3 projects are depicted on Figure 3.5-1. The acreage of each vegetation community and land cover type within the VEGA SES 2 and 3 project sites is summarized in Table 3.5-1.

Table 3.5-1. Vegetation Communities or Land Cover Types within the VEGA SES 2 and 3 Project Sites

Vegetation Community or Land Cover Type	Acres within VEGA SES 2 and 3 Project Sites[a]
Bush Seepweed Scrub	7.44
Creosote Bush Scrub	881.97
Disturbed Creosote Bush Scrub	11.30
Blue Palo Verde/Ironwood Woodland	230.73
Tamarisk Thickets	1.57
Urban/Developed Roads	8.50

Table 3.5-1. Vegetation Communities or Land Cover Types within the VEGA SES 2 and 3 Project Sites

Vegetation Community or Land Cover Type	Acres within VEGA SES 2 and 3 Project Sites[a]
Project Area Total	**1,141.51**

Source: Appendix E1 of this EIR
Notes:
[a] Vegetation and land cover type acreages are rounded to the nearest hundredth of an acre.

VEGA SES 5

The majority of vegetation communities and land cover types mapped within the VEGA SES 5 BSA consist of creosote bush scrub and fallow agricultural land. Vegetation communities and land cover types within the VEGA SES 5 BSA are depicted on Table 3.5-2. The acreage of each vegetation community and land cover type within the VEGA SES 5 project site is summarized in Table 3.5-2.

Table 3.5-2. Vegetation Communities or Land Cover Types within the VEGA SES 5 Project Site

Vegetation Community or Land Cover Type	Acres within the VEGA SES 5 Project Site[a]
Bush Seepweed Scrub	60.25
Creosote Bush Scrub	103.26
Fallow Agricultural Land	101.27
Tamarisk Thickets	1.54
Urban/Developed	2.49
Urban/Developed Roads	0.30
Project Area Total	**269.11**

Source: Appendix E2 of this EIR
Notes:
[a] Vegetation and land cover type acreages are rounded to the nearest hundredth of an acre.

Figure 3.5-1. Vegetation Communities and Land Cover Types in the VEGA SES 2 and 3 BSA

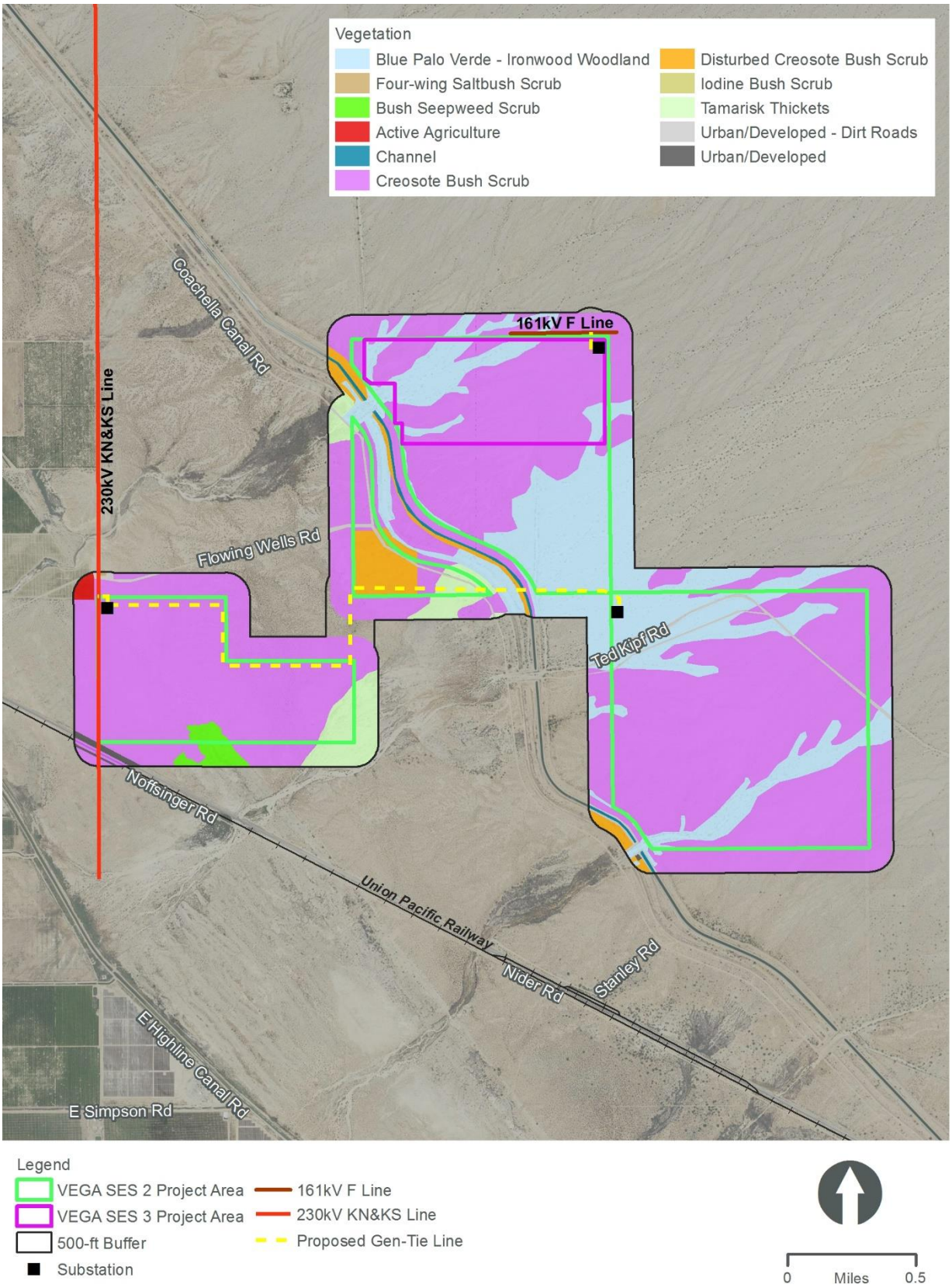
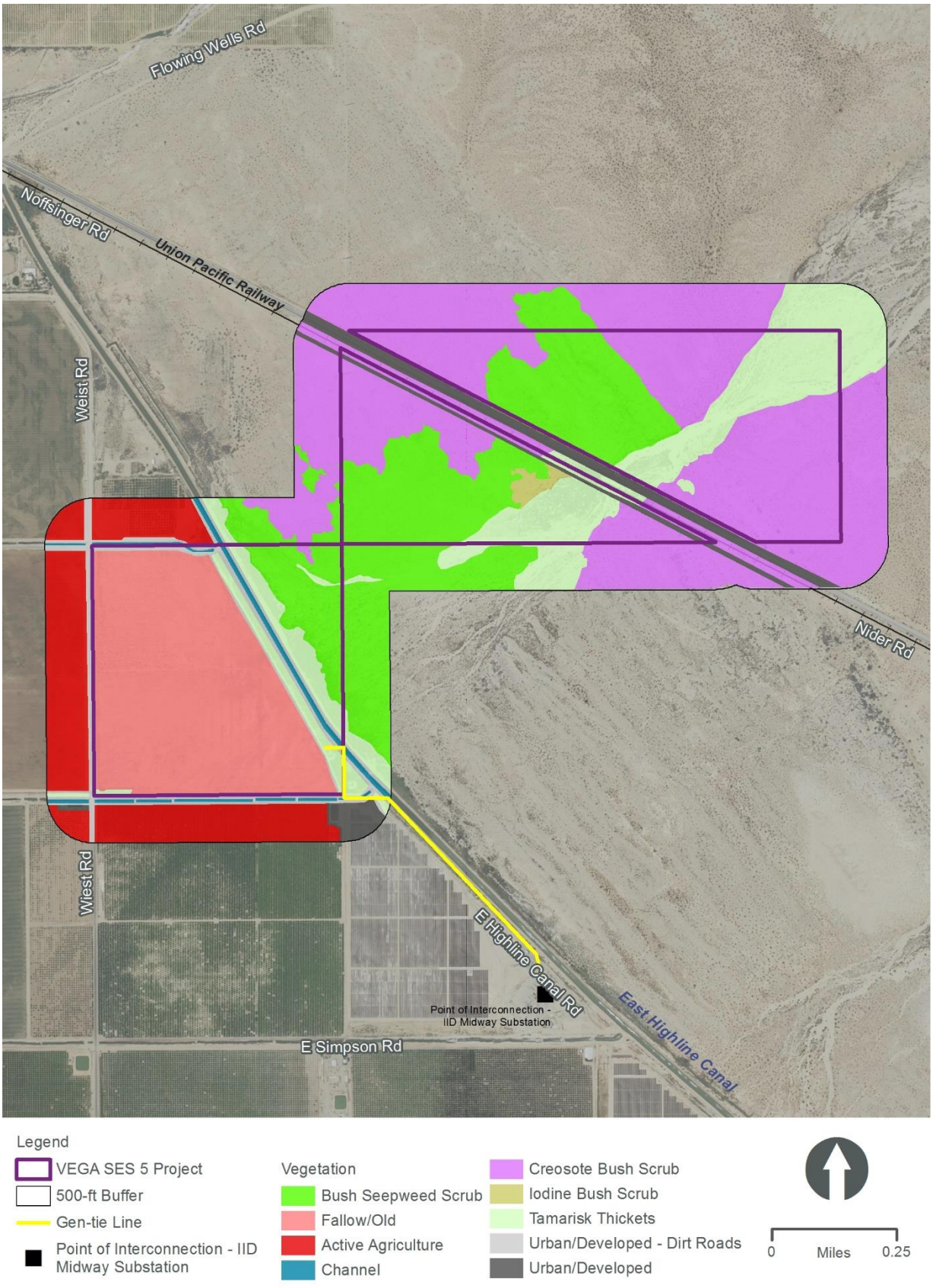


Figure 3.5-2. Vegetation Communities and Land Cover Types in the VEGA SES 5 BSA



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

BUSH SEEPWEED SCRUB (*SUAEDA [MOQUINII] NIGRA* SHRUBLAND ALLIANCE)

Bush sweepweed scrub is found on flat to gently sloping valley bottoms, bajadas, and toe slopes adjacent to alluvial fans. Bush seepweed scrub is dominated by bush seepweed, a USFWS Wetland Inventory obligate species (see Appendix E2 of this EIR), and can be co-dominant with four-wing saltbush (*Atriplex canescens*) and/or alkali goldenbush (*Isocoma acradenia*). This vegetation community typically has a sparse to intermittent herbaceous layer. Within the VEGA SES 2, 3, and 5 BSAs, bush seepweed dominated the shrub cover with occasional occurrences of four-wing saltbush, arrow weed (*Pluchea sericea*), big saltbush (*Atriplex lentiformis*), alkali goldenbush, and tamarisk.

CREOSOTE BUSH SCRUB (*LARREA TRIDENTATA* SHRUBLAND ALLIANCE)

Creosote bush scrub is the most characteristic vegetation of the California desert and is found on alluvial fans, bajadas, upland slopes, and washes. Creosote bush scrub is dominated by a nearly monotypic stand of creosote bush with an open canopy and an herbaceous layer of seasonal annuals and perennials. This community was dominant in the VEGA SES 2, 3, and 5 BSAs. Other species that were observed within this community included burrobush (*Ambrosia dumosa*), four-wing saltbush, big saltbush, narrow leaved cryptantha (*Cryptantha angustifolia*), desert plantain (*Plantago ovata*), Mediterranean grass (*Schismus barbatus*), and occasional bush seepweed on the banks of established drainages.

DISTURBED CREOSOTE BUSH SCRUB (DISTURBED *LARREA TRIDENTATA* SHRUBLAND ALLIANCE)

Disturbed creosote bush is creosote bush scrub that has been previously altered. Within the VEGA SES 2 and 3 BSA, this vegetation cover is characterized as sparser with a high percentage of non-native plant species including common Mediterranean grass and Saharan mustard (*Brassica tournefortii*). Within the VEGA SES 5 BSA, creosote was typically dominant in the shrub canopy, but occasionally was co-dominant with white bursage, with an absent to intermittent herbaceous layer of seasonal annuals.

BLUE PALO VERDE/IRONWOOD WOODLAND (PARKINSONIA FLORIDA - OLNEYA TESOTA WOODLAND ALLIANCE)

Blue palo verde/ironwood woodland is characterized by blue palo verde or ironwood as a dominant or co-dominant plant species in the tree or tall shrub canopy that is open to continuous. The shrub layer is intermittent or open, while the herbaceous layer is sparse with seasonal annuals. It occurs in desert arroyo margins, seasonal watercourses, desert washes, bottomlands, bajadas, alluvial fans, and lower slopes. Blue palo verde/ironwood woodland take up large portions of the VEGA SES 2 and 3 BSAs. Other plant species observed within this community included creosote bush, cheesebush (*Ambrosia salsola*), and burrobush.

TAMARISK THICKETS (TAMARIX SPP. SHRUBLAND SEMI-NATURAL ALLIANCE)

Tamarisk thickets are characterized by a weedy monoculture of tamarisk. This habitat is typically in ditches, washes, rivers, arroyo margins, lake margins, and other watercourses. Within the VEGA SES 2, 3, and 5 BSAs, tamarisk was often the dominant species, with arrow weed occasionally as a co-dominant plant species. Other species observed within this community included four-wing saltbush,

bis saltbush, popcorn flower (*Cryptantha* spp.), screw bean mesquite (*Prosopis pubescens*), bush seepweed, and Mediterranean grass.

IODINE BUSH SCRUB (*ALLENROLFEA OCCIDENTALIS* SHRUBLAND ALLIANCE)

Iodine bush scrub is found on playas perched above drainages, seep, and dry lakebed margins. Iodine bush, a USFWS Wetland Inventory obligate species (see Appendix E2 of this EIR), is dominant in the shrub and herbaceous layers in an open to continuous canopy in the VEGA SES 5 BSA. Other plant species observed within this community include four-wing saltbush, tamarisk, and bush seepweed.

OTHER LAND COVER TYPES

Fallow Agricultural Land. Fallow agricultural lands include remnant signs of row crops with open space between rows. Agricultural lands often occur in upland areas with high soil quality, or floodplains and are almost always artificially irrigated. This land cover was observed in the southern portion of the VEGA SES 5 project site where the area consisted primarily of ruderal vegetation including bush seepweed, amaranth (*Amaranthus* sp.), and sudangrass (*Sorghum bicolor* ssp. *drummondii*) and occasional big saltbush.

Active Agricultural Land. Active agriculture consists of row crops that include planted, typically monotypic rows of crops of annual and perennial species with open space between rows. Species composition frequently changes by season and year. Row crops often occur in upland areas with high soil quality or floodplains and are almost always artificially irrigated (see Appendices E1 and E2 of this EIR). Active agricultural land was observed in the western portion of the VEGA SES 2 and 3 BSA, and the western and southern portion of the VEGA SES 5 BSA.

Urban/Developed. Areas mapped as developed have been constructed upon or otherwise physically altered to an extent that natural vegetation communities are no longer supported. In the VEGA SES 2, 3, and 5 BSAs, this land cover consisted primarily of compacted dirt roads and structures (see Appendices E1 and E2 of this EIR).

Sensitive Natural Communities

Iodine bush scrub, bush seepweed scrub, tamarisk thickets, and blue palo verde-ironwood woodland occur within the project sites and are considered sensitive natural communities by the California Department of Fish and Wildlife (CDFW).

Special-Status Species

Literature Review

Prior to conducting field surveys, a literature search was conducted to identify special-status plant and wildlife species with potential to occur within the BSAs. Special-status plants were evaluated for their potential to occur within the project sites (project footprint) where impacts could potentially occur. Special-status wildlife species were evaluated for their potential to occur within the BSAs, a broader area, where direct and indirect impacts could potentially occur.

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

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

Biological Reconnaissance Survey

A biological reconnaissance survey was conducted by ECORP Consulting Inc. on September 29 and 30, 2020 for the VEGA SES 2 and 3 project sites and on September 29 and 30 and November 9 through 13, 2020 for the VEGA 5 project site by walking the BSAs to determine the existing vegetation communities and wildlife habitats on the project sites. The biologists documented the plant and wildlife species present and the conditions within the BSAs were assessed for their potential to provide habitat for special-status plant and wildlife species, including those identified in the literature review. All plant and wildlife species observed during the survey, including special-status species, were recorded (see Appendices E1 and E2 of this EIR).

Special-Status Plant Species

VEGA SES 2 AND 3

Of the 22 special-status plant species analyzed for their potential to occur, 1 was present within the project sites and 17 additional species were identified as having the potential to occur within the vicinity of the VEGA SES 2 and 3 project sites. The remaining 9 species are presumed absent from the VEGA SES 2 and 3 project sites due to a lack of suitable habitat (Appendix E1 of this EIR).

Present. One special-status plant species was observed within the VEGA SES 2 and 3 BSA during the biological reconnaissance survey:

- Munz's cholla (*Cylindropuntia munzii,* California Rare Plant Rank [CRPR][1] 1B.3)

Potential to Occur. The remaining 17 special-status plant species with potential to occur within the VEGA SES 2 and 3 project sites and their sensitivity statuses are:

- Gravel milk-vetch (*Astragalus sabulonum,* CRPR 2B.2)
- Wiggins' croton (*Croton wigginsii,* CRPR 2B.2)
- Glandular ditaxis (*Ditaxis claryana,* CRPR 2B.2)

[1] California Rare Plant Rank (CRPR) 1B=Plants rare, threatened, or endangered in California and elsewhere; CRPR 2B=Plants rare, threatened or endangered in California but more common elsewhere; CRPR 3=Plants needing more information; CRPR 4=Plants of limited distribution. Threat ranks: 0.1=Seriously endangered in California. 0.2=Fairly endangered in California.

- Sand food (*Pholisma sonorae,* CRPR 1B.2)
- Salton milk-vetch (*Astragalus crotalariae*, CRPR 4.3)
- Harwood's milk-vetch (*Astragalus insularis var. harwoodii*, CRPR 2B.2)
- Borrego milk-vetch (*Astragalus lentiginosus var. borreganus*, CRPR 4.3)
- pink fairy-duster (*Calliandra eriophylla*, CRPR 2B.3)
- sand evening-primrose (*Chylismia arenaria*, CRPR 2B.2)
- spiny abrojo (*Condalia globosa var. pubescens*, CRPR 4.2)
- Abrams' spurge (*Euphorbia abramsiana*, CRPR 2B.2)
- ribbed cryptantha (*Johnstonella costata*, CRPR 4.3)
- slender-spined all thorn (*Koeberlinia spinosa var. tenuispina*, CRPR 2B.2)
- slender cottonheads (*Nemacaulis denudata var. gracilis*, CRPR 2B.2)
- roughstalk witch grass (*Panicum hirticaule var. hirticaule*, CRPR 2B.1)
- Coves' cassia (*Senna covesii*, CRPR 2B.1)
- Mecca-aster (*Xylorhiza cognata*, CRPR 1B.2)

VEGA SES 5

Of the 22 special-status plant species analyzed for their potential to occur, all were identified as having the potential to occur within the vicinity of the VEGA SES 5 project site (Appendix E2 of this EIR).

Potential to Occur. The 22 special-status plant species with potential to occur within the VEGA SES 5 project site and their sensitivity statuses are:

- Gravel milk-vetch (CRPR 2B.2)
- Glandular ditaxis (CRPR 2B.2)
- Salton milk-vetch (CRPR 4.3)
- Borrego milk-vetch (CRPR 4.3)
- Spiny abrojo (CRPR 4.2)
- Abrams' spurge (CRPR 2B.2)
- Ribbed cryptantha (CRPR 4.3)
- Slender-spined all thorn (CRPR 2B.2)
- Slender cottonheads (CRPR 2B.2)
- Sand food (CRPR 1B.2)
- Mecca-aster (CRPR 1B.2)
- chaparral sand-verbena (CRPR 1B.1)
- Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*, CRPR 2B.2)
- Peirson's milk-vetch (CRPR 1B.2)

- pink fairy-duster (CRPR 2B.3)
- sand evening-primrose (CRPR 2B.2)
- Wiggins' croton (CRPR 2B.2)
- Munz's cholla (CRPR 1B.3)
- Algodones Dunes sunflower (CRPR 1B.2)
- giant Spanish-needle (CRPR 1B.3)
- roughstalk witch grass (CRPR 2B.1)
- Coves' cassia (CRPR 2B.1)

Special-Status Wildlife Species

VEGA SES 2 AND 3

The literature search documented 27 special-status wildlife species in the vicinity of the VEGA SES 2 and 3 project sites, 4 of which are federally and/or state listed. Of the 27 special-status wildlife species identified in the literature review, 2 were present within the project sites and 15 additional species were found to have the potential to occur. The remaining 10 species are presumed absent from the VEGA SES 2 and 3 project sites due to a lack of suitable habitat (Appendix E1 of this EIR).

Present. The following species were observed on the VEGA SES 2 and 3 project sites during the biological reconnaissance survey:

- Black-tailed gnatcatcher (*Polioptila melanura*, CDFW Watch List [WL])
- Loggerhead shrike (*Lanius ludovicianus*, USFWS Bird of Conservation Concern [BCC], CDFW Species of Special Concern [SSC])

Potential to Occur. Of the 27 special-status wildlife species identified in the literature review, 15 have the potential to occur in the vicinity of the VEGA SES 2 and 3 project sites.

- Burrowing owl (*Athene cunicularia,* BCC, SSC, and Imperial County Species of Conservation Focus)
- Flat-tailed horned lizard (*Phrynosoma mcallii,* SSC and Imperial County Species of Conservation Focus])
- Desert tortoise (*Gopherus agassizii*, federally and state threatened)
- Northern harrier (*Circus hudsonius,* SSC)
- California horned lark (*Eremophila alpestris ssp. actia,* WL)
- Merlin (*Falco columbarius,* WL)
- Crissal thrasher (*Toxostoma crissale,* SSC)
- California black rail (*Laterallus jamaicensis coturniculus*, USFWS BCC, state threatened, and CDFW fully protected)
- Yuma hispid cotton rat (*Sigmodon hispidus eremicus,* SSC)
- Palm Springs pocket mouse (*Perognathus longimembris bangsi,* SSC)

- mountain plover (*Charadrius montanus*, BCC, SSC)
- Gila woodpecker (*Melanerpes uropygialis*, USFWS BCC, and state endangered)
- Yuma Ridgway's rail (*Rallus obsoletus yumanensis*, federally endangered, state threatened, and CDFW fully protected)
- California leaf-nosed bat (*Macrotus californicus*, SSC)
- pallid bat (*Antrozous pallidus*, SSC)
- western yellow bat (*Lasiurus xanthinus*, SSC)

VEGA SES 5

The literature search documented 23 special-status wildlife species in the vicinity of the VEGA SES 5 project site, 3 of which are federally and/or state listed. Of the 23 special-status wildlife species identified in the literature review, 3 were present within the VEGA SES 5 project site and 11 were found to have the potential to occur. The remaining 9 species are presumed absent from the VEGA SES 5 project site due to a lack of suitable habitat (Appendix E2 of this EIR).

Present. The following 3 species were observed on the VEGA SES 5 project site during the biological reconnaissance survey:

- Burrowing owl (BCC, SSC, and Imperial County Species of Conservation Focus)
- Black-tailed gnatcatcher (WL)
- Loggerhead shrike (BBC, SSC)

Potential to Occur. Of the 23 special-status wildlife species identified in the literature review, 11 have the potential to occur in the vicinity of the VEGA SES 5 project site.

- Mountain plover (*Charadrius montanus,* BCC and SCC)
- California black rail (BCC, state threatened, CDFW fully protected)
- Merlin (WL)
- Yuma hispid cotton rat (*Sigmodon hispidus eremicus,* SSC)
- desert tortoise (federally and state threatened)
- flat-tailed horned lizard (SSC)
- northern harrier (SSC)
- Yuma Ridgway's rail (*Rallus obsoletus ssp. yumanensis*, federally endangered, state threatened, and CDFW fully protected)
- California leaf-nosed bat (*Macrotus californicus*, SSC)
- pallid bat (*Antrozous pallidus*, SSC)
- western yellow bat (*Lasiurus xanthinus*, SSC)

Aquatic Resources

The boundaries of aquatic resources were delineated through standard field methods (e.g., paired sample set analyses) and aerial photograph interpretation. Field data was recorded on Wetland Determination Data Forms - Arid West Region and Arid West Ordinary High Water Mark (OHWM) Datasheets (see Appendix F1 of this EIR). ESRI© and sUAS aerial imagery were used to assist with mapping and ground-truthing.

Where jurisdictional features were present, the extent of potential Waters of the State and CDFW-regulated streambed and top-of-bank limits were determined using the OHWM in accordance with USACE requirements and guidelines, as well as SWRCB and CDFW delineation guidance (see Appendix F1 of this EIR for details). Streambed widths were based on evidence of an OHWM as observed during the field survey. In addition, each of the drainages were evaluated for the presence or absence of sediment deposits, litter/debris, water stains, soil shelving, and/or exposed roots indicating active hydrology within the channel. Streambed widths and other lateral limits of jurisdiction were calculated and recorded. The extent of associated riparian habitat was based on the extent of the canopy of the riparian community within or directly adjacent to the feature. Bank-to-bank width measures were also recorded and used as a measure of CDFW jurisdictional boundary where features lacked riparian vegetation.

VEGA SES 2 and 3

A total of 50.83 acres of aquatic resources were mapped within the Vega 2 and 3 BSAs. Aquatic resources are summarized in Appendix F1 of this EIR and depicted on Figure 4 in Appendix F1. These results are subject to agency verification.

Features identified as an aquatic resource had wetland indicators present and/or physical evidence of flow including OHWM, defined bed and bank, presence of a clear and natural line impressed on the bank, the presence or absence of sediment deposits, litter/debris, and/or exposed roots indicating active hydrology within the channel. Associated riparian habitat identified within the project sites consisted of hydrophytic vegetation and hydrological indicators but lacked hydric soil indicators.

WETLAND FEATURES

No wetlands were delineated within the VEGA SES 2 or 3 project sites.

OTHER AQUATIC RESOURCES (NON-WETLAND WATERS)

Ephemeral Drainages

Ephemeral drainages are linear features that exhibit a bed and bank and an OHWM. These features typically convey runoff for short periods of time, during and immediately following rain events, and are not influenced by groundwater sources at any time during the year. The VEGA SES 2 and 3 project sites and adjacent upslope areas are within an alluvial fan drainage system that produces ephemeral conditions with surface waters flowing in direct response to large rain events for short durations. A number of these ephemeral drainages were determined to be inactive, as they do not actively transport water during rain events and are therefore assumed to be relic features on the landscape. Drainages determined to be active transport surface flow water from the direction of the Chocolate Mountains to the southwest and have connectivity to the intermittent drainages within the VEGA SES 2 and 3 project sites.

At the time of the field assessment, all ephemeral features contained no surface flow. The OHWM was delineated in the field primarily by the changes in sediment texture, vegetation, a natural scour line, bank erosion, and the presence of litter and debris. Some of the ephemeral drainages are associated with the Siphons and contained no surface flow at the time of the field assessment and had sparse vegetation within the bed. The ephemeral drainage systems divert surface flow from the direction of the Chocolate Mountains to the southwest, bypassing the Coachella Canal and railroad right-of-way and ultimately connecting to the East Highline Canal and/or associated wetlands. The East Highline Canal supplies water to the Imperial Valley via smaller lateral canals and drains that ultimately drain to the Salton Sea.

MANMADE FEATURES

Canals

The Coachella Canal is adjacent to and outside of the VEGA SES 2 and 3 project sites and is assumed to flow perennially. This concrete-lined canal is used for the purpose of year-round water transport throughout the Coachella Valley. It is maintained by the Coachella Valley Water District to be free of vegetation for water conveyance efficiency and ultimately flows into the Lake Cahuilla storage reservoir. Lake Cahuilla is an artificial soil-cement-lined temporal reservoir that is not connected to a traditional navigable water.

POTENTIAL CDFW REGULATED HABITATS

The following vegetation communities or habitat features could be regulated by CDFW but are not expected to be regulated by the USACE because they do not appear to meet the current definition of waters of the U.S.

Alkali Sinks

Alkali sinks are composed of poorly drained soils with high salinity and/or alkalinity from evaporation of water that accumulates in closed drainages. These sinks are often seasonally inundated and lose water through evaporation. Alkali sink habitat occurs within the southwestern portion of the VEGA SES 2 project site. Plant species observed included bush seepweed and wetland hydrology indicators (soil surface cracks) were observed.

Riparian Habitat

Riparian habitat associated with the drainage systems throughout the VEGA SES 2 and 3 project sites consists of blue palo verde-ironwood woodland and tamarisk thickets. This habitat is typically found in ditches, washes, rivers, arroyo margins, lake margins, and other watercourses. There were scattered riparian trees associated with active ephemeral drainages within the creosote scrub habitat due to the alluvial nature of the sites.

VEGA SES 5

A total of 1.54 acres of aquatic resources were mapped within the VEGA SES 5 project BSA. Aquatic resources are summarized in Appendix F2 of this EIR and depicted on Figure 4 of Appendix F2. These results are subject to agency verification.

WETLAND FEATURES

Freshwater Forested/Shrub Wetland

Freshwater forested/shrub wetlands are dominated by woody vegetation such as shrubs, young trees (saplings), and trees or shrubs that are stunted due to environmental conditions. In seasonally flooded wetlands, surface water is present for extended periods, particularly in the early growing season, but is absent by the end of the growing season in most years. The water table can be variable after a flooding event, and ranges from saturation at the ground surface to a water table well below the ground surface.

Three freshwater forested/shrub wetlands were identified and mapped within the VEGA SES 5 project site. Two of these features are located adjacent to the East Highline Canal in the southwest parcel, and one feature is associated with the ephemeral drainage in the northeast parcel of the VEGA SES 5 project site. Freshwater forested/shrub wetlands within the project site were sparsely vegetated and dominated by hydrophytic vegetation characterized as tamarisk scrub and contained the F8 (redox depressions) hydric soil indicator. Hydrologic indicators within each wetland feature primarily included surface soil cracks (B6) with some areas exhibiting water marks (B1) and sediment deposits (B3) as primary indicators.

Freshwater Pond

Freshwater ponds are non-tidal wetlands that are typically dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. They consist of unconsolidated substrates with less than 75 percent cover of stones, boulders, or bedrock and less than 30 percent cover of vegetation. In intermittently flooded wetlands, substrate is usually exposed but surface water is present for variable periods without detectable seasonal periodicity. Weeks, months, or years may pass between periods of inundation.

One freshwater pond was identified and mapped within the northeast portion of the VEGA SES 5 project site. The pond was dominated by hydrophytic vegetation, tamarisk and iodine bush, and contained the hydric soil indicator for redox depressions (F8). Wetland hydrology indicators met included surface soil cracks (B6).

OTHER AQUATIC RESOURCES (NON-WETLAND WATERS)

Ephemeral Drainage

The VEGA 5 project site and adjacent upslope areas are within an alluvial fan drainage system. Multiple ephemeral drainages that are part of this system flow through the VEGA SES 5 project site and appear to transport surface water from the direction of the Chocolate Mountains to the East Highline Canal, the ephemeral drainage (ED-3001), and/or the freshwater forested/shrub wetland directly northeast of the East Highline Canal. These features lack connectivity to the intermittent system further upstream due to the presence of the railroad right-of-way.

At the time of the field assessment, these features contained no surface flow. The OHWM was delineated in the field primarily by the changes in vegetation, sediment changes, and the break in bank slope. Other features observed included mud cracks and surface relief caused by flowing water. Channel surface features within ephemeral drainages indicated weak bed and bank along with a narrow, scoured area that varied in width. Other indicators present included drainage patterns and sediment deposits.

MANMADE FEATURES

Canals

One major canal, the East Highline Canal, is located within the VEGA SES 5 project site. The East Highline Canal is managed by the Imperial Irrigation District (IID) and was constructed for the purposes of water delivery. It is an unvegetated, concrete (or other impervious material)-lined channel that transports water year-round. Within the VEGA SES 5 project site, lateral canals transport water from the East Highline Canal east towards active agricultural land within the buffer area. The East Highline Canal ultimately flows into the Salton Sea through a series of lateral canals and drains.

Irrigation Channels

Features classified as irrigation channels include concrete-lined lateral canals and concrete-lined irrigation ditches. The irrigation channels within the VEGA SES 5 project site are used for agricultural purposes and are part of a larger interconnected system that supplies water throughout the Imperial Valley.

Lateral Canals

The lateral canals within the VEGA SES 5 project site are managed by IID and supply water to irrigation ditches that are used by private farming operations. The concrete-lined lateral canals are managed by IID to be free of vegetation and therefore lack habitat for wildlife species. Lateral canals that fall within the VEGA SES 5 project site include the O Lateral along the northern end and the N Lateral along the southern end of the VEGA SES 5 project site.

Irrigation Ditches

There is one concrete-lined irrigation ditch within the VEGA SES 5 project site that is associated with a fallow agricultural field and is no longer in use. This irrigation ditch runs parallel to the East Highline Canal and associated wetlands. The concrete-lined irrigation ditch is free of vegetation and therefore lacks habitat for wildlife species.

POTENTIAL CDFW REGULATED HABITATS

The following vegetation communities or habitat features could be regulated by CDFW but are not expected to be regulated by the USACE because they do not appear to meet the current definition of waters of the U.S.

Alkali Sink

Alkali sink habitat was documented within the VEGA SES 5 project site. Hydrophytic vegetation within the akali sink included iodine bush, arrow weed, bush seepweed, and big saltbush. Wetland hydrologic indicators observed within the akali sink habitat included soil cracks (B6), with secondary indicators of sediment deposits (B2), drift deposits (B3), and drainage patterns (B10). No hydric soil indicators were observed within the akali sink habitat.

Riparian Habitat

Riparian habitat associated with the drainage systems throughout the VEGA SES 5 project site consists of tamarisk thickets. This habitat is typically found in ditches, washes, rivers, arroyo margins, lake margins, and other watercourses. Throughout the VEGA SES 5 project site, other species observed included four-wing saltbush and arrow weed. There is additional riparian habitat within the

southwest portion of the VEGA SES 5 project site near the N Lateral canal that is not associated with an active aquatic feature. This habitat likely established opportunistically in areas that were recently left fallow and consists of tamarisk thickets. This area was determined to be remnant of a relic unlined irrigation channel that is no longer in use.

Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the overall health and function of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions, which is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. The nature of corridor use and wildlife movement patterns varies greatly among species. The VEGA SES 2, 3, 5 BSAs were assessed for their ability to function as wildlife corridors.

VEGA SES 2 and 3

The VEGA SES 2 and 3 BSAs have an alluvial fan system, which stems from the Chocolate Mountains and spreads across the landscape in the lowland areas. This interconnected drainage system has associated riparian corridors, which occur throughout the BSAs. These areas provide cover for migrating and nesting birds, and also provide foraging habitat for raptors and small and large mammals, including rodents, felids, and canids.

The large drainages and canal lined with tamarisk thickets and blue palo verde/ironwood woodlands are likely utilized by wildlife moving through the area. During field surveys, a lone bobcat was spotted using the tamarisk thickets for movement. Therefore, these features and associated riparian habitat would be considered linkages between natural habitat areas.

A portion of the BSA is restricted by the Coachella Canal and railroad tracks. Due to the location between the canal and railroad, the VEGA SES 2 and 3 project sites are already disconnected and act as more of a buffer between agricultural lands and wildlands to the northeast, but not as a corridor for mammals.

The blue palo verde – ironwood woodland provides shelter and good-quality foraging habitat. This habitat would function as a corridor for wildlife movement from the Chocolate Mountains. The bush seepweed scrub provides moderate shelter and little to moderate-quality foraging habitat. The creosote bush scrub habitats offer little shelter, but moderate-quality foraging habitat. The eastern portion of the BSA, east of Coachella Canal, currently provides wildlife movement opportunities because it consists of open and relatively unimpeded land.

VEGA SES 5

The VEGA SES 5 project site has an ephemeral drainage braided system with an associated riparian corridor in the eastern section of the site that provides cover for migrating and nesting birds. It also provides foraging habitat for raptors and small and large mammals, including rodents and canids. The tamarisk thicket-dominated wetlands located near the East Highline Canal boundaries are likely

utilized by wildlife moving through the area. Therefore, these features and associated riparian habitat would be considered necessary linkages between natural habitat areas to the north and east. The southern portion is restricted by the East Highline Canal, off-shoot channels, roads, and agricultural fields. Although the canals, roads, and agricultural fields inhibit or deter large mammal movement, avian species and small mammals may forage and pass through these features.

The bush seepweed scrub, iodine scrub, and creosote bush scrub habitats offer little shelter, but moderate-quality foraging habitat. This natural pocket of habitat is semi-open with barriers to the north and south, leaving the terrain accessibility constrained for wildlife access. The eastern portion of the site currently provides wildlife movement opportunities to the northwest and southeast because it consists of open and relatively unimpeded land. However, this portion of the site would not be considered a wildlife movement corridor that would need to be preserved to allow wildlife to move between important natural habitat areas due to the lack of conserved natural lands in the immediate vicinity and the site's proximity to farmlands. The VEGA SES 5 project site is surrounded to the north, west, and south by agriculture. The scrub habitat within the project site is exposed and does not contain any major features that would be considered critical movement corridors for wildlife. Therefore, the scrub habitat acts as more of a buffer between agricultural lands and wildlands to the northeast, but not as a corridor for mammals.

Habitat Conservation Plans

The VEGA SES 2, 3, and 5 project sites are not located in a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.5.2 Regulatory Setting

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

Federal

Bald and Golden Eagle Protection Act of 1940

The Bald Eagle Protection Act of 1940 protects bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. 'Take' is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." 'Disturb' is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (72 *Federal Register* [FR] 31132; 50 CFR 22.3). All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this Act.

Federal Endangered Species Act

The Federal ESA protects federally listed threatened and endangered species and their habitats from unlawful take and ensures that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Under the Federal ESA, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or

collect, or to attempt to engage in any such conduct. USFWS regulations define harm to mean “an act which actually kills or injures wildlife” (50 CFR 17.3).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

Section 404 Permit (Clean Water Act)

The purpose of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of dredge and fill material into waters of the U.S., including wetlands, without a permit from the USACE. Activities regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Either an individual 404 permit or authorization to use an existing USACE Nationwide Permit will need to be obtained if any portion of the construction requires fill into a river, stream, or stream bed that has been determined to be a jurisdictional waterway.

Farmland Protection Policy Act

The Farmland Protection Policy Act is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It also stipulates that federal programs be compatible with state, local, and private efforts to protect farmland. The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) is charged with oversight of the Farmland Protection Policy Act.

State

California Endangered Species Act

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

In addition to state-listed species, CDFW has also produced a list of Species of Special Concern to serve as a “watch list.” Species on this list are of limited distribution or the extent of their habitats has

been reduced substantially such that threats to their populations may be imminent. Species of Special Concern may receive special attention during environmental review, but they do not have statutory protection.

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

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

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

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

Under Sections 3503, 3503.5, and 3513 of the California FGC, activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory nongame bird as designated by the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to FGC Section 3800 are prohibited. Additionally, the state further protects certain species of Fully Protected fish, mammals, amphibians, reptiles, birds, and mammals by prohibiting any take or possession of classified species.

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

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

Porter-Cologne Water Quality Control Act

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

California Environmental Quality Act

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

Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan provides detailed plans and measures for the preservation and management of biological resources. The purpose of this element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public and to protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and for public health and safety. In addition, the purpose of this element is to promote the protection, maintenance, and use of the County's natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the state's natural resources. Table 3.5-3 analyzes the consistency of the VEGA SES 2, 3, and 5 projects with specific policies contained in the Imperial County General Plan associated with biological resources.

Table 3.5-3. Project Consistency with General Plan Goals and Policies

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element - *Open Space and Recreation Conservation* **Policy No. 2 -** The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County. **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.	Consistent	A biological assessment has been conducted at the project sites to evaluate the proposed projects' potential impacts on biological resources. Although special-status plant species and habitat for special-status wildlife species were identified within the projects' BSAs, implementation of Mitigation Measures BIO-1 through BIO-8 would reduce potential impacts on these species to a level that is less than significant. Applicable agencies responsible for protecting plants and wildlife will be notified of the proposed projects and provided an opportunity to comment on this EIR prior to the County's consideration of any approvals for the projects. As described in Chapter 2, Project Description, implementation of the projects would require the approval of CUPs by the County to allow for the construction and operation of the projects.
Conservation of Environmental Resources for Future Generations **Goal 1 -** Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value. **Objective 1.6 -** Promote the conservation of ecological sites and preservation of cultural resource sites through scientific investigation and public education.	Consistent	A biological assessment has been conducted at the project sites to evaluate the projects' potential impacts on biological resources. Although special-status plant species and habitat for special-status wildlife species were identified within the BSA, implementation of Mitigation Measures BIO-1 through BIO-8 would reduce potential impacts on these species to a level that is less than significant. With implementation of Mitigation Measures BIO-1 through BIO-8, the projects would not result in residual significant and unmitigable impacts on biological resources.

Source: County of Imperial 2016
BLM=Bureau of Land Management; CDFW – California Department of Fish and Wildlife; EIR – environmental impact report; USFWS – U.S. Fish and Wildlife Service

3.5.3 Impacts and Mitigation Measures

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

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to biological resources are considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- Have a substantial adverse effect on state or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Methodology

This analysis evaluates the potential for the projects, as described in Chapter 2, Project Description, to interact with local biological resources on the project sites. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

Biological resources technical reports (Appendices E1 and E2) and aquatic resources delineation reports (Appendices F1 and F2) were prepared for each project. The information obtained from the sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with biological resources that could result from project construction and operational activities were evaluated qualitatively based on on-site conditions; expected construction practices; and materials, locations, and duration of project construction and related activities.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not

substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

Impact Analysis

Impact 3.5-1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Construction

VEGA SES 2 and 3

SPECIAL-STATUS PLANTS

The literature review identified 18 special-status plant species that have the potential to occur within the VEGA SES 2 and 3 project sites. A total of 13 plant species have a low potential to occur due to the limited suitable habitat within the VEGA SES 2 and 3 project sites. A total of 4 plant species have a moderate potential to occur due to the presence of suitable habitat within the VEGA SES 2 and 3 project sites: gravel milk-vetch, Wiggins' croton, glandular ditaxis, and sand food. One rare plant species, Munz's cholla (CRPR 1B.3), was found to be present within the VEGA SES 2 and 3 project sites. Potential impacts that may occur on special-status species during construction of the VEGA SES 2 and 3 projects include loss of individuals, habitat, and seedbank. Depending on the size of the population, impacts on special-status plant species within the project impact area may be considered significant. Implementation of Mitigation Measures BIO-1a, BIO-2, and BIO-3 would reduce potential impacts on special-status plant species to a level less than significant.

SPECIAL-STATUS WILDLIFE

The literature review identified 27 special-status wildlife species that have the potential to occur within the VEGA SES 2 and 3 BSA. Fifteen (15) of these species have a low or no potential to occur due to the lack of suitable and/or limited habitat within the BSA. Of the 27 special-status species identified, 10 species have a moderate or high potential to occur on the VEGA SES 2 and 3 project sites: flat-tailed horned lizard, Mojave desert tortoise, northern harrier, California horned lark, merlin, Crissal thrasher, California black rail, Yuma hispid cotton rat, Palm Springs pocket mouse, and burrowing owl. Additionally, two special-status wildlife species were observed onsite during the habitat assessment; loggerhead shrike and black-tailed gnatcatcher were observed in the tamarisk thickets, bush seepweed scrub, blue palo verde-ironwood woodland, and creosote bush scrub on the VEGA SES 2 and 3 project sites. Direct impacts on these species that could occur include injury, mortality, nest failures, and loss of young. Indirect impacts include loss of nesting and foraging habitat and an increase in anthropogenic effects (i.e., noise levels, introduction of invasive and non-native species, increase in human activity, increase in dust). Potential impacts on these special-status wildlife species may be considered significant. Implementation of Mitigation Measures BIO-2, BIO-3, BIO-4, BIO-5, BIO-6a, and BIO-7a would reduce potential impacts on special-status wildlife species to a level less than significant.

VEGA SES 5

SPECIAL-STATUS PLANTS

The literature review identified 22 special-status plant species that have the potential to occur within the VEGA SES 5 project site. Eleven (11) of these plant species have a low potential to occur due to the limited suitable habitat within the site. There is moderate or high potential for 11 rare plant species to occur on the VEGA SES 5 project site: Salton's milk-vetch, Borrego milk-vetch, gravel milk-vetch, spiny abrojo, glandular ditaxis, Abram's spurge, ribbed cryptantha, slender-spined all thorn, slender cottonheads, sand food, and Mecca-aster. Suitable habitat for these species is present within the existing washes and creosote bush scrub habitats. Potential impacts that may occur on these species include loss of individuals, habitat, and seedbank. Depending on the size of the population, potential impacts may be considered significant. Implementation of Mitigation Measure BIO-1b, BIO-2, and BIO-3 would reduce potential impacts on special-status plant species to a level less than significant.

SPECIAL-STATUS WILDLIFE

The literature review identified 23 special-status wildlife species that have the potential to occur within the VEGA SES 5 project site. Sixteen (16) of these species have a low or no potential to occur due to the lack of suitable and limited habitat on the site. The following four species have a moderate or high potential to occur onsite: mountain plover, merlin, California black rail, and Yuma hispid cotton rat. Additionally, 3 special-status wildlife species were observed onsite during the habitat assessment. Black-tailed gnatcatchers, burrowing owl, and loggerhead strikes were observed in the tamarisk thickets and creosote bush scrub in the northern portion of the VEGA SES 5 project site.

Direct impacts on these species that could occur include injury, mortality, nest failures, and loss of young. Indirect impacts include loss of nesting and foraging habitat, increase in anthropogenic effects (i.e., noise levels, introduction of invasive/non-native species, increase in human activity, increase in dust). Potential impacts on these species may be considered significant. Implementation of Mitigation Measures BIO-2, BIO-3, BIO-4, BIO-5, BIO-6b, and BIO-7b would reduce potential impacts on special-status wildlife species to a level less than significant.

Operation

VEGA SES 2, 3 and 5

All electrical components on the project sites shall be either underground or protected so that there will be no exposure to wildlife and therefore no potential for electrocution. Additionally, based on the Avian Powerline Interaction Committee's (APLIC) 1996 report on power line electrocution in the U.S., avian electrocution risk is highest along distribution lines (generally less than 69 kV) where the distance between energized phases, ground wires, transformers, and other components of an electrical distribution system are less than the length or skin-to-skin contact distance of birds. The distance between energized components along transmission lines (greater than 69 kV) is generally insufficient to present avian electrocution risk. Therefore, no impact on avian species is anticipated to occur due to electrocution along the proposed gen-tie line.

Mitigation Measure(s)

BIO-1a **Rare Plant Surveys.** Prior to initiating ground disturbance, rare plant surveys shall be conducted within suitable habitat on the VEGA SES 2 and 3 project sites during the appropriate blooming period for gravel milk-vetch, Wiggins' croton, glandular ditaxis,

sand food, and Munz's cholla. The surveys shall be conducted by a botanist or qualified biologist in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996); the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018); and the CNPS Botanical Survey Guidelines (CNPS 2001). If any special-status species are observed during the rare plant surveys, the location of the individual plant or population will be recorded with a submeter GPS device for mapping purposes. If project-related impacts to rare plants on the project sites are unavoidable, then consultation with CDFW may be required to develop a mitigation plan or additional avoidance and minimization measures. Mitigation measures that may be implemented if the species is observed include establishing a no-disturbance buffer around locations of individuals or a population and additional monitoring requirements.

BIO-1b **Rare Plant Surveys.** Prior to initiating ground disturbance, rare plant surveys shall be conducted within suitable habitat on the VEGA SES 5 project site during the appropriate blooming period for Salton milk-vetch, Borrego milk-vetch, gravel milk-vetch, spiny abrojo, glandular ditaxis, Abram's spurge, ribbed cryptantha, slender-spined all thorn, slender cottonheads, sand food, and Mecca-aster. The surveys shall be conducted by a botanist or qualified biologist in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996); the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018); and the CNPS Botanical Survey Guidelines (CNPS 2001). If any special-status species are observed during the rare plant surveys, the location of the individual plant or population will be recorded with a submeter GPS device for mapping purposes. If project-related impacts to rare plants on the project sites are unavoidable, then consultation with CDFW may be required to develop a mitigation plan or additional avoidance and minimization measures. Mitigation measures that may be implemented if the species is observed include establishing a no-disturbance buffer around locations of individuals or a population and additional monitoring requirements.

BIO-2 **General Impact Avoidance and Minimization Measures.** The following measures will be applicable throughout the life of the projects:

- To reduce the potential indirect impact on migratory birds, bats and raptors, the project shall comply with the APLIC 2012 Guidelines for overhead utilities, as appropriate, to minimize avian collisions with transmission facilities (APLIC 2012)
- All electrical components on the project sites shall be either undergrounded or protected so that there will be no exposure to wildlife and therefore no potential for electrocution.
- The project proponent shall designate a Project Biologist who shall be responsible for overseeing compliance with protective measures for biological resources during vegetation clearing and work activities within and adjacent to areas of native habitat. The Project Biologist shall be familiar with the local habitats, plants, and wildlife. The Project Biologist shall also maintain communications with the Contractor to ensure that issues relating to biological resources are appropriately

and lawfully managed and shall monitor construction. The Project Biologist shall monitor activities within construction areas during critical times, such as vegetation removal, the implementation of Best Management Practices (BMPs), and installation of security fencing to protect native species. The Project Biologist shall ensure that all wildlife and regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed.

- The boundaries of all areas to be newly disturbed (including solar facility areas, staging areas, access roads, and sites for temporary placement of construction materials and spoils) shall be delineated with stakes and flagging prior to disturbance. All disturbances, vehicles, and equipment shall be confined to the flagged areas.
- No potential wildlife entrapments (e.g., trenches, bores) shall be left uncovered overnight. Any uncovered pitfalls will be excavated to 3:1 slopes at the ends to provide wildlife escape ramps. Alternatively, man-made ramps may be installed. Covered pitfalls will be covered completely to prevent access by small mammals or reptiles.
- To avoid wildlife entrapment (including birds), all pipes or other construction materials or supplies shall be covered or capped in storage or laydown areas, and at the end of each work day in construction, quarrying and processing/handling areas. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches shall be left open either temporarily or permanently.
- No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), shall be used within the project sites, on off-site project facilities and activities, or in support of any other project activities.
- Avoid wildlife attractants. All trash and food-related waste shall be placed in self-closing containers and removed regularly from the sites to prevent overflow. Workers shall not feed wildlife. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards to prevent the formation of puddles, which could attract wildlife. Pooled rainwater or floodwater within retention basins shall be removed to avoid attracting wildlife to the active work areas.
- To minimize the likelihood for vehicle strikes on wildlife, speed limits shall not exceed 15 miles per hour when driving on access roads. All vehicles required for O&M must remain on designated access/maintenance roads.
- Avoid nighttime construction lighting or if nighttime construction cannot be avoided, use shielded directional lighting pointed downward and towards the interior of the project sites, thereby avoiding illumination of adjacent natural areas and the night sky.
- All construction equipment used for the projects shall be equipped with properly operating and maintained mufflers.
- Hazardous materials and equipment stored overnight, including small amounts of fuel to refuel hand-held equipment, shall be stored within secondary containment

when within 50 feet of open water to the fullest extent practicable. Secondary containment shall consist of a ring of sand bags around each piece of stored equipment/structure. A plastic tarp/visqueen lining with no seams shall be placed under the equipment and over the edges of the sandbags, or a plastic hazardous materials secondary containment unit shall be utilized by the Contractor.

- The Contractor will be required to conduct vehicle refueling in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species. Any fuel containers, repair materials, including creosote-treated wood, and/or stockpiled material that is left on site overnight, shall be secured in secondary containment within the work area and staging/assembly area and covered with plastic at the end of each work day.
- In the event that no activity is to occur in the work area for the weekend and/or a period of time greater than 48 hours, the Contractor shall ensure that all portable fuel containers are removed from the project sites.
- All equipment shall be maintained in accordance with manufacturer's recommendations and requirements.
- Equipment and containers shall be inspected daily for leaks. Should a leak occur, contaminated soils and surfaces will be cleaned up and disposed of following the guidelines identified in the Stormwater Pollution Prevention Plan or equivalent, Materials Safety Data Sheets, and any specifications required by other permits issued for the projects.
- The Contractor shall utilize off-site maintenance and repair shops as much as possible for maintenance and repair of equipment.
- If maintenance of equipment must occur onsite, fuel/oil pans, absorbent pads, or appropriate containment will be used to capture spills/leaks within all areas. Where feasible, maintenance of equipment shall occur in upland areas where fuel cannot enter waters of the U.S. and in areas that do not have potential to support federally threatened or endangered species.
- Appropriate BMPs shall be used by the Contractor to control erosion and sedimentation and to capture debris and contaminants from construction to prevent their deposition in waterways.
- Erosion and sediment control devices used for the proposed projects, including fiber rolls and bonded fiber matrix, shall be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.
- Firearms, open fires, and pets shall be prohibited at all work locations and access roads. Smoking shall be prohibited along the project alignment.
- Cross-country vehicle and equipment use outside of approved designated work areas and access roads shall be prohibited to prevent unnecessary ground and vegetation disturbance.
- Any injured or dead wildlife encountered during project-related activities shall be reported to the project biologist, biological monitor, CDFW, or a CDFW-approved veterinary facility as soon as possible to report the observation and determine the

best course of action. For special-status species, the Project Biologist shall notify the County, USFWS, and/or CDFW, as appropriate, within 24 hours of the discovery.

- Stockpiling of material shall only be allowed within established work areas.
- The Contractor shall actively manage the spread of noxious weeds.
- The ground beneath all parked equipment and vehicles shall be inspected for wildlife before moving.

BIO-3 **Worker Environmental Awareness Program.** Prior to project construction, a Worker Environmental Awareness Program shall be developed and implemented by a qualified biologist and shall be available in both English and Spanish. Handouts summarizing potential impacts on special-status biological resources and the potential penalties for impacts on these resources shall be provided to all construction personnel. At a minimum, the education program shall including the following:

- the purpose for resource protection;
- a description of special-status species including representative photographs and general ecology;
- occurrences of USACE, RWQCB, and CDFW regulated features in the project study area;
- regulatory framework for biological resource protection and consequences if violated
- sensitivity of the species to human activities;
- avoidance and minimization measures designed to reduce the impacts on special-status biological resources
- environmentally responsible construction practices;
- reporting requirements;
- the protocol to resolve conflicts that may arise at any time during the construction process; and
- workers sign acknowledgement form indicating that the Environmental Awareness Training and Education Program that has been completed, which shall be kept on record.

BIO-4 **Burrowing Owl Avoidance and Minimization.** Take avoidance (pre-construction) surveys for burrowing owl shall be completed prior to project construction. Surveys shall be conducted as detailed within Appendix D of the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012). If burrowing owl is not detected, construction may proceed.

- If burrowing owl is identified during the non-breeding season (September 1 through January 31), then a 50-meter buffer will be established by the biological monitor. Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until a CDFW-approved exclusion plan has been implemented. The buffer distance may be reduced if noise attenuation

buffers such as hay bales are placed between the occupied burrow and construction activities.

- If burrowing owl is identified during the breeding season (February 1 through August 31), then an appropriate buffer will be established by the biological monitor in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until young have fledged. The buffer distance may be reduced in consultation with CDFW if noise attenuation buffers such as hay bales are placed between the occupied burrow and construction activities.

BIO-5 **Pre-Construction Nesting Bird Survey.** If construction or other project activities are scheduled to occur during the bird breeding season (typically February 1 through August 31 for raptors and March 15 through August 31 for the majority of migratory bird species), a pre-construction nesting-bird survey shall be conducted by a qualified avian biologist to ensure that active bird nests, including those for loggerhead shrike, black-tailed gnatcatcher, and burrowing owl, will not be disturbed or destroyed. The survey shall be completed no more than three days prior to initial ground disturbance. The nesting-bird survey shall include the project site and adjacent areas where project activities have the potential to affect active nests, either directly or indirectly, due to construction activity or noise. If an active nest is identified, the biologist shall establish an appropriately sized disturbance limit buffer around the nest using flagging or staking. Construction activities shall not occur within any disturbance limit buffer zones until the nest is deemed inactive by the qualified biologist. If construction activities cease for a period of greater than three days during the bird breeding season, a pre-construction nesting bird survey shall be conducted prior to the commencement of activities. Final construction buffers or setback distances shall be determined by the qualified biologist in coordination with USFWS and CDFW on a case-by-case basis, depending on the species, season in which disturbance shall occur, the type of disturbance, and other factors that could influence susceptibility to disturbance (e.g., topography, vegetation, existing disturbance levels, etc.).

BIO-6a **Pre-Construction Survey for Special-Status Species.** A pre-construction survey shall be conducted for special-status wildlife species within all areas of potential permanent and temporary disturbance. The pre-construction survey shall take place no more than 14 days prior to the start of ground-disturbing activities. The pre-construction surveys shall take place regardless of breeding season timing and shall focus on identifying the presence of special-status wildlife species present on the VEGA SES 2 and 3 project sites or that were identified as having a high potential to occur on the sites. These species include, but are not limited to, burrowing owl, loggerhead shrike, and black-tailed gnatcatcher. Should any special-status species be identified during the pre-construction survey, consultation to develop suitable avoidance and minimization measures with the appropriate agency (USFWS, CDFW) may need to be undertaken.

BIO-6b **Pre-Construction Survey for Special-Status Species.** A pre-construction survey shall be conducted for special-status wildlife species within all areas of potential permanent and temporary disturbance. The pre-construction survey shall take place

no more than 14 days prior to the start of ground-disturbing activities. The pre-construction surveys shall take place regardless of breeding season timing and shall focus on identifying the presence of special-status wildlife species present on the VEGA SES 5 project site or that were identified as having a high potential to occur on the site. These species include, but are not limited to, mountain plover, California black rail, merlin, Yuma hispid cotton rat, burrowing owl, black-tailed gnatcatcher, and loggerhead strike. Should any special-status species be identified during the pre-construction survey, consultation to develop suitable avoidance and minimization measures with the appropriate agency (USFWS, CDFW) may need to be undertaken.

BIO-7a **Sensitive Habitat Avoidance.** To the greatest extent possible, plans should avoid impacts on blue palo verde-ironwood woodland, bush seepweed scrub, and tamarisk thickets habitats within the VEGA SES 2 and 3 project sites to minimize potential impacts on special-status species. Excluding these habitats from the projects should also minimize mitigation and permitting requirements to meet the less-than-significance threshold.

BIO-7b **Sensitive Habitat Avoidance.** To the greatest extent possible, plans should avoid impacts on bush seepweed scrub and tamarisk thicket habitats within the VEGA SES 5 project site to minimize potential impacts to special-status species. Excluding these habitats from the project should also minimize mitigation and permitting requirements to meet the less-than-significance threshold.

Significance After Mitigation

Project construction has the potential to directly impact special-status plant and wildlife species. However, implementation of Mitigation Measures BIO-1 through BIO-7 would reduce potential impacts on special-status plant and wildlife species to a level less than significant.

Impact 3.5-2 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?

VEGA SES 2 and 3

Riparian Habitat

Both alkali sinks and riparian habitat are present within the VEGA SES 2 and 3 BSAs. These sensitive natural communities are regulated under Section 1600 of the California FGC. Impacts on features that fall under the definition of streambed and associated riparian habitat would trigger the need for Streambed Alteration Notification and the VEGA SES 2 and 3 projects may need to enter into formal Agreements with CDFW. This is a potentially significant impact. However, implementation of Mitigation Measures BIO-7a, BIO-8, and BIO-9 would reduce potential impacts on riparian habitat to a level less than significant (see Appendix E1 of this EIR).

Sensitive Natural Communities

Blue palo verde-ironwood woodland, bush seepweed scrub, and tamarisk thickets occur within the VEGA SES 2 and 3 project sites and are considered sensitive natural communities by CDFW. During project construction, sensitive natural communities would be directly impacted by grading activities. However, the proposed project would comply with mitigation requirements recommended through

consultation with CDFW, including the in-kind replacement of palo verde-ironwood woodland, bush seepweed scrub, and tamarisk thickets. Implementation of BIO-7a, BIO-8, and BIO-9 is recommended to reduce potential impacts on sensitive natural communities to a level less than significant.

VEGA SES 5

Riparian Habitat

Both alkali sinks and riparian habitat are present within the VEGA SES 5 BSA. These sensitive natural communities are regulated under Section 1600 of the California FGC. Impacts on features that fall under the definition of streambed and associated riparian habitat would trigger the need for Streambed Alteration Notification and the VEGA SES 5 project may need to enter into formal Agreements with CDFW. This is a potentially significant impact. However, implementation of Mitigation Measures BIO-7b, BIO-8, and BIO-9 would reduce potential impacts on riparian habitat to a level less than significant (see Appendix E2 of this EIR).

Sensitive Natural Communities

Bush seepweed scrub and tamarisk thickets occur within the VEGA SES 5 project site and are considered sensitive natural communities by CDFW. During project construction, sensitive natural communities would be directly impacted by grading activities. However, the proposed project would comply with mitigation requirements recommended through consultation with CDFW, including the in-kind replacement of bush seepweed scrub and tamarisk thickets. Implementation of BIO-7b, BIO-8, and BIO-9 is recommended to reduce potential impacts on sensitive natural communities to a level less than significant.

Mitigation Measure(s)

BIO-8 **Aquatic Resources Regulatory Permitting.** If project-related impacts occur to the riparian areas that may also fall under the jurisdiction of the USACE, CDFW, or RWQCB a regulatory permit with those agencies will be needed prior to the impact occurring. Refer to the ECORP Jurisdiction Delineation Report (2022) for preliminary determination of regulatory limits of areas that may be regulated by the USACE, CDFW, or RWRCB. Permitting includes preparation and submittal of a Pre-Construction Notification under Section 404 of the federal CWA, an Application for Water Quality Certification under Section 401 of the federal CWA, and a Notification of Lake or Streambed Alteration under Section 1600 of the California Fish and Game Code. A completed CEQA document, and Notice of Determination, will be necessary to submit along with the applications. Other items such as finalized project plans, quantities of fill material, supporting technical studies, etc., are also submitted along with the applications. As a part of this process, the projects must also identify and approve mitigation through the respective agencies. Mitigation can include onsite or offsite options or could include purchase of credits from an existing mitigation or conservation bank or payment of an in-lieu fee to a conservation organization. Types of mitigation can include restoration, creation, rehabilitation, enhancement, or other types of habitat improvement. Typically, the type of mitigation and acreage of mitigation is negotiated with the regulatory agencies during the permitting process.

BIO-9 **Minimization of Impacts to Wetland/Riparian Habitat.** Solar panels, structures, and new access roads should not be placed within 50 feet of wetland and riparian habitat boundaries. A construction buffer of 300 feet shall be established around the wetlands and riparian habitat during the bird breading season (February 1 – August 31). Prior to construction, fencing should be installed approximately 10 feet from the wetland and riparian habitat boundaries within 50 feet of the projects. Fencing should be easily visible to construction. The extensive alluvial fan systems should not be used as access roads between the projects.

Significance After Mitigation

Construction of the VEGA SES 2, 3, and 5 projects has the potential to directly impact riparian habitat and sensitive natural communities. However, implementation of Mitigation Measures BIO-7 through BIO-9 would reduce potential impacts to a level less than significant.

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

Construction

VEGA SES 2 AND 3

The Aquatic Resources Delineation report prepared for the VEGA SES 2 and 3 projects identified numerous aquatic resources on the project site (see Appendix F1 of this EIR). Construction of the project has the potential to directly impact these resources; this is a potentially significant impact. However, impacts on aquatic features may require permits from several regulatory agencies pursuant to federal and State laws. Wetlands and perennial drainages connected to navigable waters would require a permit pursuant to Section 404 of the CWA (USACE), certification compliance with Section 401 of the CWA (USACE) and the Porter-Cologne Act (RWQCB), and an agreement pursuant to California FGC Sections 1600 and 1602 (CDFW). Ephemeral drainages are only subject to state and local jurisdiction, and associated riparian habitats are subject to an agreement pursuant to California FGC Sections 1600 and 1602 (CDFW). With implementation of Mitigation Measures BIO-7a, BIO-8, and BIO-9, which ensure the project's adherence to applicable permitting requirements for impacts on jurisdictional waters and which implement avoidance and minimization measures, the project's construction-related impacts on jurisdictional waters would be reduced to a level less than significant.

VEGA SES 5

The Aquatic Resources Delineation report prepared for the VEGA SES 5 project identified numerous aquatic resources on the project site (see Appendix F2 of this EIR). Construction of the project has the potential to directly impact these resources; this is a potentially significant impact. However, impacts on aquatic features may require permits from several regulatory agencies pursuant to federal and State laws. Wetlands and perennial drainages connected to navigable waters would require a permit pursuant to Section 404 of the CWA (USACE), certification compliance with Section 401 of the CWA (USACE) and the Porter-Cologne Act (RWQCB), and an agreement pursuant to California FGC Sections 1600 and 1602 (CDFW). Ephemeral drainages are only subject to state and local jurisdiction, and associated riparian habitats are subject to an agreement pursuant to California FGC Sections 1600 and 1602 (CDFW). With implementation of Mitigation Measures BIO-7b, BIO-8, and BIO-9, which

ensure the project's adherence to applicable permitting requirements for impacts on jurisdictional waters and which implement avoidance and minimization measures, the project's construction-related impacts on wetlands and other jurisdictional waters would be reduced to a level less than significant.

Operation

VEGA 2, 3, AND 5

Project operations would result in minimal, if any, disturbance to protected wetlands on the VEGA SES 2, 3, and 5 project sites. During ongoing operations, personnel would only visit the site as needed for maintenance. Additionally, the proposed project would comply with the necessary permitting requirements of the USACE, CDFW, and RWQCB, per Mitigation Measures BIO-7a, BIO-7b, BIO-8, and BIO-9, which include coordination with the applicable regulatory agency. Therefore, project operations are not expected to have a substantial adverse effect on any state or federally protected wetlands. Implementation of mitigation measures would reduce potential operations impacts on state or federally protected wetlands to a level less than significant.

Mitigation Measure(s)

No additional mitigation measures beyond Mitigation Measures BIO-7a, BIO-7b, BIO-8, and BIO-9 are required.

Significance After Mitigation

Project construction has the potential to directly impact state and federally protected wetlands. However, implementation of Mitigation Measures BIO-7a, BIO-7b, BIO-8, and BIO-9 would reduce potential operations related impacts on state and federally protected wetlands to a level less than significant.

Impact 3.5-4 Would the project interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Construction

VEGA 2 AND 3

As previously indicated, the project site was assessed for its ability to function as a wildlife corridor. The VEGA SES 2 and 3 BSAs are located adjacent to areas containing existing disturbances (i.e., roads, railroad tracks, and active agricultural land). The majority of the project sites do not contain suitable vegetation or cover to support wildlife movement and are nestled between agricultural and development; therefore, wildlife movement opportunities connecting the project sites to large, undeveloped natural areas is limited. However, the existing riparian corridor could act as a potential corridor and nursey site for migrating wildlife species. Implementation of Mitigation measures BIO-2, BIO-4, BIO-5, BIO-6a, and BIO-7a would reduce potential construction-related impacts on wildlife movement to a level less than significant.

Foraging habitat for a number of raptor species and breeding habitat for numerous passerine species that are protected by the MBTA occurs throughout the project sites. The sites provide nesting habitat for ground-nesting species as well as species that nest in riparian scrub habitat. The presence of large ironwood and palo verde trees within the BSA provides suitable nesting habitat for raptor species.

Additionally, northern harriers are ground nesters, and the existing tamarisk thickets and other dense habitats provide potential nesting habitat for this species. Project construction has the potential to result in both direct and indirect impacts on nesting birds. Direct impacts on nesting avian species include injury, mortality, loss of young, and nest failure. Indirect impacts include loss of foraging and nesting habitat for passerine and raptors species, increase in noise and human activities, and potential introduction of invasive or non-native species. Impacts on species protected by the MBTA would be potentially significant during project construction. However, implementation of Mitigation Measures BIO-2, BIO-4, BIO-5, and BIO-7a would reduce potential construction-related impacts on species protected by the MBTA to a level less than significant.

VEGA 5

As previously indicated, the project site was assessed for its ability to function as a wildlife corridor. The VEGA SES 5 BSA is located adjacent to areas containing existing disturbances (i.e., roads, railroad tracks, and active agricultural land). The majority of the project site does not contain suitable vegetation or cover to support wildlife movement and are nestled between agricultural and development; therefore, wildlife movement opportunities connecting the project site to large, undeveloped natural areas is limited. However, the existing riparian corridor could act as a potential corridor and nursey site for migrating wildlife species. Implementation of Mitigation Measures BIO-2, BIO-4, BIO-5, BIO-6b, and BIO-7b would reduce potential construction-related impacts on wildlife movement to a level less than significant.

Foraging habitat for a number of raptor species and breeding habitat for numerous passerine species that are protected by the MBTA occurs throughout the VEGA SES 5 BSA. The site provides nesting habitat for ground-nesting species as well as species that nest in creosote scrub and riparian scrub habitats. Due to the lack of large trees within the BSA, there is no suitable nesting habitat for tree-nesting raptor species. However, project construction has the potential to result in both direct and indirect impacts on nesting birds. Direct impacts on nesting avian species include injury, mortality, loss of young, and nest failure. Indirect impacts include loss of foraging and nesting habitat for passerine species, increase in noise and human activities, potential introduction of invasive/non-native species. Impacts on species protected by the MBTA would be potentially significant during project construction. However, implementation of Mitigation Measures BIO-2, BIO-4, BIO-5, and BIO-7b would reduce potential construction-related impacts on species protected by the MBTA to a level less than significant.

Operation

VEGA 2, 3, AND 5

Project operations would result in minimal, if any, disturbance to the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors and nursery sites. During ongoing operations, personnel would only visit the site as needed for maintenance. Following construction of the project, ground dwelling wildlife will continue to be able to move locally through the area using the surrounding agricultural lands, undeveloped lands, and margins of the irrigation canals. Operation impacts on wildlife movement would be considered less than significant.

Mitigation Measure(s)

No mitigation measures beyond Mitigation Measures BIO-2, BIO-4, BIO-5, BIO-6a, BIO-6b, BIO-7a, and BIO-7b are required.

Significance After Mitigation

Project construction has the potential to directly interfere with the movement of native resident or migratory wildlife species, established native resident or migratory wildlife corridors, and impede the use of native wildlife nursery sites. However, implementation of Mitigation Measures BIO-2, BIO-4, BIO-5, BIO-6a, BIO-6b, BIO-7a, and BIO-7b would reduce potential construction-related impacts on wildlife movement and species protected by the MBTA to a level less than significant.

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

VEGA 2, 3, AND 5

The proposed projects consist of the construction and operation of solar energy facilities and associated electrical transmission lines. Development of the solar facilities would be subject to the County's zoning ordinance.

The VEGA SES 2, 3, and 5 projects are located on seven privately owned legal parcels zoned Heavy Agriculture with a Renewable Energy Zone Overlay (A-3-RE), General Agriculture with a Renewable Energy Zone Overlay A-2-RE, and Open Space/Preservation with a Renewable Energy Zone Overlay (S-2-RE). Pursuant to Title 9, Division 5, Chapter 9, "Solar Energy Plants" and "Transmission lines, including supporting towers, poles microwave towers, utility substations" are uses that are permitted in the A-3 Zone, subject to approval of a CUP from Imperial County.

As demonstrated in Table 3.5-3 and discussed further in Section 3.11, Land Use Planning, with approval of a CUP and General Plan Amendment, the projects would be consistent with Imperial County General Plan, and with biological resources policies contained therein. Therefore, implementation of the proposed projects would not result in a significant impact associated with the projects' potential to conflict with local policies protecting biological resources.

Mitigation Measure(s)

No mitigation is required.

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

VEGA 2, 3, AND 5

The VEGA SES 2, 3, and 5 project sites are not located in a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Implementation of the proposed projects would result in no impact associated with the potential to conflict with local conservation plans. No impact would occur.

Mitigation Measure(s)

No mitigation is required.

3.5.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the projects, the projects will be decommissioned and dismantled. Project decommissioning activities will require construction vehicles to drive across the solar facility, transmission line, and access roads. Concrete footings, foundations, and pads would be removed using heavy equipment and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. Similar to project construction, decommissioning activities have the potential to directly impact special-status species, sensitive vegetation and habitats, aquatic resources, and wildlife habitat linkages. This is a potentially significant impact; however, implementation of Mitigation Measures BIO-1 through BIO-9 at the time of decommissioning would reduce potential impacts to a level less than significant.

Residual

With implementation of Mitigation Measures BIO-1 through BIO-9, the projects would not significantly impact state or federally protected wetlands, conflict with any local policies or ordinances protecting biological resources, or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

With the implementation of Mitigation Measures BIO-1 through BIO-9, potential impacts on special-status species, sensitive vegetation and habitats, aquatic resources, and wildlife habitat linkages would be reduced to a level less than significant.

Therefore, the VEGA SES 2, 3, and 5 projects would not result in residual significant and unmitigable impacts related to biological resources.

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3.6 Cultural Resources

This section discusses cultural resources that may be potentially impacted by the proposed projects. The following identifies the existing cultural resources within the project sites, analyzes potential impacts of the proposed projects, and recommends mitigation measures to avoid or reduce potential impacts of the proposed projects.

Information for this section is summarized from the Archaeological and Built Environment Resources Inventory Report for the VEGA SES 2, 3, 5 Solar Energy Storage Projects prepared by ECORP Consulting, Inc. This report is included as Appendix G of this EIR. The cultural resources inventory included a records search, literature review, and field survey.

The Area of Potential Effects (APE), or project area, consists of the horizontal and vertical limits of a project and includes the area within which significant impacts to historical resources or historic properties could occur as a result of the project. The APE is defined for projects subject to regulations implementing Section 106 (federal law and regulations). For projects subject to CEQA and for the purposes of this EIR, the term “project area” is used rather than APE.

The horizontal limit of the project area includes areas proposed for construction, vegetation removal, grading, trenching, stockpiling, staging, and paving. The horizontal limit of the VEGA SES 2 and 3 project area measures approximately 1,553 acres. The horizontal limit of the VEGA SES 5 project area measures approximately 410 acres.

The vertical limit of the project area is described as the maximum depth below the surface to which excavations for project foundations and facilities will extend. Therefore, the vertical limit includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical limit varies across the project, depending on the depth of the grading or trenching for installation of facilities. The Cultural Resources Inventory assumes it could extend as deep as 10 feet below the current surface; therefore, review of geologic and soils maps was necessary to determine the potential for buried archaeological sites that cannot be seen on the surface.

The vertical limit also is described as the maximum height of structures that could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. The Archaeological and Built Environment Resources Inventory Report assumes the above-surface vertical limit is up to 7.5 feet above the surface, which his anticipated to be the maximum height of the solar arrays.

3.6.1 Existing Conditions

Cultural Setting

Regional Pre-contact History

EARLY HOLOCENE (10,000-6,500 BP) AND MIDDLE HOLOCENE (6,500-3,500 BP)

The Salton Trough area of the Colorado Desert has little archaeological material dating to the Early and Middle Holocene. The only indications of use of this area during this period of time consist of large bifacial dart points found on relic lake beds of Lake Cahuilla and on desert pavement. These include projectile point types common in the Mojave Desert such as Lake Mojave, Pinto, and Elko (Schaefer and Laylander 2007:249). The sparse occupation during the Middle Holocene may be

related to extremely arid climatic conditions and of the lack of water in the Salton Trough (absence of Lake Cahuilla). The Salton Sea Naval Test Base study (Apple et al. 1997) has produced evidence for Archaic occupation on the west side of the Salton Trough. Pinto and Elko series projectile points recovered during investigations at the Test Base yielded a date of 5,840 ±250 years BP (Apple et al. 1997). This data suggests that the desert area of southeastern California was not entirely abandoned during the Middle Holocene. While the population of the region was probably sparse, small bands of mobile people most likely moved among areas where water (at springs) and plant food resources were available (Appendix G of this EIR).

LATE ARCHAIC PERIOD (3,000 TO 1,300 BP)

A few temporary camps with living surfaces and hearths dating to the period 3,000 to 1,300 BP (Late Archaic Period) are located away from the lakebed in canyons and in the upper Coachella Valley above the maximum lake level. However, two temporary camps dating to the first millennium BC that contain fish and waterfowl bone in the Coachella Valley along the maximum Lake Cahuilla shoreline indicate there may have been a lake stand during this period ([Schaefer and Laylander 2007:249], [Appendix G of this EIR]).

LATE PERIOD (1,300 BP TO CONTACT)

Higher population and greater numbers of sites appear to correlate with the presence of Lake Cahuilla, which filled the Salton Trough when water flowed into the trough from the Colorado River. When water ceased to flow from the river, the lake dried, markedly reducing the availability of resources. When the lake was present, lacustrine resources such as fish, shellfish, and waterfowl were available. When the lake was absent, very few resources were available and human population was low. To the northwest, in the Coachella Valley, the intermittent Whitewater River entered Lake Cahuilla near Point Happy between what is now Indian Wells and Indio. Several late pre-contact archaeological sites have been investigated along the ancient Lake Cahuilla shoreline in this area. To the south, the entire Imperial Valley between East Mesa and West Mesa was underwater when Lake Cahuilla was present (Appendix G of this EIR).

During the Late Period, the northern part of the Salton Trough (northern Salton Sea area and the Coachella Valley) was occupied by ancestors of the Takic-speaking Cahuilla. They also occupied the adjacent Santa Rosa and San Jacinto mountains. Floral remains indicated use of these sites during all four seasons. These large multi-seasonal residential bases were likely occupied during the three Lake Cahuilla lake stands between AD 1200 and 1680 (Schaefer and Laylander 2007), along the ancient shorelines in the Coachella Valley. These sites also contain abundant fish bone, waterfowl bone, and shell from freshwater shellfish which indicate use of both lowland and upland resources. Typical artifacts at these sites include cottonwood and desert side-notched arrow points, buff ware ceramics, and late pre-contact marine shell beads (Warren 1984: 407).

The Colorado Desert area northeast of the Salton Trough, including the Chuckwalla Valley area, was probably used intermittently prior to AD 1200 by small groups of Yuman-speaking hunter-gatherers who had residential bases or villages along the Colorado River. These sites would consist of small temporary camps and lithic scatters. Ancestors of the Numic-speaking Chemehuevi moved into the southeastern Mojave Desert and northeastern Colorado Desert (including Chuckwalla Valley) on the west side of the Colorado River about AD 1200 (Sutton et al, 2007: 244). Because the Chemehuevi did not have access to the Colorado River Valley, which was still occupied by Yuman speakers, their use of the desert area was more intensive. Therefore, temporary camps used by ancestors of the Chemehuevi as well as lithic scatters, should be larger than those dating

prior to AD 1200. Pottery is present in some of the temporary camps and consists of either locally made brown ware or buff ware that was obtained through trade with the Colorado River groups.

The southern part of the Salton Trough was occupied by ancestors of the Yuman-speaking Tipai, Kumeyaay, or Kamia (Schaefer and Laylander 2007). This area included the Imperial Valley, the Yuha Desert, and the mountains to the west and east. The lower Colorado River area was occupied by ancestors of the Yuman-speaking Quechan. However, Late Prehistoric archaeological sites in this area belong to the Patayan. Patayan I begins about 1,300 BP and is indicated archaeologically by the presence of small arrow points and by the appearance of Black Mesa Buff and Colorado Beige ceramics along the Colorado River. Patayan ceramics first appeared about 1,200 BP on the east shore of Lake Cahuilla and were probably introduced by Yuman people from the Colorado River. Within other areas of the the southern Salton Trough, ceramics first appear about 1,000 BP at the beginning of Patayan II. Later Patayan II (AD 1000 – 1700) and III (AD 1700 – 1850) ceramics include Tumco Buff and Colorado Buff (Schaefer and Laylander 2007: 252).

Along the lower Colorado River, the Patayan settlement-subsistence system consisted of horticulture, hunting, and gathering in riparian habitats. People lived in multi-seasonal residential bases along the river. When Lake Cahuilla was present in the Salton Trough, they also occupied temporary camps for fishing, hunting, and gathering on the eastern shore of Lake Cahuilla. On the west side of the Salton Trough, the Patayan pattern consisted of a seasonal round among upland and lowland habitats. When Lake Cahuilla was present, seasonal residential bases and temporary camps were occupied on the western shore of Lake Cahuilla in order to obtain lacustrine resources including fish, shellfish, and waterfowl (Schaefer and Laylander 2007: 253).

Obsidian from the Obsidian Butte source on the southeast margin of the Salton Sea was used for making flaked-stone tools throughout southern California during the Late Period. However, obsidian from Obsidian Butte could only be obtained when lake levels were low, since it is at an elevation of -40 meters (130 feet) below sea level. It is possible that the Imperial Valley Yumans traded obsidian for food resources from other groups when lacustrine resources from Lake Cahuilla were not available. Exchange patterns are also indicated by the presence of numerous marine shell beads (made in the coastal Chumash area) in late pre-contact Takic-speaking Cahuilla sites, but not in Yuman-speaking areas (Schaefer and Laylander 2007: 253).

Ethnohistory

The Kumeyaay (also known as Ipai and Tipai) are the Yuman-speaking native people of central and southwestern Imperial County, central and southern San Diego County, and the northern Baja Peninsula in Mexico (Luomala 1978). The ancestral lands of the Kumeyaay extend north from Todos Santos Bay near Ensenada, Mexico to Agua Hedionda Lagoon in north San Diego County, and east to the Imperial Valley. Village locations were selected for seasonal use and were occupied by exogamous, patrilineal clans or bands. Kumeyaay lived in residential bases during the winter and subsisted on stored resources. No permanent houses were built. Brush shelters were temporary and were not reused the next year. Ceremonies, including rites of passage and ceremonies were held in the winter residential bases (Christenson 1990: 58, 62). The Kumeyaay were geographically and linguistically divided into western and eastern Kumeyaay (Chistenson 1990: 64). The western Kumeyaay lived along the coast and in the valleys along the drainages west of the mountains. The eastern Kumeyaay lived in the canyons and desert east of the mountains. The eastern and western Kumeyaay met in the mountains in the fall, where they gathered black oak acorns, traded, and held ceremonies ([Luomala 1978], [Appendix G of this EIR]).

Beginning in 1775, the seminomadic life of the Kumeyaay began to change as a result of contact with Euro-Americans, particularly from the influence of the Spanish missions. Through successive Spanish, Mexican, and Anglo-American control, the Kumeyaay were forced to adopt a sedentary lifestyle and accept Christianity (Luomala 1978).

Regional History

In September of 1771, Father Francisco Garcés followed the Gila River west to its confluence with the Colorado River, traveled south to the Laguna de Salada in Baja California, then turned northwest until he reached the southern end of Imperial Valley. Garcés and his party were the first Europeans to see the Salton Sink region. After his return to Mexico, Garcés talked of his discovery to Captain Juan Bautista de Anza, the commander of the Spanish presidio at Tubac, in what is now southern Arizona. Anza wrote to the Viceroy of Mexico, Antonio María Bucareli Ursúa, and received permission to mount an expedition to cross the Colorado River into California (Bannon 1974; Dowd 1960; Hoyt 1948; Pourade 1971).

The Anza expedition crossed the Colorado River near Yuma, entering the Colorado Desert. Rather than crossing or skirting the extensive sand dunes that lie west of Yuma, Anza followed the river south into Baja California, then turned north. After about three weeks of hardship, the expedition reached Imperial Valley west of the future site of Calexico. After crossing Borrego Valley and the Santa Rosa Mountains, Anza and his men reached Mission San Gabriel in Los Angeles on March 22, 1774, having become the first Europeans to cross the Colorado Desert and what would later be known as Imperial Valley ([Bannon 1974; Dowd 1960; Hoyt 1948; Pourade 1971], [Appendix G of this EIR]).

The first proposal to irrigate the Colorado Desert for agriculture came from Dr. Oliver M. Wozencraft after he saw Indians cultivating plots during an exploratory trip in May of 1849. Wozencraft secured the rights to 1,600 square miles of desert land in the Salton Sink from the California Legislature in 1859 with engineer Charles R. Rockwood directing operations. In 1891, the Colorado River Irrigation Company was formed. In 1896, Rockwood formed the California Development Company and Canadian capitalist George Chaffey, the founder of Ontario, California, provided funding and promotion for the company in 1900. By 1902, the Central Main Canal (Imperial Canal) had been built and water began flowing from the Colorado River just south of the U.S.-Mexico border, via the Alamo River, to the canal (Athens 2007a; Cory 1915; De Stanley 1966; Fitch 1961; Harris 1956-58; Kennan 1917; Nordland 1977; Simon 2007a)

Agricultural development of the sink as a result of irrigation and real estate promotion by Chaffey and the California Development Company exceeded expectations. The population of 2,000 in 1902 grew to 7,000 by 1903 and to more than 10,000 by 1904; and from little or no cultivation in 1900, agriculture in the Salton Sink grew to 120,000 acres under cultivation by January of 1905 (Fitch 1961; Kennan 1917). During the winter of 1904-1905, greater than usual rainfall in the watershed area of the Gila River caused a high rate of discharge into the Colorado River and resulted in the clogging of canal intake systems with a disproportionate amount of silt. After four floods, the Alamo River-Imperial Canal system overflowed, and the entire discharge of the Colorado River began to pour into the Salton Sink, creating the Salton Sea. Agricultural development resumed in Imperial Valley after the flooding of the Salton Sea was brought under control in early 1907 (Cory 1915; Duke 1974; Fitch 1961; Kennan 1917; Simon 2007b; Woerner 1989).

With the increasing acreage under irrigation and cultivation, and the Southern Pacific Railroad reaching southward all the way through Imperial and El Centro to Calexico, the population of

Imperial Valley and the region surrounding it had grown to around 20,000 by 1907. After prominent Imperial Valley citizens petitioned for Imperial Valley to be separated from the County of San Diego, a vote was held on August 6, 1907; and on August 12, 1907, Imperial County was created (Farr 1918; Lusk 2007). Although Imperial was the first city to be established and incorporated in the region, El Centro was chosen by election to be the county seat later that year (Harris 1956-58; Lusk 2007).

The Imperial Irrigation District (IID) was established in July 1911 and was the largest irrigation district in the world at that time, covering an area of 817 square miles. In June 1916, the IID purchased the canal system built by the California Development Company. Today, the IID provides water for 6,471 square miles in Imperial Valley and is the most extensive irrigation district in the U.S. Agriculture, dairy farming, and cattle raising have been the economic staples of Imperial Valley since the early twentieth century. Although the Great Depression of the 1930s brought hardships to the area, it also brought many agricultural workers from the Oklahoma dust bowl who became permanent residents. The completion of Boulder (Hoover) Dam on the Colorado River in 1935, and the All-American Canal from the river to Imperial Valley in 1940, increased and secured the region's irrigation water supply, solidifying the Imperial Valley's economy (Athens 2007b; Hartshorn 1977; Simon 2007c).

Records Search

Records searches from the South Coastal Information Center (SCIC) of the CHRIS at San Diego State University were requested on November 6 and 16, 2020, to determine the extent of previous surveys within a 1-mile of the project area, and whether previously documented pre-contact or historic-period archaeological sites, architectural resources, or traditional cultural properties exist within project areas.

Previous Research

The results from the CHRIS records search revealed that 22 previous cultural resources investigations have been conducted within 1 mile of the project area between 1979 and 2016. Thirteen of those previous cultural resources investigations overlap the project area, and the records search indicates that portions of the project area have been previously surveyed as part of a cultural resources inventory. Though portions of the project areas were previously surveyed, these surveys took place more than 35 years ago for the VEGA SES 5 project site and over 5 years ago for the VEGA SES 2 and 3 project sites under obsolete standards. The length of time that has passed between the prior surveys and the present necessitated a resurvey of the project area.

Previously Recorded Resources

The CHRIS records search determined that 28 previously recorded cultural resources are located within 1 mile of the project area. Previously recorded resources comprise of dumps/trash scatters, trash scatter and foundation, a railroad, a canal, trash scatter and ceramic scatter (multi-component), lithic scatter, ceramic scatters, lithic and ceramic scatters, a village, and ceramic isolates on the VEGA SES 2 and 3 project area; as well as pre-contact resources consisting of lithic scatters, hearths, milling features, and cremation burials; and historic-period resources consisting of a railroad, refuse scatters, a canal, and the historic town site of Flowing Well on the VEGA SES 5 project area.

Four previously recorded resources which include the Coachella Canal, a pre-contact seasonal camp, a precontact fishing village, and a historic GLO survey marker with a glass shard and a plate are located within the VEGA SES 2 and 3 project area; and three previously recorded resources which include historic refuse scatters and the historic period East Highline Canal are located within the VEGA SES 5 project area. Table 3.6-1 details all 28 previously recorded resources and the seven resources within the project area.

Table 3.6-1. Previously Recorded Cultural Resources Within 1-Mile of the Project Area

Primary and/or Site No.	Description	Within Project Area?
P-13- /CA-IMP-000137	Village - hearths, rock rings, cremations (some with ollas), lithics	No
P-13- /CA-IMP-000147	Village – house pits, milling, pumice, hearths, lithics, cremation, shell beads and pendants	Yes (VEGA SES 5)
P-13- /CA-IMP-003093	Isolate - Ceramic scatter	No
P-13- /CA-IMP-003094	Isolate - Ceramic	No
P-13- /CA-IMP-003095	Ceramic scatter	No
P-13- /CA-IMP-003096	Isolate - Ceramic	No
P-13- /CA-IMP-003097	Isolate - Ceramic	No
P-13-003424	Southern Pacific Railroad	No
P-13-004251	Ceramic scatter	No
P-13-004934	Seasonal camp – milling, hearths, ceramics. All surface artifacts collected; site destroyed	Yes (VEGA SES 2 and 5)
P-13-005485	Lithic scatter, ceramic scatter	No
P-13-005487	Trash dump/scatter, historic-period refuse scatter	Yes (VEGA SES 5)
P-13-005488	Trash dump/scatter	Yes (VEGA SES 5)
P-13-006525	Lithic scatter, ceramic scatter	No
P-13-006526	Lithic scatter, ceramic scatter	No
P-13-006527	Ceramic scatters, pendant	No
P-13-006528	Lithic scatter, ceramic scatter	No
P-13-007858	Coachella Canal	Yes (VEGA SES 2 and 3)
P-13-008333/ CA-IMP-007835	East Highline Canal	Yes (VEGA SES 5)
P-13-008347/ CA-IMP-007830	Trash scatter, ceramic scatter	No

Table 3.6-1. Previously Recorded Cultural Resources Within 1-Mile of the Project Area

Primary and/or Site No.	Description	Within Project Area?
P-13-008735/ CA-IMP-008217	Trash dump, historic-period refuse scatter	Yes (VEGA SES 5)
P-13-009177/ CA-IMP-008425	Privies/dumps/trash scatters	No
P-13-011192/ CA-IMP-010187	Privies/dumps/trash scatters	No
P-13-011350/ CA-IMP-010246	Dump/trash scatters	No
P-13-011375/ CA-IMP-010315	Lithic scatter	No
P-13-011376/ CA-IMP-010316	Foundation, trash scatter	No
P-13-011377/ CA-IMP-010317	GLO survey marker, one glass shard, one plate	Yes (VEGA SES 2 and 5)
P-13-011945	None	No

Source: Appendix G of this EIR

The National Register Information System did not list any eligible or listed properties within the project sites or one-mile vicinity. Additionally, no resources were identified as listed as California Historical Landmarks and by the OHP. A search of the Caltrans Local Bridge Inventory online shows the bridge at Flowing Wells Road and East Highline Canal (Bridge 58C0189), was built in 1950. The bridge is within 1 mile of the VEGA SES 2 and 5 project area, but does not overlap with the project area. No historic bridges were identified within or around the VEGA SES 5 project area.

General Land Office

A search of historic GLO land patent records revealed one historic-period resource in the VEGA SES 2 and 3 project area (Appendix G of this EIR). The Southern Pacific Railroad was granted Sections 9, 15, and 17. No GLO Patent information was available for portions of VEGA SES 2 and 3 within Sections 8, 7, and 18. GLO land patent records for VEGA SES 5 also identified land patent records revealed the eastern half of Section 19 and all of Section 17 was granted to the Southern Pacific Railroad Company on June 30, 1905 under the authority of the 1866 Atlantic and Pacific Railroad Land Grant (14 Stat. 292), which allowed for federal lands to be granted to complete the disconnected portions of the Atlantic and Pacific Railroad across the U.S. from southern California to Tulsa, Oklahoma.

Field Survey

Pedestrian surveys were conducted between November 18, 2020, and January 26.

At the time of the survey, the survey areas consisted of broad alluvial fan crossed by the Coachella Canal as well as vacant desert with sparse vegetation to the north of the East Highline Canal, and disused agricultural land with moderately sparse to dense vegetation south of the canal. The pedestrian survey was conducted by walking north-south and east-west transects across all accessible portions of the property and examining both permeable and impermeable surfaces

throughout. The survey areas are located to the south and west of the Chocolate Mountains Aerial Gunnery Range, and the only permanent structures or development that remains on the Project property are canal related. Overall, the visibility throughout open areas of the survey areas was good to excellent (approximately 70 to 100 percent). Visible soil is all native soils that are either periodically inundated, undisturbed, or disturbed by agricultural or vegetation removal activities within the Study Areas.

VEGA SES 2

Two previously recorded resources were revisited and updated as part of this study. Additionally, 146 newly identified archaeological and built-environment resources were found as a result of the field survey, which comprised three pre-contact sites, three pre-contact isolated finds, 49 historic sites, and 102 historic period isolated finds summarized in section 5.3.1 of the Archaeological and Built Environment Resources Inventory Report prepared for this project (Appendix G of this EIR).

VEGA SES 3

No previously recorded archaeological and built environment resources are located within the Vega 3 survey area. Additionally, 9 newly identified archaeological and built-environment resources were found as a result of the field survey, which includes five historic sites and four historic period isolated finds summarized in section 5.3.2 of the Archaeological and Built Environment Resources Inventory Report prepared for this project (Appendix G of this EIR).

VEGA SES 5

Seven previously recorded resources were revisited and updated as part of this study. Additionally, 16 newly identified archaeological and built-environment resources were found as a result of the field survey, which comprised one GLO survey marker, one community, six refuse scatters, and eight isolated finds summarized in Section 5.3.2 of the Archaeological and Built Environment Resources Inventory Report prepared for this project (Appendix G of this EIR).

Summary

As summarized above, the inventories of the Study Areas resulted in confirmation of seven previously recorded sites (P-13-147, P-13-7858, P-13-4934, P-13-11377, P-13-8333, P-13-5487, and P-13-8735), 48 newly identified historic-era sites, 3 newly identified pre-contact sites, 114 historic isolated finds, and 3 pre-contact isolated finds. Only three of these resources (P-13-147, P-13-7858, and P-13-8333) have been previously determined to be eligible for the NRHP and CRHR; the rest remain unevaluated. The isolated finds, however, are not in primary context or do not have the potential for subsurface deposits and could be evaluated using survey level data alone, as follows.

One hundred seventeen newly identified isolated finds were recorded during the archaeological and built environment resources survey, including three pre-contact isolates and 114 historic-period isolates. Isolates are unassociated artifacts or minor features that represent either accidental inclusion or are otherwise disconnected from the human activity that produced them. Isolates typically do not individually contribute to the broad patterns of history because they cannot be connected to a particular event (NRHP Criterion A/CRHR Criterion 1). Isolates are similarly difficult to associate with specific individuals due to their lack of association with archaeological or historical sites, and generally no information exists in the archival record to associate isolates with important individuals in history (NRHP Criterion B/CRHR Criterion2). Isolates do not embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or

possess high artistic values (NRHP Criterion C/CRHR Criterion 3). Finally, isolates in general do not provide important information in history or prehistory (NRHP Criterion D/CRHR Criterion 4). Therefore, the 116 isolates identified during the technical study do not meet the eligibility criteria for inclusion in the NRHP or CRHR as an individual resource. These isolated finds do not contribute to any known or suspected historic districts; and are neither considered to be Historic Properties for the purpose of Section 106 NHPA, nor Historical Resources under CEQA.

The 117 isolated finds identified during the survey are not individually eligible for the CRHR or the NRHP based on the criteria discussed above. However, a detailed evaluation of the other resources (sites) identified during the survey may lead to the conclusion that many or all of the isolated finds are constituents of a historic district based on the density and association of the isolated finds.

With the exception of resources P-13-147, P-13-7858, and P-13-8333, no other resources have been evaluated using NRHP and CRHR eligibility criteria, and therefore, it is not currently known whether any of these are considered Historical Resources under CEQA or Historic Properties under Section 106 NHPA (if applicable). If sites are not presumed eligible, then the process of evaluation requires a combination of archival research and archaeological excavation. If found to be eligible for the NRHP or CRHR, a determination would next need to be made about whether the Project would have a significant effect on the qualities that made them significant.

3.6.2 Regulatory Setting

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

Federal

National Historic Preservation Act

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

State

California Office of Historic Preservation

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

Section 15064.5 of the CEQA Guidelines also requires that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to museums, historical commissions, associations, and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and

associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (HSC Section 7050.5, PRC Sections 5097.94 et seq.).

CEQA Guidelines: Historical Resources Definition

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

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC Section 5024.1; Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC Section 5024.1; Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important to our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.[1]

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

CEQA Guidelines: Archaeological Resources

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

(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

[1] Ibid.

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

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

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

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (HSC Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.

(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner or the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the NAHC within 24 hours.

2. The NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3. The mostly descendent may make recommendations to the landowner of the person responsible for the excavation work, for means of treating or disposing of,

with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or

(2) Where the following conclusions occur the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

California Health and Safety Code, Section 7050.5

California HSC 7050.5 makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the County Coroner.

Local

Imperial County General Plan

The Imperial County General Plan provides goals, objectives, and policies for the identification and protection of significant cultural resources. The Conservation and Open Space Element of the General Plan includes goals, objectives, and policies for the protection of cultural resources and scientific sites that emphasize identification, documentation, and protection of cultural resources. While Section 3.11 Land Use Planning, of this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors and Planning Commission ultimately make a determination as to the project's consistency with the General Plan. Goals and Objectives applicable to the proposed projects are summarized in Table 3.6-2.

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

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element - *Open Space and Recreation Conservation* **Goal 1** - Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value. **Objective 1.4** - Ensure the conservation and management of the County's natural and cultural resources.	Consistent	As discussed in Section 3.6.3 below, the proposed projects have the potential to encounter undocumented historical, archaeological resources, and human remains. Implementation of Mitigation Measures CR-1 through CR-4 would reduce potentially significant impacts on unknown cultural and archaeological materials to a less than significant level during construction. Implementation of Mitigation Measure CR-5 would reduce potential impacts on human remains to a level less than significant.
Objective 3.1 - Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	

Source: County of Imperial 1993
Notes:
CR=cultural resource

3.6.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

- Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5
- Disturb any human remains, including those interred outside of dedicated cemeteries

Methodology

This analysis evaluates the potential for the proposed projects, as described in Chapter 2, Project Description, to interact with cultural resources within the project area. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, the Archaeological and Built Environment Resources Inventory Report prepared for this project (Appendix G of this EIR). were prepared for the projects. The cultural resources inventories provide the results of a SCIC records search and field surveys which have been completed for the project area pursuant to CEQA.

The information from the cultural resources inventory was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with cultural resources that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, and duration of project construction and related activities.

Impact Analysis

Impact 3.6-1 Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section §15064.5?

Section 15064.5 of the CEQA Guidelines defines a historical resource as one that meets one or more of the following criteria:

- Is listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; or
- Is included in a local register of historical resources or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code; or
- Is determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

Of the 168 resources within the VEGA SES 2 and 5 project area, the Old Coachella Canal (P-13-7858) and East Highline Canal (P-13-8333) have been previously evaluated for potential eligibility for listing in the NRHP and CRHR.

EAST HIGHLINE CANAL: P-13-8333

This historic-period earthen canal, built in 1914, runs a length of 45 miles from the Alamo River to just north of Niland, and a portion of it runs diagonally through the VEGA SES 5 project area. It was originally recorded in 1998 and multiple segments have been recorded multiple times since that time. It was incorporated into the All American Canal System in the 1940s, and in 2016 it was evaluated as eligible for the NRHP/CRHR under Criterion A/1 for association with the theme of Development of Irrigated Agriculture in the Imperial Valley, 1900-1942 and under NRHP and CRHR Criterion C/3 as an example of early engineering design of canal systems in Imperial County, at the local level. The Canal was assigned a period of significance of 1914 (when the canal was constructed) to 1942.

During the current inventory, the canal segment within the VEGA SES 5 project area was observed to be in similar condition to past descriptions of other portions of the canal. It is earthen, approximately 60 feet across, and lined with shallow vegetation on either side. It is currently functional and appears to be in good condition and subject to regular maintenance.

OLD COACHELLA CANAL: P-13-7858

This resource was originally recorded in 1997 by ASM Affiliates and is a branch of the All-American Canal, referred to as the Old Coachella Canal. It was replaced by the (new) Coachella Canal in 1980. In a 2014 site record update, Steven Brann and Dan Broockman of Cardno TEC recommended a portion of this resource as eligible for the NRHP.

During the current survey, the portions of this resource within the current project area was revisited and found to be in the same condition as in previous updates. Modern refuse and debris are present within the old canal. Overall construction does not appear to have been affected.

Neither the East Highline Canal (P-13-8333) or the Old Coachella Canal (P-13-7858) will be impacted by project construction. There were no new built environment resources recorded during field investigations. Implementation of the project would result in no adverse change in significance of a historical resources. A less that significant impact to historical resources is expected. No mitigation would be required.

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

As identified in Section 3.6.1, there are 168 cultural resources within the project area identified during the sacred lands, Native American outreach, cultural resources records search, archival research, and intensive pedestrian survey. These resources are described in the Archaeological and Built Environment Resources Inventory Report prepared for this project (Appendix G of this EIR). This includes 48 historic-period archaeological sites, 3 pre-contact archaeological sites, and 117 isolated finds. The 51 sites have not been evaluated for the National Register of Historic Places or the California Register of Historical Resources under any criteria. The 117 isolated finds by their nature are not considered eligible for either the NHRP or CRHR.

Construction activities associated with the project as planned will include ground disturbing actions that would impact unevaluated archaeological resources within the project area. In addition, ground disturbing activities have the potential to disturb previously undocumented resources that could qualify as significant archaeological resources pursuant to CEQA. The potential impact is considered significant. Implementation of Mitigation Measures CR-1 through CR-4 would reduce the potential impact to less than significant.

Mitigation Measure(s)

CR-1 Cultural Resources Management Plan

Project proponent will develop a cultural resources management plan (CRMP) to outline the process for compliance with applicable cultural resources laws, management of resources during operation, and consideration of the effect of decommissioning., the CRMP should include the following: identification of California Native American tribes, identification of long and short term management goals for cultural resources within the project area, evaluation of eligibility for the CRHR and NRHP for all resources within the project area, description of measures to avoid, minimize, or significant impacts to historical resources and historic properties, unanticipated discovery procedures, monitoring needs, curation procedures, anticipated personnel requirements and qualifications. The draft CRMP should be reviewed and approved by the lead agency.

CR-2 Cultural Resources Training

Project proponent will provide cultural resources training for all project personnel regarding the laws protecting cultural resources, appropriate conduct in the field, and other project-specific issues identified in the CRMP.

CR-3 Construction Monitoring

A qualified Archaeologist shall be present on site for ground disturbing activities within 100-feet of all unevaluated or sites eligible for inclusion to the NRHP or CRHR. Ground disturbing activities include grubbing, trenching, and grading. Monitoring will be limited to natural surfaces and undisturbed sediments. Monitoring is not required for previously disturbed areas or fill. Monitors will complete daily monitoring reports documenting activities and results of the day. After construction activities have finished a comprehensive monitoring report shall be prepared.

CR-4 Unanticipated Discovery Procedures

In the event of the discovery of previously unidentified archaeological materials, the contractor shall immediately cease all work activities within approximately 100 feet of the discovery. After cessation of excavation, the contractor shall immediately contact the Imperial County Department of Planning and Development Services. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act, the discovery of any cultural resource within the project area shall not be grounds for a “stop work” notice or otherwise interfere with the project’s continuation except as set forth in this paragraph.

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

Impact 3.6-3 Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

During the construction and operational phases of the proposed projects, grading, excavation and trenching will be required. Although the potential for encountering subsurface human remains within the project sites are low, there remains a possibility that human remains are present beneath the ground surface, and that such remains could be exposed during construction activities. The potential to encounter human remains is considered a significant impact. Implementation of Mitigation Measure CR-5 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA. A less than significant impact with implementation of mitigation is expected.

Mitigation Measure(s)

CR-5 Human Remains

If subsurface deposits believed to be human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist who meets the Secretary of the Interior's Standards for prehistoric and historic archaeology and is familiar with the resources of the region, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the find includes human remains, or remains that are potentially human, the professional archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Imperial County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented.
- If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC may mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 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 reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the Imperial County Planning and Development Services Department, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

3.6.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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

Residual

Implementation of Mitigation Measures CR-1 through CR-4 would reduce potentially significant impacts on unknown cultural and archaeological materials to a less than significant level during construction. Implementation of Mitigation Measure CR-5 would reduce potential impacts on human remains to a level less than significant. No unmitigable impacts on cultural resources would occur with implementation of the proposed projects.

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3.7 Geology and Soils

This section includes an evaluation of the projects in relation to existing geologic and soils conditions within the project sites. Information contained in this section is summarized from the Preliminary Geological and Geotechnical Hazard Evaluation Report prepared by HDR. This report is included as Appendix H of this EIR.

3.7.1 Existing Conditions

Regional Geology

The project sites are located in Imperial County in the Salton Trough portion of the Colorado Desert physiographic province. The Salton Trough is a topographic and geologic structural depression resulting from large scale regional faulting. The trough is bounded on the east and northeast by the San Andreas Fault and of the west by the San Jacinto Fault Zone. The Salton Trough represents the northward extension of the Gulf of California, and contains more than 15,000 feet of Miocene and younger, marine and non-marine sediments capped by approximately 100 feet of Pleistocene and later lacustrine deposits as a result of intermittent filling derived from periodic flooding of the Colorado River and Lake Cahuilla (Appendix H of this EIR). Tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of seismicity.

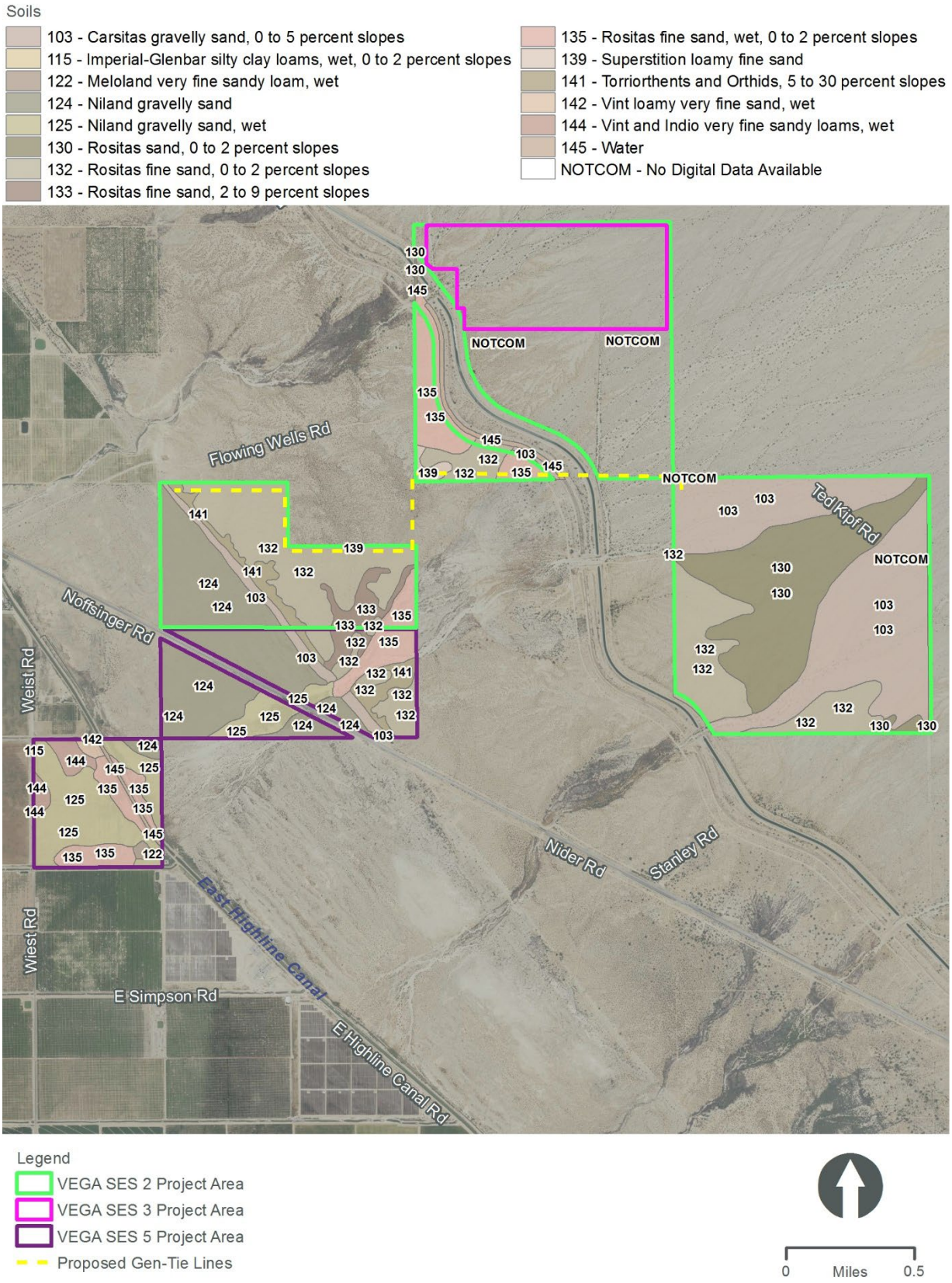
The geologic conditions present within the County contribute to a wide variety of hazards that can result in loss of life, bodily injury, and property damage. Fault displacement is the principal geologic hazard affecting public safety in Imperial County. The primary seismic hazard at the project sites is the potential for strong ground shaking. The project sites are located within a highly active seismic zone. The nearest active major fault that poses a risk contribution of greater than 1 percent is the Brawley Fault Zone, located approximately 13.1 miles (21 kilometers) west of the project sites (Appendix H of this EIR).

Surface Subgrade Soils and Groundwater Conditions

The project sites are generally underlain by stratified alluvial deposits, predominately consisting of interbedded layers of silt, sand, and clay. The near-surface soils are predominantly comprised of very fine to fine sand and occasionally gravelly sand (Appendix H of this EIR). As shown on Figure 3.7-1, soil series mapped on the project sites include:

- 103 – Carsitas gravelly sand, 0 to 5 percent slopes;
- 115 – Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes;
- 122 – Meloland very fine sand loam, wet;
- 124 – Nilan gravelly sand;
- 125 – Niland gravelly sand, wet;
- 130 – Rositas sand, 0 to 2 percent slopes;
- 132 – Rositas fine sand, 0 to 2 percent slopes;

Figure 3.7-1. Soils Mapped on the Project Sites



- 133 - Rositas fine sand, 2 to 9 percent slopes;
- 135 – Rositas fine sand, wet, 0 to 3 percent slopes;
- 139 – Superstition loamy fine sand;
- 141 – Torriorthents and Orthids, 5 to 30 percent slopes;
- 142 – Vint loamy very fine sand, wet;
- 144 – Vint and Indio very fine sandy loams, wet; and
- 145 – Water.

There is one known groundwater well (Well No. 11S15E23M001S) within a one-mile radius of the VEGA SES 2 Project site (less than a mile south of APN 025-270-023). Groundwater at this well measured at 50 feet below ground surface level in March 2020; however, seasonal fluctuations of shallow groundwater should be expected during periods of rainfall, irrigation of adjacent properties, and site grading (Appendix H of this EIR).

Faulting and Seismicity

Earthquakes are the result of an abrupt release of energy stored in the earth. This energy is generated from the forces which cause the continents to change their relative position on the earth's surface, a process called “continental drift.” The earth’s outer shell is composed of a number of relatively rigid plates that move slowly over the comparatively fluid molten layer below. The boundaries between plates are where the more active geologic processes take place. Earthquakes are an incidental product of these processes.

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

In Southern California, the plate boundary is a complex system of numerous faults known as the San Andreas Fault System that spans a 150-mile-wide zone from the main San Andreas Fault in the Imperial Valley westward to offshore of San Diego (Appendix H of this EIR).

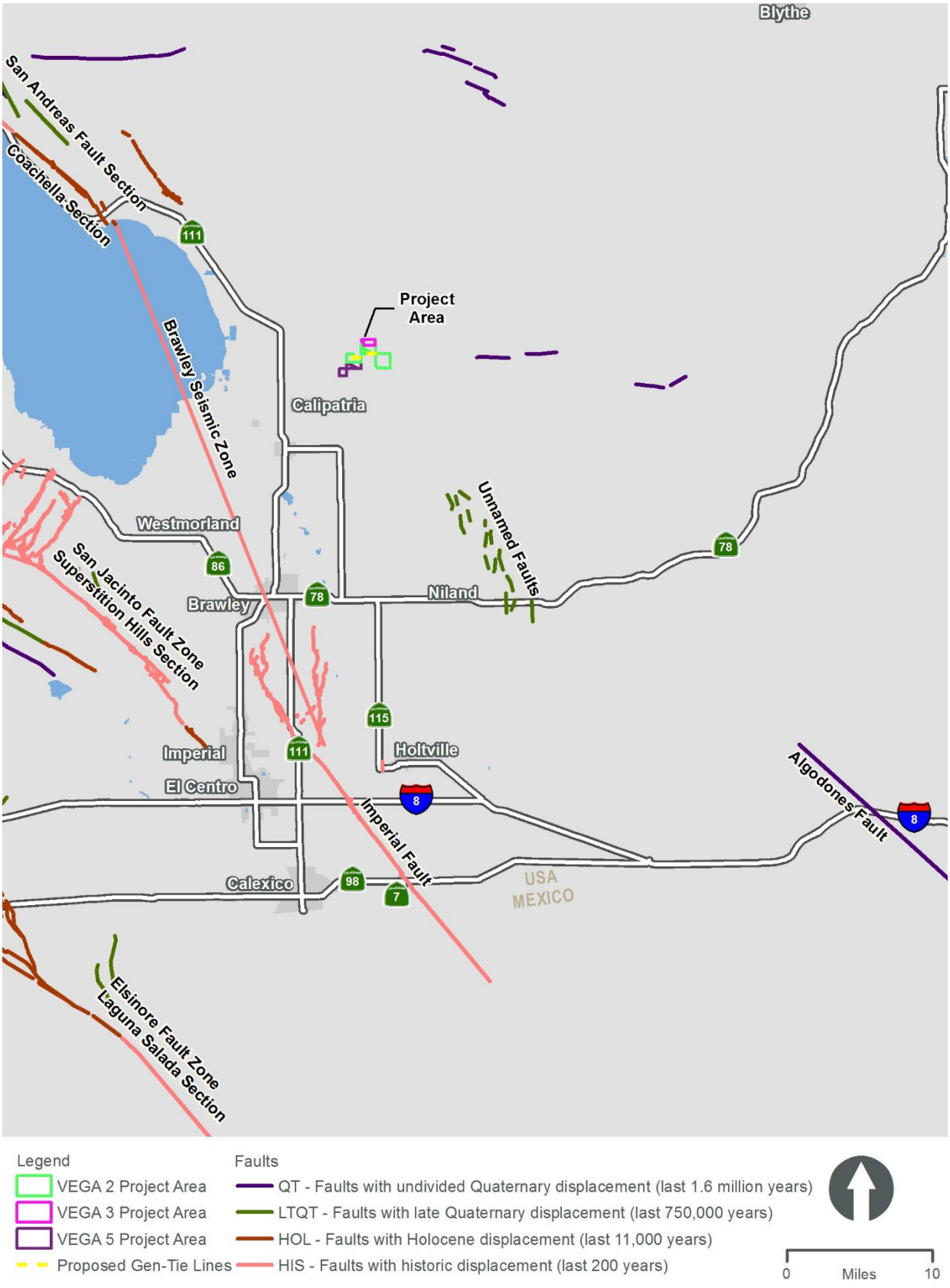
The project sites are located in the seismically active Southern California region, with numerous mapped faults traversing the region including the San Andreas, San Jacinto, and Elsinore Fault Zones. Under the current understanding of regional seismology and tectonics, the largest maximum earthquake to impact the project sites would most likely be generated by the Brawley Seismic Zone, which has an estimated maximum magnitude (M) of 7.4. Table 3.7-1 lists faults with a risk contribution greater than 1 percent (Appendix H of this EIR). Figure 3.7-2 identifies faults within the project region.

Table 3.7-1. Faults with a Risk Contribution of Greater than One Percent

Fault Name	Approximate Distance from Project Site (km)	Maximum Magnitude (M)
Brawley Seismic Zone	21.0	7.4
Elmore Ranch	21.6	6.5

Source: Appendix H of this EIR
Notes:
km=kilometers; M=maximum magnitude

Figure 3.7-2. Regional Fault Map



Seismic Ground Shaking

Ground shaking is the byproduct of an earthquake and is the energy created as rocks break and slip along a fault during an earthquake. The amount of ground shaking that an area may be subject to during an earthquake is related to the proximity of the area to the fault, the depth of the hypocenter (focal depth), location of the epicenter and the size (magnitude) of the earthquake. Soil type also plays a role in the intensity of shaking. Bedrock or other dense or consolidated materials are less prone to intense ground shaking than soils formed from alluvial deposition.

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

Surface Rupture

Surface rupture occurs when movement along a fault results in actual cracking or breaking of the ground along a fault during an earthquake; however, it is important to note that not all earthquakes result in surface rupture. Surface rupture almost always follows preexisting fault traces, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Fault creep is the slow rupture of the earth's crust. Sudden displacements are more damaging to structures because they are accompanied by shaking.

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

In 1972 the Alquist-Priolo Special Studies Earthquake Hazards Act (APEHA) was passed, which required fault studies within 500 feet of active or potentially active faults. The APEHA designates "active" and "potentially active" faults utilizing the same age criteria as that used by the CGS. The project sites are not located within a currently mapped APEHA zone. As previously mentioned above, the nearest active earthquake fault zone likely to impact the project sites is the Brawley Fault Zone, located approximately 21 miles west of the project sites (Appendix H of this EIR). Based on this distance, the potential for surface fault rupture to occur on the project sites is considered low.

Liquefaction

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as those produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand).

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

The project sites have not been mapped for liquefaction potential by CGS.

Landslides

Landslides are the descent of rock or debris caused by natural factors, such as the pull of gravity, fractured or weak bedrock, heavy rainfall, erosion, and earthquakes. The project sites are relatively flat. Due to the existing topography, landslides are not considered a potential hazard for the projects (Appendix H of this EIR).

Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat lying alluvial material toward an open or “free” face such as an open body of water, channel, or excavation. This movement is generally due to failure along a weak plane, and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally toward the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. It is unknown whether lateral spreading is a potential hazard on the project sites.

Land Subsidence

Land subsidence is the sinking of the ground surface caused by the compression of earth materials or the loss of subsurface soil because of underground mining, tunneling, or erosion. The major causes of subsidence include fluid withdrawal from the ground, decomposing organics, underground mining or tunneling, and placing large fills over compressible earth materials. The effective stress on underlying soils is increased resulting in consolidation and settlement. Subsidence may also be caused by tectonic processes.

The project sites are not located in an area of known ground subsidence or within any delineated zones of subsidence due to groundwater pumping or oil extraction. As such, the potential for subsidence at the project sites is low (Appendix H of this EIR).

Expansive Soils

Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures. The project sites are underlain by sand, gravelly sand, and clay/silty clay. Generally, sands are considered not expansive while soils and clays may exhibit moderate to high expansion potential due to variation in moisture content (Appendix H of this EIR).

Collapsible Soils

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

Corrosive Soils

Corrosive soils can damage underground utilities, including pipelines and cables, or weaken roadway structures. Generally, fine grained soils like clays are more likely to be corrosive (Appendix H of this EIR). Fine grained and potentially corrosive soils are expected to be encountered at the project sites.

Paleontological Resources

Paleontological resources (fossils) are the remains of prehistoric plant and animal life. Fossil remains, such as bones teeth, shell, and wood, are found in geologic deposits (rock formations) within which they were originally buried. Many paleontological fossil sites are recorded in Imperial County and have been discovered during construction activities. Paleontological resources are typically impacted when earthwork activities, such as mass excavation cut into geological deposits (formations) with buried fossils.

The project sites are in the Salton Basin near the shoreline of ancient Lake Cahuilla. The lake covered much of the Imperial Valley and created an extensive lacustrine environment. Lake Cahuilla experienced several fill recession episodes before it finally dried up about 300 years ago. In 1905, the Colorado River overflowed into the Salton Basin creating the present-day Salton Sea. As previously mentioned above, the project sites are generally underlain by deposits from periodic flooding of the Colorado River and Lake Cahuilla (Appendix H of this EIR). Sediments from this formation have yielded fossilized remains of continental vertebrates, invertebrates, and plants at numerous previously recorded fossil sites in the Imperial Valley. Therefore, the project sites are considered paleontologically sensitive.

3.7.2 Regulatory Setting

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

Federal

Earthquake Hazards Reduction Act

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

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

State

Alquist-Priolo Special Studies Earthquake Hazards Act

The APEHA was passed into law following the destructive February 9, 1971, San Fernando earthquake. The APEHA provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the APEHA is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The State Geologist (Chief of the California Division of Mines and Geology) is required to identify “earthquake fault zones” along known active faults in California. Counties and cities must withhold development permits for human occupancy projects within these zones unless geologic studies demonstrate that there would be no issues associated with the development of projects. The project sites are not located within a currently mapped APEHA zone (Appendix H of this EIR).

California Building Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. CCR Title 24 is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment, known as building standards. The California Building Code (CBC) is based on the Federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The California Health and Safety Code (HSC) Section and 18980 HSC Section 18902 give CCR Title 24 the name of California Building Standards Code. The updates to the 2019 California Building Standards Code were published on January 1, 2021, with an effective date of July 1, 2021.

Local

County of Imperial Land Use Ordinance

Title 9 Division 15 (Geological Hazards) of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per County regulations, construction of buildings intended for human occupancy are prohibited across the trace of an active fault. An exception exists when such buildings located near the fault or within a designated Special Studies Zone are demonstrated through a geotechnical analysis and report not to expose a person to undue hazard created by the construction.

County of Imperial General Plan

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

Table 3.7-2 analyzes the consistency of the projects with specific policies contained in the County of Imperial General Plan associated with geology, soils, and seismicity. While this EIR analyzes the

projects' 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 3.7-2. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Seismic and Public Safety Element		
Goal 1. Include public health and safety considerations in land use planning.	Consistent	Division 15 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. 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. Since the project sites are located in a seismically active area, the projects are required to be designed in accordance with the CBC for near source factors derived from a design basis earthquake based on a peak ground acceleration of 0.50 gravity. It should be noted that, the projects 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. A preliminary geotechnical report has been prepared for the proposed projects. The preliminary geotechnical report has been referenced in this environmental document. Additionally, a design-level geotechnical investigation would be conducted to evaluate the potential for site specific hazards associated with seismic activity.
Objective 1.1. Ensure that data on geological hazards is incorporated into the land use review process, and future development process.		
Objective 1.3. Regulate development adjacent to or near all mineral deposits and geothermal operations.		
Objective 1.4. Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service.		
Objective 1.7. Require developers to provide information related to geologic and seismic hazards when siting a proposed project.		
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.		
Objective 2.2. Reduce risk and damage due to seismic hazards by appropriate regulation.		
Objective 2.5 Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		
Objective 2.8 Prevent and reduce death, injuries, property damage, and economic and social dislocation resulting from natural hazards including flooding, land subsidence, earthquakes, other geologic phenomena, levee or dam failure, urban and wildland fires and building collapse by appropriate planning and emergency measures.		

Source: County of Imperial 1997

3.7.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

- Directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent AP Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42).
    - Strong seismic ground shaking.
    - Seismic related ground failure, including liquefaction.
    - Landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Methodology

This analysis evaluates the potential for the projects, as described in Chapter 2, Project Description, to interact with local geologic and soil conditions on the project sites. A preliminary geological and geotechnical hazard evaluation report was prepared for the projects. The information obtained from the report was reviewed and summarized to present the existing geologic and soil conditions on the project sites. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

Impact Analysis

Impact 3.7-1 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Rupture of a known earthquake fault, as delineated on the most recent AP Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault; (Refer to Division of Mines and Geology Special Publication 42)?

As previously discussed above, the project sites are located in the seismically active Imperial Valley of southern California with several mapped faults of the San Andreas Fault System traversing the region. As shown in Table 3.7-1, the project sites are not located on an active fault. Furthermore, no portion of the project sites are within a designated APEHA zone and, therefore, the potential for ground rupture to occur within the project sites is considered low. Based on these considerations, the projects would not directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. This is considered a less than significant impact.

Mitigation Measure(s)

No mitigation measures are required.

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

Strong seismic ground shaking?

As previously discussed, the project sites are not located within a designated APEHA zone and the closest active fault with the potential to impact the project sites is the Brawley Fault Zone, located approximately 21 miles west of the project sites. In the event of an earthquake along this fault or another regional fault, seismic hazards related to ground motion could occur in susceptible areas within the project sites. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking.

Even with the integration of building standards, ground shaking within the project sites could cause some structural damage to the facility structures or, at least, cause unsecured objects to fall. During a stronger seismic event, ground shaking could result in structural damage or collapse of electrical distribution facilities. Given the potentially hazardous nature of the project facilities, the potential impact of ground motion during an earthquake is considered a significant impact, as proposed structures, such as the substation and transmission lines could be damaged. However, implementation of Mitigation Measure GEO-1, which requires preparation of a design-level geotechnical report, would reduce the potential impacts associated with ground shaking to a level less than significant.

Mitigation Measure(s)

GEO-1 **Prepare Geotechnical Report(s) as Part of Final Engineering for the Project and Implement Required Measures.** Facility design for all project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by the project applicant. The final geotechnical and/or civil engineering report shall address and make recommendations on the following:

- Site preparation
- Soil bearing capacity

- Appropriate sources and types of fill
- Potential need for soil amendments
- Structural foundations
- Grading practices
- Soil corrosion of concrete and steel
- Erosion/winterization
- Seismic ground shaking
- Liquefaction
- Expansive/unstable soils

In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include subsurface testing of soil and groundwater conditions and shall determine appropriate foundation designs that are consistent with the version of the CBC that is applicable at the time building and grading permits are applied for. All recommendations contained in the final geotechnical engineering report shall be implemented by the project applicant. The final geotechnical and/or civil engineering report shall be submitted to Imperial County Public Works Department, Engineering Division for review and approval prior to issuance of building permits.

Significance after Mitigation

With implementation of Mitigation Measure GEO-1, potential impacts associated with strong seismic ground shaking would be reduced to a level less than significant with the implementation of recommendations made by a licensed geotechnical engineer in compliance with the CBC prepared as part of a formal geotechnical investigation.

Impact 3.7-3 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Seismic related ground failure, including liquefaction?

As discussed above, the factors known to influence liquefaction potential include soil type, relative density, grain size distribution, confining pressure, depth to groundwater, and the intensity and duration of the seismic ground shaking. Liquefaction is most prevalent in loose- to medium-dense, silty, sandy, and gravelly soils below the groundwater table. The project sites have not been mapped for liquefaction potential by CGS (Appendix H of this EIR). However, given that the project sites are underlain by sand and clay, there is a potential for liquefaction to occur on the project sites. Additional geotechnical investigation would be required in order to assess the risk of liquefaction on the project sites. The potential impact related to liquefaction is considered a significant impact**.** Implementation of Mitigation Measure GEO-1, which requires the preparation of a design-level geotechnical report, would reduce the potential impact associated with liquefaction to a level less than significant.

Mitigation Measure(s)

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

Impact 3.7-4 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Landslides?

As stated above, the project sites have a relatively flat topographic gradient. Therefore, the projects would not directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving landslides and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

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

During the site grading and construction phases, large areas of unvegetated soil would be exposed to erosive forces by water for extended periods of time due to ICAPCD dust suppression requirements. Unvegetated soils are much more likely to erode from precipitation than vegetated areas because plants act to disperse, infiltrate, and retain water. Construction activities 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 significant.

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

The projects are not expected to result in substantial soil erosion or the loss of topsoil over the long term. The project applicant would be required to implement on-site erosion control measures in accordance with County standards, which require the preparation, review, and approval of a grading plan by the County Engineer. Therefore, with implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1, identified in Section 3.10 Hydrology/Water Quality, impacts from construction-related erosion would be reduced to a level less than significant.

Mitigation Measure(s)

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

Significance after Mitigation

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

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

The potential for lateral spreading to occur on the project sites has not yet been determined. Additional geotechnical investigation would be required in order to assess the risk of lateral spreading to occur on the project sites. The potential impact associated with lateral spreading is considered a significant impact**.**

The project sites are not located in an area of known ground subsidence or within any delineated zones of subsidence due to groundwater pumping or oil extraction. The potential for subsidence to occur on the project sites is considered low. Therefore, the proposed projects would result in a less than significant impact associated with ground subsidence.

As described above, given that the project sites are underlain by sand and clay, there is a potential for liquefaction to occur on the project sites. Additional geotechnical investigation would be required in order to assess the risk of liquefaction on the project sites. The potential impact related to liquefaction is considered a significant impact**.**

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

Implementation of Mitigation Measure GEO-1, which requires the preparation of a design-level geotechnical report, would reduce the potential impacts associated with lateral spreading, liquefaction, and collapsible soils to a level less than significant.

Mitigation Measure(s)

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

Impact 3.7-7 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

As stated above, expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures. The project sites are underlain by sand, gravelly sand, and clay/silty clay. Generally, sands are not considered expansive soils. However, clays may exhibit moderate to high expansion potential due to variation in moisture content. Unless properly mitigated, shrink-swell soils could exert additional pressure on buried structures and electrical connections producing shrinkage cracks that could allow water infiltration and compromise the integrity of backfill material. These conditions could be worsened if structural facilities are constructed directly on expansive soil materials. This potential impact would be significant as structures could be damaged by these types of soils. In addition, the on-site soils, particularly clay/silty clay, are known to be corrosive. Corrosive soils can damage underground utilities, including pipelines and cables, or weaken roadway structures. A site-specific geotechnical investigation would be required at the project sites to determine the extent and effect of problematic soils.-Implementation of Mitigation Measure GEO-1, which requires the preparation of a design-level

geotechnical report, would reduce potential impacts associated with expansive and corrosive soils to a level than significant.

Mitigation Measure(s)

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

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

The proposed projects would not require an operations and maintenance building. The proposed solar facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Therefore, no septic or other wastewater disposal systems would be required for the projects and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

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

As stated above, the project sites are in the Salton Basin near the shoreline of ancient Lake Cahuilla. The lake covered much of the Imperial Valley and created an extensive lacustrine environment. Lake Cahuilla experienced several fill recession episodes before it finally dried up about 300 years ago. In 1905, the Colorado River overflowed into the Salton Basin creating the present-day Salton Sea. As previously noted, the project sites are generally underlain by deposits from periodic flooding of the Colorado River and Lake Cahuilla (Appendix H of this EIR). Sediments from this formation have yielded fossilized remains of continental vertebrates, invertebrates, and plants at numerous previously recorded fossil sites in the Imperial Valley. Therefore, the project sites are considered paleontologically sensitive.

Although unlikely, project construction has the potential to unearth and/or potentially destroy previously undiscovered paleontological resources. This potential impact is considered a significant impact. However, implementation of Mitigation Measure GEO-2 would reduce the potential impact on paleontological resources to a level less than significant.

Mitigation Measure(s)

GEO-2 **Paleontological Resources.** In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing activities, work must cease within 50 feet of the discovery and a paleontologist shall be hired to assess the scientific significance of the find. The consulting paleontologist shall have knowledge of local paleontology and the minimum levels of experience and expertise as defined by the Society of Vertebrate Paleontology's Standard Procedures (2010) for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. If any paleontological resources or unique geologic features are found within the project sites, the consulting paleontologist shall prepare a paleontological Treatment and Monitoring Plan to include the methods that will be used to protect paleontological resources that may exist within the project sites, as well as procedures

for monitoring, fossil preparation and identification, curation of specimens into an accredited repository, and preparation of a report at the conclusion of the monitoring program.

Significance after Mitigation

Implementation of Mitigation Measure GEO-2 would reduce the potential impact on paleontological resources to a level less than significant. In the event that unanticipated paleontological resources or unique geologic resources are encountered during ground-disturbing activities, work must cease within 50 feet of the discovery and a paleontologist shall be hired to assess the scientific significance of the find.

3.7.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration of the project sites at the end of their use as a solar facility would involve the removal of structures and restoration to prior (pre-solar project) conditions. No geologic or soil impacts associated with the restoration activities would be anticipated and, therefore, no impact is identified.

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

Residual

With implementation of Mitigation Measure GEO-1, impacts related to strong seismic ground shaking, liquefaction, lateral spreading, collapsible soils, expansive soils, and corrosive soils would be reduced to a level less than significant. With implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1 in Section 3.10 Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a level less than significant. Implementation of Mitigation Measure GEO-2 would reduce the potential impact on paleontological resources to a level less than significant. The projects would not result in residual significant and unmitigable impacts related to geology and soil resources.

3.8 Greenhouse Gas Emissions

This section includes an overview of existing greenhouse gas (GHG) emissions within the project area and identifies applicable federal, state, and local policies related to global climate change. The impact assessment provides an evaluation of potential adverse effects with regards to GHG emissions based on criteria derived from the CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description. ECORP Consulting, Inc. prepared an *Air Quality and Greenhouse Gas Assessment* that assesses the combined climate change impacts of the VEGA SES 2, 3 & 5 Solar Energy Projects. This report is included in Appendix D of this EIR.

3.8.1 Existing Conditions

Greenhouse Gases

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHGs, particularly those generated from the production and use of fossil fuels.

GHGs refer to atmospheric gases that absorb solar radiation and subsequently emit radiation in the thermal infrared region of the energy spectrum, trapping heat in the Earth's atmosphere. These gases include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and water vapor, among others. While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy.

The dominant GHG emitted is CO_2, mostly from fossil fuel combustion. GHGs differ in how much heat each can trap in the atmosphere (i.e., global warming potential [GWP]). When accounting for GHGs, all types of GHG emissions are expressed in terms of carbon dioxide equivalent (CO_2e) and are typically quantified in metric tons (MT) or million metric tons. The GWP of a GHG is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is expressed relative to CO_2 over a specified time period. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2 (Appendix D of this EIR).

State law defines GHGs as any of the following compounds CO_2, CH_4, N_2O, hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexafluoride (SF_6) (California HSC Section 38505(g)).

CO_2 is a colorless, odorless gas consisting of molecules made up of two oxygen atoms and one carbon atom. CO_2 is produced when an organic carbon compound, such as wood, or fossilized organic matter, such as coal, oil, or natural gas, is burned in the presence of oxygen. CO_2 is removed from the atmosphere by CO_2 "sinks", such as absorption by seawater and photosynthesis by ocean dwelling plankton and land plants, including forests and grasslands; however, seawater is also a source of CO_2 to the atmosphere, along with land plants, animals, and soils, when CO_2 is released during respiration. Whereas the natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood.

CH_4 is a colorless, odorless non-toxic gas consisting of molecules made up of four hydrogen atoms and one carbon atom. CH_4 is combustible, and it is the main constituent of natural gas-a fossil fuel. CH_4 is released when organic matter decomposes in low oxygen environments. Natural sources include wetlands, swamps and marshes, termites, and oceans. Human sources include the mining of fossil fuels and transportation of natural gas, digestive processes in ruminant animals, such as cattle, rice paddies and the buried waste in landfills. Over the last 50 years, human activities, such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

N_2O is a colorless, non-flammable gas with a sweetish odor, commonly known as "laughing gas", and sometimes used as an anesthetic. N_2O is naturally produced in the oceans and in rainforests. Man-made sources of N_2O include the use of fertilizers in agriculture, nylon and nitric acid production, cars with catalytic converters and the burning of organic matter. Concentrations of N_2O also began to rise at the beginning of the industrial revolution.

Chlorofluorocarbons (CFC) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically un-reactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Because of the discovery that they are able to destroy stratospheric ozone (O_3), an ongoing global effort to halt their production was undertaken and has been extremely successful, so much so that levels of the major CFCs are now remaining steady or declining; however, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

HFCs are synthesized chemicals that are used as a substitute for CFCs. Out of all of the GHGs; HFCs are one of three groups with the highest GWP. HFCs are synthesized for applications, such as automobile air conditioners and refrigerants.

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

SF_6 is an extremely potent GHG. SF_6 is very persistent, with an atmospheric lifetime of more than 1,000 years. Thus, a relatively small amount of SF_6 can have a significant long-term impact on global climate change. SF_6 is human-made, and the primary user of SF_6 is the electric power industry. Because of its inertness and dielectric properties, it is the industry's preferred gas for electrical insulation, current interruption, and arc quenching (to prevent fires) in the transmission and distribution of electricity. SF_6 is used extensively in high voltage circuit breakers and switchgear, and in the magnesium metal casting industry.

Statewide Greenhouse Gas Emissions Inventory

In 2020, CARB released the 2020 edition of the California GHG inventory covering calendar year 2018 emissions. In 2018, California emitted 425.3 million gross metric tons of CO_2e including from imported electricity. The current inventory covers the years 2000 to 2018 and is summarized in Table 3.8-1. Data sources used to calculate this GHG inventory include California and Federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the IPCC. The 2000 emissions level is the sum total of sources from all sectors and categories in the inventory. The inventory is divided into seven broad sectors and categories in the inventory. These sectors include agriculture, commercial and residential, electric power, industrial, transportation, recycling and waste, and high GWP gases.

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

Table 3.8-1. California Greenhouse Gas Emissions Inventory 2000 to 2018

Sector	Total 2000 Emissions ($MMTCO_2e$)	Total 2017 Emissions ($MMTCO_2e$)
Agriculture	30.97	32.57
Commercial and Residential	43.95	41.37
Electric Power	104.75	63.11
Industrial	96.18	89.18
Transportation	178.40	169.50
Recycling and Waste	7.67	9.09
High GWP Gases	6.28	20.46

Source: CARB 2020
Notes:
GWP=global warming potential; $MMTCO_2e$=million metric tons of CO_2 equivalent

Potential Effects of Climate Change

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

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

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

3.8.2 Regulatory Setting

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

Federal

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

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

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

Corporate Average Fuel Standards

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

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

State

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

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

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

This EO directed the secretary of the California EPA to oversee the efforts made to reach these targets, and to prepare biannual biennial reports on the progress made toward meeting the targets and on the impacts on California related to global warming. The first such Climate Action Team Assessment Report was produced in March 2006 and has been updated every two years thereafter. This goal was further reinforced with the passage of AB 32 in 2006 and SB 32 in 2016.

Executive Order S-01-07

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

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

Assembly Bill 32 – California Global Warming Solutions Act

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

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

Senate Bill 32 and Assembly Bill 197 of 2016

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

Renewable Portfolio Standard

The RPS promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "initial RPS"), the goals have been accelerated and increased by EOs S-14-08, S-21-09, SB 350, and SB 100.

The RPS is included in CARB's Scoping Plan list of GHG reduction measures to reduce energy sector emissions. It is designed to accelerate the transformation of the electricity sector through such means as investment in the energy transmission infrastructure and systems to allow integration of large quantities of intermittent wind and solar generation. Increased use of renewables would decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector.

Senate Bill 350

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

Senate Bill 100

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

Climate Change Scoping Plan

The Scoping Plan released by CARB in 2008 outlined the state's strategy to achieve the AB 32 goals. This Scoping Plan, developed by CARB in coordination with the Climate Action Team, proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It was adopted by CARB at its meeting in December 2008. According to the Scoping Plan, the 2020 target of 427 million $MTCO_2e$ requires the reduction of 169 million $MTCO_2e$, or approximately 28.3 percent, from the state's projected 2020 BAU emissions level of 596 million $MTCO_2e$.

However, in August 2011, the Scoping Plan was re-approved by the Board and includes the Final Supplement to the Scoping Plan Functional Equivalent Document. This document includes expanded analysis of project alternatives as well as updates the 2020 emission projections in light of the current economic forecasts. Considering the updated 2020 BAU estimate of 507 million $MTCO_2e$, only a 16 percent reduction below the estimated new BAU levels would be necessary to return to 1990 levels by 2020. The 2011 Scoping Plan expands the list of nine Early Action Measures into a list of 39 Recommended Actions.

In May 2014, CARB developed; in collaboration with the Climate Action Team, the *First Update to California's Climate Change Scoping Plan* (Update), which shows that California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32. In accordance with the United Nations Framework Convention on Climate Change (UNFCCC), CARB is beginning to transition to the use of the AR4's 100-year GWPs in its climate change programs. CARB has recalculated the 1990 GHG emissions level with the AR4 GWPs to be 431 million $MTCO_2e$; therefore, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 million $MTCO_2e$ in the initial Scoping Plan.

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

The majority of the Scoping Plan's GHG reduction strategies are directed at the two sectors with the largest GHG emissions contributions: transportation and electricity generation. The GHG reduction strategies for these sectors involve statutory mandates affecting vehicle or fuel manufacture, public transit, and public utilities. The reduction strategies employed by CARB are designed to reduce emissions from existing sources as well as future sources.

Senate Bill 97

SB 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs Office of Planning and Research (OPR) to develop draft CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" by July 1, 2009, and directs the Resources Agency to certify and adopt the CEQA Guidelines by January 1, 2010.

On December 30, 2009, the Natural Resources Agency adopted amendments to the CEQA Guidelines in the CCR. The amendments went into effect on March 18, 2010, and are summarized below:

- Climate action plans and other GHG reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the GHG emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. In addition, consideration of several qualitative factors may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. The Guidelines do not set or dictate specific thresholds of significance.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of GHG emissions in Appendix G of the CEQA Guidelines.
- The Guidelines are clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- The Guidelines promote the advantages of analyzing GHG impacts on an institutional, programmatic level, and, therefore, approve tiering of environmental analyses and highlights some benefits of such an approach.
- EIRs must specifically consider a project's energy use and energy efficiency potential, pursuant to Appendix F of the CEQA Guidelines.

Senate Bill 375 – Regional Emissions Targets

SB 375 requires that regions within the state which have a metropolitan planning organization (MPO) must adopt a sustainable communities' strategy as part of their RTPs. The strategy must be designed to achieve certain goals for the reduction of GHG emissions. The bill finds that "it will be necessary to achieve significant additional GHG reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 provides that new CEQA provisions be enacted to encourage

developers to submit applications and local governments to make land use decisions that will help the state achieve its goals under AB 32," and that "current planning models and analytical techniques used for making transportation infrastructure decisions and for air quality planning should be able to assess the effects of policy choices, such as residential development patterns, expanded transit service and accessibility, the walkability of communities, and the use of economic incentives and disincentives."

Regional

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

The SCAG is the designated MPO for Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. CEQA requires that regional agencies like SCAG review projects and plans throughout its jurisdiction. SCAG, as the region's "Clearinghouse," collects information on projects of varying size and scope to provide a central point to monitor regional activity. SCAG has the responsibility of reviewing dozens of projects, plans, and programs every month. Projects and plans that are regionally significant must demonstrate to SCAG their consistency with a range of adopted regional plans and policies.

In September 2020, SCAG adopted the 2020-2045 RTP/SCS. The RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the NAAQS as set forth by the federal CAA (see Section 3.4, Air Quality, of this EIR). The following SCAG goal is applicable to the projects:

- Reduce greenhouse gas emissions and improve air quality

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

Local

County of Imperial

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the CEQA Guidelines to provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts. Formal CEQA thresholds for lead agencies must always be established through a public hearing process. Imperial County has not established formal quantitative or qualitative thresholds through a public rulemaking process, but CEQA permits the lead agency to establish a project-specific threshold of significance if backed by substantial evidence, until such time as a formal threshold is approved.

3.8.3 Impacts and Mitigation Measures

Thresholds of Significance

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

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment

- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1. Quantify greenhouse gas emissions resulting from a project; and/or
2. Rely on a qualitative analysis or performance-based standards.

A lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

Mojave Desert Air Quality Management District's Interim Thresholds

The ICAPCD has not adopted a GHG significance threshold. As previously described, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). Thus, in the absence of any GHG emissions significance thresholds, the projected emissions are compared to the Mojave Desert Air Quality Management District (MDAQMD) numeric threshold of 100,000 metric tons of CO_2e annually.

While significance thresholds used in the Mojave Desert Air Basin are not binding on the ICAPCD or County of Imperial, they are instructive as a comparative metric of the project's potential GHG impact. This threshold is also appropriate as the MDAQMD GHG thresholds were formulated based on similar geography and climate patterns as found in Imperial County. Therefore, the 100,000-metric ton of CO_2e threshold is appropriate for this analysis.

Methodology

The project-related direct and indirect emissions of GHGs were estimated using the similar methods for quantification of criteria air pollutants, as described in Section 3.4 Air Quality. Where GHG emission quantification was required, emissions were modeled using CalEEMod, version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated GHG emissions were calculated using CalEEMod model defaults for Imperial County coupled with information provided by the project applicant.

For instance, construction is estimated to take 12-18 months. According to the Traffic Study prepared for the projects (Appendix K1 and K2 of this EIR), the number of on–site construction workers for the VEGA SES 2 and 3 solar facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the VEGA SES 2 and 3 battery storage facility and substations is not expected to exceed 100 workers at any one time. The number of on–site construction workers for the VEGA SES 5 solar facility is not expected to exceed 75 workers at any one time. The number of on-site construction workers for the VEGA SES 5 battery storage facility and substation is not expected to exceed 50 workers at any one time.

Operational air pollutant emissions account for a conservative estimate of two worker trip per day. Such visits include inspections, equipment servicing, site and landscape clearing, and periodic washing of the PV modules if needed to maintain power generation efficiency. Therefore, operational onsite equipment use is accounted in addition to the consumption of 32 acre-feet of water annually.

Impact Analysis

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

VEGA SES 2, 3 AND 5

Construction and operation of the projects would result in a relatively small amount of GHG emissions. The projects would generate GHG emissions during construction and routine operational activities at the project sites.

Construction. During construction, GHG emissions would be generated from the operation of off-road equipment, haul-truck trips, and on-road worker vehicle trips. Table 3.8-2 shows the projects' combined construction-related GHG emissions. Once construction is complete, the generation of these GHG emissions would cease.

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

Emissions Source	CO_2e (metric tons/year)
Construction of VEGA SES 2 and 3 (2023)	961
Construction of VEGA SES 5 (2024)	787
MDAQMD Significance Threshold	*100,000*
Exceed MDAQMD's Significance Threshold?	**No**

Source: Appendix D of this EIR

As shown in Table 3.8-2, implementation of the projects would result in the generation of approximately 961 metric tons of CO_2e for the construction of VEGA SES 2 and 3, and 787 metric tons of CO_2e for the construction of VEGA SES 5. Therefore, the construction emissions are less than the MDAQMD's screening threshold of 100,000 $MTCO_2e$ per year. As previously described, this significance threshold is not binding on the projects, yet in the absence of an established threshold from the ICAPCD or County it is instructive for comparison purposes. This threshold is also appropriate for use in this analysis as the MDAQMD GHG thresholds were formulated based on similar geography and climate patterns as found in Imperial County.

Operation. Once the projects are constructed and operational, the proposed projects would have no major stationary emission sources and would require minimal vehicular trips. Therefore, operation of the proposed solar facilities would result in substantially lower emissions than project construction. As shown in Table 3.8-3, the yearly contribution to GHG from operation of the projects would total 2,734 $MTCO_2e$ per year. Therefore, the proposed projects' operational emissions are less than the MDAQMD's screening threshold of 100,000 $MTCO_2e$ per year. Impacts would be less than significant.

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

Emissions Source	CO_2e (metric tons/year)
Area Source	0
Energy	2,720
Mobile	4
Waste	0
Water	10
Total	2,734
Significance Threshold	*100,000*
Exceed Significance Threshold?	**No**

Source: Appendix D of this EIR

Notes:

Emission projections predominately based on CalEEMod model defaults for Imperial County. Operational emissions account for two vehicle trips per day. It is noted that this is a conservative estimate as many days will have no operational related vehicle trips. Additionally, it accounts for the energy usage used for the battery energy storage system and the pumping of 32-acre feet of water per year.

Additionally, the projects propose solar energy generation facilities intended to generate renewable energy. Solar plants generate far less GHG life-cycle emissions (approximately 83 to 94 percent less) than fossil-fueled energy plants. The proposed projects would contribute to the continued reduction of GHG emissions in the interconnected California and western U.S. electricity systems, as the total energy produced by the projects would displace GHG emissions that would otherwise be produced by existing business-as-usual power generation resources (including natural gas, coal, arid renewable combustion resources). Table 3.8-4 shows the total emissions that would potentially be displaced by the proposed projects. As shown in Table 3.8-4, the proposed projects would potentially displace approximately 12,620 $MTCO_2e$ per year, and approximately 378,597 $MTCO_2e$ over the course of 30 years. The proposed projects' annual indirect GHG emissions from the displacement of fossil fuel fired electricity generation is significantly higher than the projects' annualized direct and indirect emissions sources. Implementation of the proposed projects would result in a less than significant impact associated with the generation of GHG emissions.

Table 3.8-4. Proposed Project Displaced GHG Emissions (Metric Tons)

	Emissions (Metric Tons)			
	CO_2	CH_4	N_20	CO_2e
Emissions Displaced Annually (metric tons)				
Displaced Natural-Gas Source Emissions	10,880	0.00	0.00	10,880
Displaced Coal-Source Emissions	1,737	0.01	0.01	1,740
Total	**12,617**	**0.01**	**0.01**	**12,620**
Emissions Displaced over 30 Years (metric tons)				
Displaced Natural-Gas Source Emissions	326,411	0.00	0.00	326,411
Displaced Coal-Source Emissions	52,097	0.35	0.26	52,186
Total	**378,508**	**0.35**	**0.26**	**378,597**

Source: Appendix D of this EIR

Notes:

In order to provide a conservative analysis, the Proposed Project is assumed to generate electricity 50 percent of the time available (4,380 hours annually). Heat Rate indicates the energy generator efficiency of existing fossil-fuel based energy generators. The heat rate of a power plant measures the amount of fuel used to generate one unit of electricity. Power plants with lower heat rates are more efficient than plants with higher heat rates. The CEC's Updated Thermal Power Plant Efficiency Measures and Operational Characteristics for Production Cost Modeling" (2019b) estimates heat rates and operating ranges for thermal power plants supplying energy to California. The average heat rate of power plants types are as follows:

***Steam Boiler fueled by coal: 10,800 heat rate **Steam Boiler fueled by natural gas: 10,200 heat rate **Gas Turbine: 10,100 heat rate*

***Combined natural gas Boiler and Turbine: 7,640 heat rate*

By omitting steam boilers fueled by coal since so little of California's energy is derived from coal, the average heat rate = 9,313 [(10,100 + 10,200 + 7,640) ÷ 3 = 9,313]. 14.6 MW (63,875,000 annual kWH) x 9,313 heat rate = 594,867,875,000 Btu displaced from fossil fuel production. Fossil fuel-based energy consumption in California is predominately derived from natural gas (34.23 percent). Coal constitutes 2.96 percent of all fossil fuel-based energy. Therefore, 247,286,575,638 of the displaced Btu is displaced natural gas consumption and 17,251,168,375 is displaced Btu is displaced coal. The heat content of coal is assumed at 24 million Btu per ton of coal burned. At a rate of 24 million Btu per ton of coal burned, the Project would displace 719 tons of burned coal annually.

Mitigation Measure(s)

No mitigation measures are required.

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

As discussed in Impact 3.8-1, the proposed projects would generate a relatively small amount of GHG emissions.

The proposed project-generated GHG emissions would not exceed the MDAQMD significance thresholds, which were prepared with the purpose of complying with statewide GHG-reduction efforts. While the projects would emit some GHG emissions during construction and a very small amount during operations, the contribution of renewable resource energy production to meet the goals of the Renewable Portfolio Standard (Scoping Plan Measure E-3) would result in a net cumulative reduction of GHG emissions, a key environmental benefit. Scoping Plan Measure E-3, Renewable Portfolio Standard, of the Climate Change Scoping Plan requires that all investor-owned utility companies generate 60 percent of their energy demand from renewable sources by the year 2030. Therefore, the short-term minor generation of GHG emissions during construction, which is necessary to create this

new, low-GHG emitting power-generating facility, as well as the negligible amount generated during ongoing maintenance operations, would be more than offset by GHG emission reductions associated with solar-generated energy during operation.

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

Implementation of the proposed projects would result in a less than significant impact associated with the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs.

Mitigation Measure(s)

No mitigation measures are required.

3.8.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Similar to construction activities, decommissioning and restoration would result in GHG emissions below allowable thresholds. Construction activities during decommissioning and restoration would adhere to Mitigation Measures AQ-1 and AQ-2 outlined in Section 3.4, Air Quality of this EIR, further reducing GHG emissions. Therefore, the impact is considered less than significant.

Residual

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

3.9 Hazards and Hazardous Materials

Information contained in this section is summarized from the Phase I Environmental Site Assessment (ESA) prepared for the VEGA 2/3 Solar Site and the Phase I ESA prepared for the VEGA 5 Solar Site by GS Lyon Consultants, Inc. The Phase I ESAs prepared for the project sites were used to assess the potential hazards and hazardous materials found on-site or adjacent to the project sites. These reports are included in Appendix I1 and I2 of this EIR, respectively. This section addresses potential hazards and hazardous materials for construction and operational impacts.

3.9.1 Existing Conditions

The project sites are located on approximately 1,963 acres of privately-owned land zoned for agricultural and open space/preservation uses within unincorporated Imperial County. The VEGA SES 2 and 3 and a portion of the VEGA SES 5 project sites east of the East Highline Canal are not currently under cultivation and contain scattered desert vegetation. Meanwhile, the VEGA SES 5 project site west of the East Highline Canal contains fallow agricultural land.

As seen on Figure 2-2, VEGA SES 2 and 3 are located on three parcels (APNs 025-260-011 [partial], 025-270-023, and 025-010-006 [partial]) and have been vacant desert land since 1937. A high voltage 230 kV powerline is immediately west of APN 025-260-011. A dry ephemeral wash bed subject to flash flooding, runs through the southeast corner of APN 025-260-011; and the high stand shoreline of ancient Lake Cahuilla crosses diagonally, southeast to northwest, across this parcel and is expressed with a sharp change in elevation. VEGA SES 2 and 3 share APN 025-010-006. The southwestern corner of this parcel is bisected by the concrete lined Coachella Canal and is traversed by the unpaved Flowing Wells Road and Coachella Canal Road. A dry ephemeral wash bed subject to periodic flooding crosses the northwest corner of the parcel and an earth flood diversion berm runs north-south within the eastern portion of the parcel to divert desert flood water to the Siphon 5 crossing of the Coachella Canal. The Coachella Canal is adjacent to the southwest corner of VEGA SES 2 (APN 025-270-023) while PegLeg Well Road which is unpaved, crosses the northern portion of this parcel. The unpaved Ted Kipf Road splits off of PegLeg Road to the southeast and diagonally crosses the northeastern portion of the parcel. Similar to the other parcels, APN 025-270-023 has dry ephemeral wash beds that are subject to flash flooding which cross the northwest and southeast corners of the parcel aligning with Siphons 4 and 5 of the Coachella Canal.

VEGA SES 5 is made up of three parcels (APN 025-260-011 [partial], 025-260-022, and 025-260-019). Noffisinger Road and the Union Pacific Railroad (UPRR) separate APNs 025-260-011 and 025-260-019. The portions of VEGA SES 5 that are east of the East Highline Canal are within a desert area and contains dry wash beds that traverse in a northeast to southwest direction. As with the other dry wash beds, this wash is subject to flash flooding. The same high voltage 230 kV powerline that forms the western boundary of VEGA SES 2, forms the western boundary of APN 025-260-019 and the eastern boundary of APN 025-260-022. The agricultural portion of VEGA SES 5 (APN 025-260-022) that is west of the East Highline Canal contains fallow agricultural land with scattered dry crop residue. The agricultural field is bounded by McDonald Road to the north, Schrimpf Road to the south, and Weist Road to the west. The East Highline Canal cuts across APN 025-260-022 diagonally in a northwest to southeast direction. Within the agricultural portion of VEGA SES 5, there are subsurface tile drainage pipelines that are generally aligned north to south and carry irrigation wastewater to the N Drain at the southwest corner of the field.

Records Review

A review of historic aerial photographs, historic topographic maps, historic Sanborn Fire Insurance maps, governmental regulatory databases, and other regulatory and agency databases was performed to evaluate potential adverse environmental conditions resulting from previous ownership and uses of the project sites.

GS Lyon Consultants, Inc. contracted Environmental Data Resources, Inc. of Shelton, Connecticut which queries and maintains comprehensive environmental databases and historical information, including proprietary databases, aerial photography, topographic maps, Sanborn Maps, and city directories to generate a compilation of federal, state and tribal regulatory lists containing information regarding hazardous materials occurrences on or within the prescribed radii of American Society of Testing and Materials Practice E 1527-13. The search of each database was conducted using the approximate minimum search distances from the subject property defined by the Standard. The purpose of the records review is to obtain and review reasonably ascertainable records that would help identify recognized environmental conditions or historical recognized environmental conditions in connection with the project sites. The project sites are not identified in the Environmental Data Resources, Inc. report as being located on a hazardous materials site pursuant to Government Code Section 65962.5. The results of the background review are presented in the Phase I ESAs (Appendix I1 and I2 of this EIR).

VEGA SES 2 and 3

Historical aerial photographs from EDR dating back to 1937 and Google Earth aerial photographs from 1996 were reviewed for the project sites. In 1937, the VEGA SES 2 and 3 project sites are observed to have been vacant desert ground with dry washes crossing the parcels in a northeast to southwest direction. Adjacent parcels also appear to be vacant desert lands. The UPRR is visible on the southwest boundary of the VEGA SES 2 project site (APN 025-260-011) and the high stand shoreline of ancient Lake Cahuilla crossing is visible crossing the VEGA SES 2 project site (APN 025-260-011) from northwest to southeast. From 1940 to 1976 aerial photographs show the VEGA SES 2 and 3 project sites are similar to the 1937 aerial photograph with the exception that the Coachella Canal had been constructed adjacent to the VEGA SES 2 project site (APN 025-270-023) and crossing through the western portion of shared VEGA SES 2 and 3 parcel (APN 025-010-006). By 1984, the Coachella Canal appears to have been shifted to the east and lined with concrete. Aerial photographs from 2004-2016 are similar to those from 1984 and at present time. Based on historic topographic maps, powerlines were shown to be crossing the northern and western sites from 1940 to 1947, as well as several unpaved roads crossing the VEGA SES 2 and 3 project sites.

VEGA SES 5

In 1937 aerial photographs of the VEGA SES 5 project site was observed to be vacant desert ground with the East Highline Canal crossing diagonally through the western parcel (APN 025-260-022) and a dry wash crossing both VEGA SES 5 parcels (APN 025-260-022 and 025-260-019) from a northeast to southwest direction. An agricultural field is present to the southwest of the VEGA SES 5 project site while other adjacent parcels also appear to be vacant desert lands. Aerials from 1940 to 1953 show similar imagery to 1937 with the exception of several small structures located adjacent to the westside of the East Highline Canal on McDonald Road, and the presence of agricultural fields located to the west and south of the western portion of the VEGA SES 5 project site. The 1967 aerials show the clearing of vegetation on the VEGA SES 5 project site west of the East Highline Canal as well as the removal of the structures in the northeast corner parcel (APN 025-260-022). The same western portion

of the VEGA SES 5 project site aerials appears to be occupied by fallow agricultural land from 2004 to 2012 aerials, and under cultivation from 1992 and 1996 aerials. Aerials from 2015 show the northern portion of the VEGA SES 5 western project area under cultivation and the southern portion as fallow agricultural. The VEGA SES 5 eastern project area, east of the East Highline Canal remained as vacant desert land.

The primary use of the fire insurance maps was to assess the buildings that were being insured, the existence and location of fuel storage tanks, flammable or other potentially toxic substances, and the nature of businesses are often shown on these maps. Due to the location and rural undeveloped nature of the project sites for the years the Sanborn Fire Insurance Maps were available for this subject property, no maps are available for the project sites.

Site Reconnaissance

A site reconnaissance was performed on September 29, 2020. The site visit consisted of a driving the perimeter of the project sites and randomly crossing the project sites. The reconnaissance included visual observations of surficial conditions at the project sites and observation of adjoining properties to the extent that they were visible from public areas. The site visit evaluated the project sites and adjoining properties for potential hazardous materials/waste and petroleum product use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; mechanical or electrical equipment likely to contain liquids; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination.

Underground and Aboveground Storage Tanks, Drums, or Containers

No underground storage tanks (USTs) and aboveground storage tanks (ASTs) were observed within the project sites during the site reconnaissance. No drums or storage containers, nor any open or damaged containers containing unidentified substances were observed at the project sites. Additionally, no reports of spills or leaks were identified in the EDR report.

Surface Staining

No evidence of stained soil or pavement was observed on the project sites.

Sewer/Water

No evidence of septic systems or wells was observed on the project sites.

Suspect Polychlorinated Biphenyl (PCB) Containing Equipment

No potential PCB containing equipment such as electrical transformers, capacitors, and hydraulic equipment were observed during the site reconnaissance on the project sites or within the immediate vicinity.

Pesticides

Based on review of environmental records and historic documents, the VEGA SES 2 and 3 project sites have been vacant desert land since 1937. Therefore, the presence of Dichlorodiphenyltrichloroethane/Dichlorodiphenyldichloroethylene (DDT/DDE) are not anticipated within the VEGA SES 2 and 3 project sites. Based on the review of environmental records, historical documents, and property conditions of the VEGA SES 5 project site, the project site has been in

agricultural use intermittently and/or vacant since the 1960s. Residues of currently available pesticides and currently banned pesticides, such as DDT/DDE may be present in near surface soils in limited concentrations. Therefore, there is a potential for the VEGA SES 5 project site to contain hazards related to pesticide and herbicide use from aerial and/or ground application which can migrate via surface run-off. The concentrations of these pesticides found on other Imperial Valley agricultural sites are typically less than 25 percent of the current regulatory threshold limits and are not considered a significant environmental hazard. The presence and concentration of near surface pesticides at the VEGA SES 5 project site can be accurately characterized only by site-specific sampling and testing.

Lead and Asbestos

The potential for asbestos containing materials (ACM) and lead based paint residues existing at the project sites are low due to the lack of structures and development.

Airports

The project sites are not located within 2 miles of a public airport or a public use airport. The nearest airport to the proposed projects is the Calipatria Municipal Airport, located approximately 6 miles southwest of the VEGA SES 5 project site.

Fire Hazard

The project sites are 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 1997).

3.9.2 Regulatory Setting

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

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over 5 years, $1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. The Comprehensive Environmental Response, Compensation, and Liability Act established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified.

Emergency Planning Community Right-to-Know Act of 1986 (42 United States Code 11001 et seq.)

The Emergency Planning Community Right-to-Know Act was included under the Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III.

Emergency Planning Community Right-to-Know was passed in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. These concerns were triggered by the disaster in Bhopal, India, in which more than 2,000 people suffered death or serious injury from the accidental release of methyl isocyanate. To reduce the likelihood of such a disaster in the U.S., Congress imposed requirements on both states and regulated facilities.

Emergency Planning Community Right-to-Know establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR 355). The Emergency Planning Community Right-to-Know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. In California, SARA Title III is implemented through the California Accidental Release Prevention.

Federal Insecticide, Fungicide, and Rodenticide Act

The objective of Federal Insecticide, Fungicide, and Rodenticide Act is to provide federal control of pesticide distribution, sale, and use. All pesticides used in the U.S. must be registered (licensed) by the EPA. Registration assures that pesticides would be properly labeled and that, if used in accordance with specifications, they would not cause unreasonable harm to the environment. Use of each registered pesticide must be consistent with use directions contained on the label or labeling.

Federal Water Pollution Control Act (Clean Water Act)

The objective of the Federal Water Pollution Control Act, commonly referred to as the CWA, is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. The oil SPCC Program of the CWA specifically seeks to prevent oil discharges from reaching waters of the U.S. or adjoining shorelines. Further, farms are subject to the SPCC rule if they:

- Store, transfer, use, or consume oil or oil products
- Could reasonably be expected to discharge oil to waters of the U.S. or adjoining shorelines. Farms that meet these criteria are subject to the SPCC rule if they meet at least one of the following capacity thresholds:
    - Aboveground oil storage capacity greater than 1,320 gallons
    - Completely buried oil storage capacity greater than 42,000 gallons

However, the following are exemptions to the SPCC rule:

- Completely buried storage tanks subject to all the technical requirements of the underground storage tank regulations
- Containers with a storage capacity less than 55 gallons of oil
- Wastewater treatment facilities
- Permanently closed containers
- Motive power containers (e.g., automotive or truck fuel tanks)

Hazardous Materials Transport Act – Code of Federal Regulations

The Hazardous Materials Transportation Act was published in 1975. Its primary objective is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous material in commerce by improving the regulatory and enforcement authority of the Secretary of Transportation. A hazardous material, as defined by the Secretary of Transportation is, any “particular quantity or form” of a material that “may pose an unreasonable risk to health and safety or property.”

Occupational Safety and Health Administration

Occupational Safety and Health Administration’s (OSHA) mission is to ensure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA standards are listed in 29 CFR Part 1910.

The OHSA Process Safety Management of Highly Hazardous Chemicals (29 CFR Part 110.119) is intended to prevent or minimize the consequences of a catastrophic release of toxic, reactive, flammable, or explosive highly hazardous chemicals by regulating their use, storage, manufacturing, and handling. The standard intends to accomplish its goal by requiring a comprehensive management program integrating technologies, procedures, and management practices.

Resource Conservation and Recovery Act

The goal of the Resource Conservation and Recovery Act, a federal statute passed in 1976, is the protection of human health and the environment, the reduction of waste, the conservation of energy and natural resources, and the elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. The corresponding regulations in 40 CFR 260-299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste.

State

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources

The Division of Oil, Gas, and Geothermal Resources was formed in 1915 to address the needs of the state, local governments, and industry by regulating statewide oil and gas activities with uniform laws and regulations. The Division supervises the drilling, operation, maintenance, and plugging and abandonment of onshore and offshore oil, gas, and geothermal wells, preventing damage to: (1) life, health, property, and natural resources; (2) underground and surface waters suitable for irrigation or domestic use; and (3) oil, gas, and geothermal reservoirs. The Division’s programs include: well permitting and testing; safety inspections; oversight of production and injection projects; environmental lease inspections; idle-well testing; inspecting oilfield tanks, pipelines, and sumps; hazardous and orphan well plugging and abandonment contracts; and subsidence monitoring.

California Department of Toxic Substances Control

DTSC regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. Approximately 1,000 scientists, engineers, and specialized support staff are responsible for ensuring that companies and individuals handle, transport, store, treat, dispose of, and clean-up hazardous wastes appropriately. Through these measures, DTSC contributes to greater safety for all Californians, and less hazardous waste reaches the environment.

On January 1, 2003, the Registered Environmental Assessor program joined DTSC. The program certifies environmental experts and specialists as being qualified to perform a number of environmental assessment activities. Those activities include private site management, Phase I ESAs, risk assessment, and more.

California Division of Occupational Safety and Health

The California Division of Occupational Safety and Health protects workers and the public from safety hazards through its programs and provides consultative assistance to employers. California Division of Occupational Safety and Health issues permits, provides employee training workshops, conducts inspections of facilities, investigates health and safety complaints, and develops and enforces employer health and safety policies and procedures.

California Environmental Protection Agency

California Environmental Protection Agency and the SWRCB establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law.

California Emergency Response Plan

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the State Office of Emergency Services (OES), which coordinates the responses of other agencies including Cal-EPA, the California Highway Patrol, CDFW, RWQCB, Imperial County Sheriff's Department, ICFD, and the City of Imperial Police Department.

Local

Imperial County General Plan

The Seismic and Public Safety Element identifies goals and policies that will minimize the risks associated with natural and human-made hazards and specify the land use planning procedures that should be implemented to avoid hazardous situations. The purpose of the Seismic and Public Safety Element is to reduce the loss of life, injury, and property damage that might result from disaster or accident. In addition, the Element specifies land use planning procedures that should be implemented to avoid hazardous situations. The policies listed in the Seismic and Public Safety Element are not applicable to the proposed project, as they address human occupancy development. The proposed project is a solar project and does not propose residential uses.

Imperial County Public Health Department

DTSC was appointed the Certified Unified Program Agency (CUPA) for Imperial County in January 2005. The Unified Program is the consolidation of 6 state environmental programs into one program under the authority of a CUPA. The CUPA inspects businesses or facilities that handle or store hazardous materials, generate hazardous waste, own or operate ASTs or USTs, and comply with the California Accidental Release Prevention Program. The CUPA Program is instrumental in accomplishing this goal through education, community and industry outreach, inspections and enforcement.

Office of Emergency Services

As part of the ICFD, the County OES is mandated by the California Emergency Services Act (Chapter 7, Division 1, Title 2 of Government Code) to serve as the liaison between the State and all the local government in the County. The OES provides centralized emergency management during major disasters, and coordinates emergency operations between various local jurisdictions within the County. The OES has developed several plans, consistent with federal and state policy guidance, to provide the County and participating local jurisdictions and agencies a framework for conducting emergency planning, response, and recovery operations, and handling of hazardous substances.

3.9.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project-related impacts related to hazards and hazardous materials, the methodology employed for the evaluation, and mitigation requirements, if necessary.

Thresholds of Significance

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

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

Methodology

This analysis evaluates the potential for the projects, as described in Chapter 2, Project Description to result in significant impacts related to hazards and hazardous materials on or within the 1-mile buffer zone of the project sites. This analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

Phase I ESAs has been prepared for the project sites. The information obtained from the Phase I ESAs were reviewed and summarized to present the existing conditions, in addition to identifying potential environmental impacts, based on the significance criteria presented above. Impacts associated with hazards and hazardous materials that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, duration of project construction, and related activities. The conceptual site plans for the projects were also used to evaluate potential impacts.

Impact Analysis

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

Although considered minimal, it is anticipated that the proposed projects 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 project sites will be stored in appropriate containers (not to exceed a 55-gallon drum) protected from environmental conditions, including rain, wind, and direct heat and physical hazards such as vehicle traffic and sources of heat and impact. In addition, if the on-site storage of hazardous materials necessitate, at any time during construction and/or operations and long-term maintenance, quantities in excess of 55-gallons, a hazardous material management program (HMMP) would be required. The HMMP developed for the projects will include, at a minimum, procedures for:

- Hazardous materials handling, use and storage

- Emergency response
- Spill control and prevention
- Employee training
- Record keeping and reporting

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

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

Additionally, hazardous material storage and management will be conducted in accordance with requirements set forth by the ICFD, Imperial County Office of Emergency Services, DTSC, and CUPA for storage and handling of hazardous materials. Further, construction activities would occur according to OSHA regulatory requirements; therefore, it is not anticipated that the construction activities for the proposed projects 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 Office of Emergency Services, DTSC, OSHA regulatory requirements and CUPA, the impact associated with the possible risk to the public or environment through routine transport, use, or disposal of hazardous materials would be considered less than significant.

Battery Energy Storage System

In conjunction with the construction of the solar facilities, BESSs will be constructed to store the energy generated by the solar panels. One BESS will be located on an approximately 5-acre site within the southwest corner of the VEGA SES 2 project site (APN 025-010-006). The BESS on the VEGA SES 5 project site is proposed to be located in the southeastern corner of APN 025-260-022. 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 or flow batteries used in the storage system contain cobalt oxide, manganese dioxide, nickel oxide, carbon, electrolyte, and polyvinylidene fluoride. Of these chemicals, only electrolyte should be considered hazardous, inflammable and could react dangerously when mixed with water. The U.S. Department of Transportation (DOT) regulates transport of lithium-ion batteries under the

DOT's Hazardous Materials Regulations (HMR; 49 C.F.R., Parts 171-180). The HMR apply to any material DOT determines is capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Lithium-ion batteries must conform to all applicable HMR requirements when offered for transportation or transported by air, highway, rail, or water (DOT 2021). Additionally, carbon (as graphite) is flammable and could pose a fire hazard. As further detailed below, fire protection is achieved through project design features, such as monitoring, diagnostics and a fire suppression system. The projects would be required to comply with state laws and county ordinance restrictions, which regulate and control hazardous materials handled on site.

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

Mitigation Measure(s)

No mitigation measures are required.

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

According to the historical records search, the VEGA SES 5 project site has been in agricultural use intermittently and/or vacant since the 1960s. Typical agricultural practices in the Imperial Valley consist of aerial and ground application of pesticides and the application of chemical fertilizers to both ground and irrigation water. GS Lyon professionals have reported that concentrations of pesticides are limited and typically less than 25 percent of the current regulatory threshold limits of EPA preliminary remediation goals.

The Federal Insecticide, Fungicide, and Rodenticide Act provides federal control of pesticide distribution, sale, and use. Pesticides used in the United States must be registered by the EPA to assure that pesticides are properly labeled and that they will not cause unreasonable harm to the environment. The construction phase, operations and long-term maintenance of the facility would not result in additional application of pesticides or fertilizers. Therefore, a less than significant impact has been identified for this issue area.

Hazardous Materials

The Phase I ESAs (Appendix I1 and I2 of this EIR) prepared for the project sites do not identify any recognized environmental conditions (RECs), ASTs, or USTs. According to the Envirostor Database for local DTSC record searches, Geotracker GIS data from the SWRCB, and interviews with individuals familiar with the subject property, there are no potential RECs existing on the project sites. Therefore, a less than significant impact is identified for this issue area.

Lead and Asbestos

According to records research and the reconnaissance survey, the potential for lead based paint residues and asbestos containing materials is very low because of the lack of development on the project sites. Therefore, a less than significant impact is identified for this issue area.

Battery Energy Storage System

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

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

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

Mitigation Measure(s)

No mitigation measures are required.

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

The project sites are not located within 0.25 mile of any existing or proposed schools. Therefore, the proposed projects would not pose a risk to nearby schools and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

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

The project sites are not identified in the EDR report as being located on a hazardous materials sites pursuant to Government Code Section 65962.5. Implementation of the proposed projects would result in no impact related to the project site being located on a listed hazardous materials site.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.9-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?

The project sites are not located within 2 miles of a public airport or a public use airport. The nearest airport to the proposed projects is the Calipatria Municipal Airport, located approximately 6 miles southwest of the VEGA SES 5 project site. According to Figure 3C of the ALUCP, no portion of the project sites are located within the Calipatria Municipal Airport's land use compatibility zones (ALUC 1996). Therefore, implementation of the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

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

The Imperial County Operational Area Emergency Operations Plan (Imperial County OES 2016) does not identify specific emergency roadway routes as part of their emergency operations plan (EOP). The Circulation & Scenic Highways Element of the General Plan (County of Imperial 2008), identifies SR-111, located west of the project sites, as the "backbone" route of Imperial County since it connects the three largest cities and acts as a major goods movement route.

The applicant for the proposed projects will be required, through the Conditions of Approval, to prepare a street improvement plan for the proposed projects that will include emergency access points and safe vehicular travel. Additionally, local building codes would be followed to minimize flood, seismic, and fire hazard. Therefore, the proposed projects would result in a less than significant impact associated with the possible impediment to emergency response plans or emergency evacuation plans.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.9-7 Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The project sites are located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low.

Proposed project facilities would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements (e.g., CPUC safety standards). PV panels would be spaced to maintain proper clearance for emergency access. Internal access roads, up to 30-feet wide, would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. Access roads 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. The access and service roads would also have turnaround areas at any dead-end to allow clearance for fire trucks per fire department standards.

Because the proposed projects are not located in proximity to an area susceptible to wildland fires, implementation of the proposed projects would result in a less than significant impact related to the possible risk to people or structures caused by wildland fires.

Mitigation Measure(s)

No mitigation measures are required.

3.9.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

During decommissioning and restoration of the project sites, the applicant or its successor in interest would be responsible for the removal, recycling, and/or disposal of all solar arrays, inverters, battery storage system, transformers and other structures on each of the project sites. The applicant of the proposed projects anticipates using the best available recycling measures at the time of decommissioning. Any potentially hazardous materials located on the project sites would be disposed of, and/or remediated prior to construction of the solar facilities.

The operation of the solar facilities would not generate hazardous wastes; therefore, implementation of applicable regulations and mitigation measures identified for construction and operations would ensure restoration of the project sites to pre-project conditions during the decommissioning process in a manner that would be less than significant. Furthermore, decommissioning/restoration activities would not result in a potential impact associated with ALUCP consistency (structures would be removed and the site would remain in an undeveloped condition), wildfires (fire protection measures), or impediment to an emergency plan (the undeveloped condition as restored, would not conflict with emergency plans).

Residual

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

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3.10 Hydrology/Water Quality

This section provides a description of existing water resources within the project areas and pertinent local, state, and federal plans and policies. Each subsection includes descriptions of existing hydrology/drainage, existing flooding hazards, and the environmental impacts on hydrology and water quality resulting from implementation of the proposed projects, and mitigation measures where appropriate. The impact assessment provides an evaluation of potential adverse effects to water quality based on criteria derived from CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description.

3.10.1 Existing Conditions

The project sites are located in the Colorado River Basin. The Colorado River Basin Region covers approximately 13 million acres (20,000 square miles) in the southeastern portion of California. It includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. The Colorado River Basin Region is divided into seven major planning areas on the basis of different economic and hydrologic characteristics (California RWQCB 2019).

The project sites are contained within the Brawley Hydrologic Area (Hydrologic Unit [HU] 723.10) of the Imperial Valley Planning Area. The Imperial Valley Planning Area comprises 2,500 square miles in the southern portion of the region with the majority located in Imperial County and is characterized as a closed basin. Surface waters mostly drain toward the Salton Sea and the average annual rainfall for most of the planning area ranges from less than 3 inches with four months of average summertime temperatures above 100 degrees Fahrenheit. Winter temperatures are mild, seldom reaching freezing. Additionally, water from the Colorado River are imported via the All-American Canal and serves as the predominant water supply for irrigation, industrial, and domestic purposes (California RWQCB 2019).

Localized Drainage Conditions

VEGA SES 2 and 3

The VEGA SES 2 and 3 project sites are within the Salton Sea Watershed (Hydrologic Unit Code 18100204). The project sites and Chocolate Mountains are part of an alluvial fan drainage system. Alluvial fans occur when stream flow feeds into a system of distributary channels. Infrequent yet intense rainfall causes sheetflood across the fan surface, in which sediment-laden water overflows from the confines of its channel and eventually results in gravel deposits that have the appearance of a network of braided channels. A number of these braided channels are fluid in nature and are relic scars that do not actively transport water during rain events. These relic channels would therefore be considered inactive, whereas channels that actively transport water during rain events would be considered active.

The alluvial fan drainage system produces ephemeral conditions within the project sites following large rain events and contains a network of inactive and active braided channels. In addition, this interconnected drainage system has associated riparian corridors that occur throughout the project sites.

Within the project sites, the alluvial fan system directs surface flow from the Chocolate Mountains through the project sites to the southwest. Surface flow eventually feeds into the intermittent drainage features associated with Siphon Four, Siphon Five, and Siphon Six. The siphons direct flow over the Coachella Canal and eventually under the railroad right-of-way before ultimately draining into the East

Highline Canal and/or associated wetlands. Both the Coachella Canal and East Highline Canal divert water from the All-American Canal, which brings water from the Colorado River at the Imperial Dam. The Coachella Canal supplies water to the Coachella Valley north of the Salton Sea, and eventually drains into a manmade storage reservoir known as Lake Cahuilla. The East Highline Canal supplies water to the Imperial Valley via smaller lateral canals and drains that ultimately drain to the Salton Sea (Appendix F1 of this EIR).

VEGA SES 5

The VEGA SES 5 Project site is also within the Salton Sea Watershed. The project site and adjacent upslope areas are within an alluvial fan drainage system that produces ephemeral conditions with surface waters flowing in direct response to large rain events for short durations. A number of ephemeral features within the project site are relic remains of rain events and do not actively transport surface flow within the site; they would therefore be considered inactive ephemeral drainages. Furthermore, these features lack connectivity to the intermittent system farther upstream due to the presence of the railroad right-of-way.

The hydrology of the intermittent system within the project site supports associated wetland, alkali sink, and riparian habitat. The intermittent system ultimately drains into wetlands existing along the eastern end of the East Highline Canal, and additional wetlands exist along the western end of the canal. Runoff within the project site generally flows southwest from the direction of the Chocolate Mountains toward the East Highline Canal and associated wetlands (Appendix F2 of this EIR).

Flooding

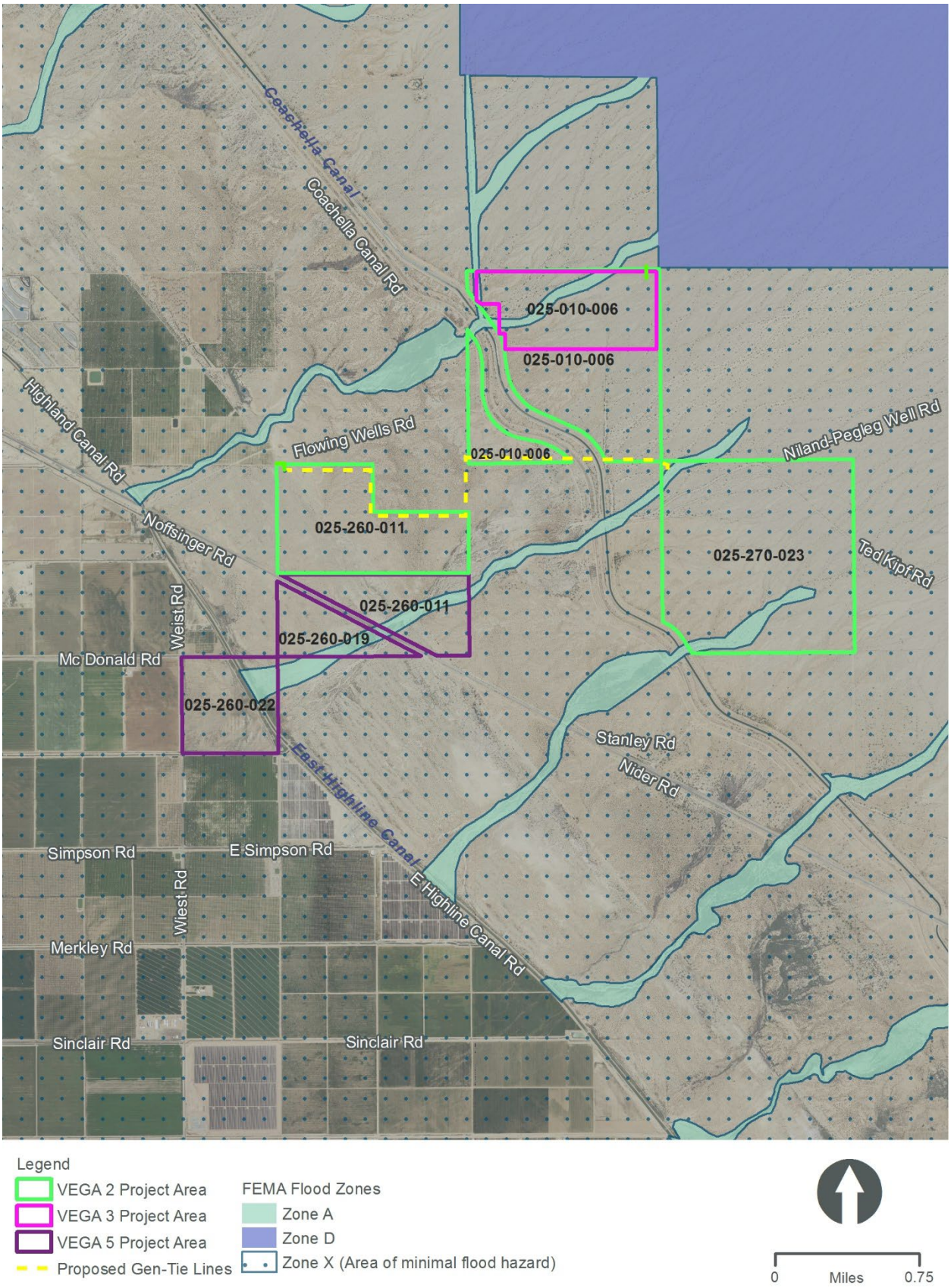
VEGA SES 2 and 3

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (Panel 06025C0750C) (FEMA 2008), the majority of the VEGA SES 2 and 3 Project sites, including the gen-tie, are within Zone X (unshaded designation), which is an area determined to be outside of the 0.2 percent annual chance floodplain (Figure 3.10-1). However, there are dry (ephemeral) wash beds that transect the VEGA 2 and 3 Project sites (northwest corner of APN 025-010-006 and northwest and southern portions of APN 025-270-023). These areas are designated as Zone A or Special Flood Hazard Areas and are subject to flash flooding.

VEGA SES 5

The majority of the VEGA SES 5 Project site, including the gen-tie, is within Zone X, which is an area determined to be outside of the 0.2 percent annual chance floodplain (Figure 3.10-1). However, there are dry (ephemeral) wash beds that transect the project site. These areas are designated as Zone A or Special Flood Hazard Areas and are subject to flash flooding.

Figure 3.10-1. FEMA Flood Zones



Surface Water Quality

The surface waters of the Imperial Valley depend primarily on the inflow of irrigation water from the Colorado River via the All-American Canal. Excessive salinity concentrations have long been one of the major water quality problems of the Colorado River, a municipal and industrial water source to millions of people, and a source of irrigation water for approximately 700,000 acres of farmland. The heavy salt load in the Colorado River results from both natural and human activities. Land use and water resources are unequivocally linked. A variety of natural and human factors can affect the quality and use of streams, lakes, and rivers. Surface waters may be impacted from a variety of point and non-point discharges. Examples of point sources may include wastewater treatment plants, industrial discharges, or any other type of discharge from a specific location (commonly a large-diameter pipe) into a stream or water body. In contrast, non-point source pollutant sources are generally more diffuse in nature and connected to a cumulative contribution of multiple smaller sources. Common non-point source contaminants within the project area may include, but are not limited to, sediment, nutrients (phosphorous and nitrogen), trace metals (e.g., lead, zinc, copper, nickel, iron, cadmium, and mercury), oil and grease, bacteria (e.g., coliform), viruses, pesticides and herbicides, organic matter, and solid debris/litter. Vehicles account for most of the heavy metals, fuel, fuel additives (e.g., benzene), motor oil, lubricants, coolants, rubber, battery acid, and other substances. Nutrients result from excessive fertilizing of agricultural areas, while pesticides and herbicides are widely used in agricultural fields and roadway shoulders for keeping ROW areas clear of vegetation and pests. All these substances are entrained by runoff during wet weather and discharged into local drain facilities and eventually into the Salton Sea.

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

- Imperial Valley Drains: Impaired for ammonia, chlordane, chlorpyrifos dichlorodiphenyldichloroethylene (DDE), dichlorodiphenyltrichloroethane (DDT), dieldrin, disulfoton, imidacloprid, PCBs, sedimentation/siltation, selenium, toxaphene, and toxicity.
- Salton Sea: Impaired for ammonia, arsenic, chloride, chlorpyrifos, DDE, DDT, enterococcus, low dissolved oxygen, nutrients, salinity, and toxicity.

Groundwater

According to the California RWQCB GAMA's Groundwater Information System,[1] the entire VEGA SES 2 and 3 Project sites and the majority of the VEGA SES 5 Project site are located within the East Salton Sea Groundwater Basin (Basin 7-033). The East Salton Sea Groundwater Basin covers 306 square miles. This basin underlies Chocolate Valley in southern Riverside County and northern Imperial County. The western portion of the basin is traversed by the San Andreas fault zone and two unnamed faults, which may impede the movement of groundwater. Recharge to the basin is chiefly from the infiltration of runoff through alluvial deposits at the base of the surrounding mountains. Total storage capacity is estimated to be 360,000 acre-feet. Groundwater in this basin is reported as not suitable for domestic, municipal, or agricultural purposes (California Department of Water Resources 2004b).

[1] https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/

The only portion of the project sites that is not within the East Salton Sea Groundwater Basin (Basin 7-033) is the southwest corner of VEGA SES 5 (APN 025-260-022), which is located within the Imperial Valley Groundwater Basin (Basin 7-030). The Imperial Valley Groundwater Basin covers approximately 1,870 surface square miles. The physical groundwater basin extends in the southeastern portion of California at the border with Mexico. The basin lies within the southern part of the Colorado Desert Hydrologic Region, south of the Salton Sea. The basin has two major aquifers, separated at depth by a semi-permeable aquitard that averages 60 feet thick and reaches a maximum thickness of 280 feet. The average thickness of the upper aquifer is 200 feet with a maximum thickness of 450 feet. The data regarding faults controlling groundwater movement is uncertain; however, as much as 80 feet of fine-grained, low permeability prehistoric lake deposits have accumulated on the valley floor, which result in locally confined aquifer conditions. Groundwater recharge within the basin is primarily from irrigation return. Other recharge sources are deep percolation of rainfall and surface runoff, underflow into the basin, and seepage from unlined canals that traverse the valley. Groundwater levels within a majority of the basin have remained stable from 1970 to 1990 because of relatively constant recharge and an extensive network of subsurface drains. Groundwater quality varies extensively throughout the base; however, is generally unusable for domestic and irrigation purposes without treatment (California Department of Water Resources 2004b).

3.10.2 Regulatory Setting

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

Federal

Clean Water Act

The U.S. EPA is the lead federal agency responsible for managing water quality. The CWA of 1972 is the primary federal law that governs and authorizes the U.S. EPA and the states to implement activities to control water quality. The various elements of the CWA that address water quality and that are applicable to the project are discussed below. Wetland protection elements administered by the USACE under Section 404 of the CWA, including permits for the discharge of dredged and/or fill material into waters of the United States, are discussed in Section 3.5, Biological Resources.

Under federal law, the U.S. EPA has published water quality regulations under Volume 40 of the CFR. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the U.S. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question; and (2) criteria that protect the designated uses. Section 304(a) requires the U.S. EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. The U.S. EPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The U.S. EPA has delegated the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the U.S. must obtain a water quality certification from the SWRCB in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate.

CWA Section 402 establishes the National Pollution Discharge Elimination System (NPDES) permit program to control point source discharges from industrial, municipal, and other facilities if their discharges go directly to surface waters. The 1987 amendments to the CWA created a new section of the CWA devoted to regulating storm water or nonpoint source discharges (Section 402[p]). The U.S. EPA has granted California primacy in administering and enforcing the provisions of the CWA and the NPDES program through the SWRCB. The SWRCB is responsible for issuing both general and individual permits for discharges from certain activities. At the local and regional levels, general and individual permits are administered by RWQCBs.

Clean Water Act Section 303(d) Impaired Waters List

CWA Section 303(d) requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers. Section 303(d) requires states to develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. A TMDL is the amount of loading that the water body can receive and still comply with applicable water quality objectives and applied beneficial uses. TMDLs can also act as a planning framework for reducing loadings of a specific pollutant from various sources to achieve compliance with water quality objectives. TMDLs prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows links between loading reductions and the attainment of water quality objectives.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRM) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection covered by the FIRM is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 (0.01) annual exceedance probability (i.e., the 100-year flood event).

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the State Water Resources Control Board (SWRCB) and RWQCBs pertaining to the adoption of Water Quality Control Plans and establishment of water quality objectives. Unlike the CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) prepared by the Colorado River RWQCB (Region 7) identifies beneficial uses of surface waters within the Colorado River Basin region, establishes quantitative and qualitative water quality objectives for protection of beneficial uses, and establishes policies to guide the implementation of these water quality objectives.

Water bodies that have beneficial uses that may be affected by construction activity and post-construction activity include the Imperial Valley Drains and the Salton Sea. Table 3.10-1 identifies the designated beneficial uses established for the project site's receiving waters. The following are definitions of the applicable beneficial uses:

- Aquaculture (AQUA) – Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.
- Freshwater Replenishment (FRSH) – Uses of water for natural or artificial maintenance of surface water quantity or quality.
- Industrial Service Supply (IND) – Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.
- Water Contact Recreation (REC I) – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.
- Non-contact Water Recreation (REC II) – Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Warm Freshwater Habitat (WARM) – Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- Wildlife Habitat (WILD) – Uses of water that support terrestrial ecosystems including, but not limited to, the preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- Preservation of Rare, Threatened, or Endangered Species (RARE) – Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.

Table 3.10-1. Beneficial Uses of Receiving Waters

Beneficial Uses	Imperial Valley Drains	Salton Sea
AQUA	--	X
FRSH	X	--
IND	--	P
REC I	X	X
REC II	X	X

Table 3.10-1. Beneficial Uses of Receiving Waters

Beneficial Uses	Imperial Valley Drains	Salton Sea
WARM	X	X
WILD	X	X
RARE	X	X

Source: SWRCB 2019

AQUA=aquaculture; FRSH=freshwater replenishment; IND=industrial service supply; P=Potential Uses; RARE=Preservation of Rare, Threatened, or Endangered Species; REC 1= water contact recreation; REC II=non-contact water recreation; WARM=Warm Freshwater Habitat; WILD=Wildlife Habitat; X=existing beneficial uses

National Pollution Discharge Elimination System General Industrial and Construction Permits

The NPDES General Industrial Permit requirements apply to the discharge of stormwater associated with industrial sites. The permit requires implementation of management measures that will achieve the performance standard of the best available technology economically achievable and best conventional pollutant control technology. Under the statute, operators of new facilities must implement industrial BMPs in the projects' SWPPP and perform monitoring of stormwater discharges and unauthorized non-stormwater discharges.

Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit), which covers stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds 1 acre. Coverage under a General Construction Permit requires the preparation of an 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 storm water, and using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical post-construction management practices include street sweeping and cleaning stormwater drain inlet structures. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

Local

County of Imperial General Plan

The Water Element and the Conservation and Open Space Element of the General Plan contain policies and programs, created to ensure water resources are preserved and protected. Table 3.10-2 identifies the General Plan policies and programs for water quality and flood hazards that are relevant to the project and summarizes the project's consistency with the General Plan. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

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

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
Goal 6: The County will conserve, protect, and enhance water resources in the County.	Consistent	The proposed projects would protect water quality during construction through compliance with Imperial County design and detention requirements and the NPDES General Construction Permit, as well as preparation and implementation of project-specific SWPPPs, which will incorporate the requirements referenced in the State Regulatory Framework, design features, and BMPs.
Objective 6.3: Protect and improve water quality and quantity for all water bodies in Imperial County.	Consistent	The proposed projects would protect water quality during construction through compliance with the NPDES General Construction Permit, SWPPP, and BMPs. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the proposed projects' drainage plans. The proposed projects will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.
Program: Structural development normally shall be prohibited in the designated floodways. Only structures which comply with specific development standards should be permitted in the floodplain.	Consistent	The proposed projects do not contain a residential component, nor would it place housing or other structures within a 100-year flood hazard area.
Water Element		
Policy: Adoption and implementation of ordinances, policies, and guidelines which assure the safety of County ground and surface waters from toxic or hazardous materials and/or wastes.	Consistent	The projects would preserve ground and surface water quality from hazardous materials and wastes during construction, operation, and decommissioning activities. The proposed projects would protect water quality during construction through compliance with NPDES General Construction Permit SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework and BMPs. Implementation of Mitigation Measure HYD-2 would require the projects to incorporate post-construction BMPs into the projects' drainage plan. The proposed projects will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution. It is anticipated that decommissioning activities would be subject to similar or more stringent ground and surface water regulations than those currently required.

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

General Plan Policies	Consistency with General Plan	Analysis
Program: The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all groundwater and surface water resources in the County.	Consistent	Mitigation measures will require that the applicant of the proposed projects prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.
Program: All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity and shall be required to implement appropriate mitigation measures for any significant impacts.	Consistent	See response for Water Element Policy above.

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

County of Imperial Land Use Ordinance, Title 9

Division 16 of the Land Use Ordinance addresses the Flood Damage Prevention Regulation. The purpose of this division is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provision of design to protect human life and minimize damage. Division 16 of the Land Use Ordinance requires an application for development in the floodplain to be submitted to the County's Floodplain Administrator. This division restricts floodplain uses; requires that floodplain uses be protected against flood damage; controls alteration of floodplains and stream channels; controls filling and grading in floodplains; and prevents diversion of flood flows where these would increase flood hazards in other areas.

Division 22 of the Land Use Ordinance addresses groundwater. The focus of this division is to preserve, protect, and manage the groundwater within the County.

In 1998, the County adopted a comprehensive Groundwater Management Ordinance for the express purpose of preserving and managing groundwater resources within the County (Chapter 1 of Title 9). The Groundwater Management Ordinance is implemented by the Planning Commission acting upon the direction of the Board of Supervisors.

The Commission, charged by the Board of Supervisors with the regulation of groundwater, can request preparation of an annual report on groundwater supplies and conditions, determine the need for and recommend groundwater management activities (see Section 92202.00), recommend groundwater extraction standards and charges, and establish standards for artificial recharge, among other things. The Groundwater 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. For example, Section 92201.13 provides a remedy for water users who are aggrieved by well interference (defined as a substantial water level decline in a short time period in a localized area caused by extraction) or other impairment or infringement of the groundwater use caused by the extraction activities of another party. In such cases, the Commission may issue any order that it determines necessary to provide the petitioning water user with an adequate remedy. The Groundwater Ordinance also requires that existing extraction facilities be registered with the County.

The County's Ordinance Code provides specific direction for the protection of water resources. Applicable ordinance requirements are contained in Division 10, Building, Sewer and Grading Regulations, and summarized below.

Chapter 10 – Grading Regulations. Section 91010.02 of the Ordinance Code outlines conditions required for issuance of a Grading Permit. These specific conditions include:

1. If the proposed grading, excavation, or earthwork construction is of irrigatable land, said grading will not cause said land to be unfit for agricultural use.
2. The depth of the grading, excavation or earthwork construction will not preclude the use of drain tiles in irrigated lands.
3. The grading, excavation or earthwork construction will not extend below the water table of the immediate area.
4. Where the transition between the grading plane and adjacent ground has a slope less than the ratio of 1.5 feet on the horizontal plane to 1 foot on the vertical plane, the plans and specifications will provide for adequate safety precautions.

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

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

III A. GENERAL REQUIREMENTS

1. All drainage design and requirements are recommended to be in accordance with the IID "Draft" Hydrology Manual or other recognized source with approval by the County Engineer and based on full development of upstream tributary basins. Another source is the Caltrans I-D-F curves for the Imperial Valley.
3. Permanent drainage facilities and ROW, including access, shall be provided from development to point of satisfactory disposal.
4. Retention volume on retention or detention basins should have a total volume capacity for a three (3) inch minimum precipitation covering the entire site with no C reduction factors. Volume can be considered by a combination of basin size and volume considered within parking and/or landscaping areas.

   There is no guarantee that a detention basin outletting to an IID facility or other storm drain system will not back up should the facility be full and unable to accept the project runoff. This provides the safety factor from flooding by ensuring each development can handle a minimum 3-inch precipitation over the project site.
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 Department of Public Works for approval. Unless specifically waived herein, required plans and specifications shall provide a drainage system capable of handling and disposing of all surface

waters originating within the subdivision and all surface waters that may flow onto the subdivision from adjacent lands. Said drainage system shall include any easements and structures required by the Department of Public Works or the affected Utility Agency to properly handle the drainage on-site and off-site. The report should detail any vegetation and trash/debris removal, as well as address any standing water.

9. Hydrology and hydraulic calculations for determining the storm system design shall be provided to the satisfaction of the Director, Department of Public Works. When appropriate, water surface profiles and adequate field survey cross-section data may also be required.

11. The County is implementing a storm water quality program as required by the SWRCB, which may modify or add to the requirements and guidelines presented elsewhere in this document. This can include ongoing monitoring of water quality of storm drain runoff, implementation of BMPs to reduce storm water quality impacts downstream or along adjacent properties. Attention is directed to the need to reduce any potential of vectors, mosquitoes, or standing water.

12. A Drainage Report is required for all developments in the County. It shall include a project description, project setting including discussions of existing and proposed conditions, any drainage issues related to the site, summary of the findings or conclusions, off-site hydrology, onsite hydrology, hydraulic calculations, and a hydrology map.

Imperial Irrigation District

The IID is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the California Water Code. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley, operation and maintenance of the drainage canals and facilities, including those in the project area, and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements, and contracts
- The Quantification Settlement Agreement and Transfer Agreements
- The Definite Plan, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments
- The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights
- Existing IID standards and guidelines for evaluation of new development and define IID's role as a responsible agency and wholesaler of water

Integrated Water Resources Management Plan

In relation to the project, IID maintains regulation over the drainage of water into their drains, including the design requirements of storm water retention basins. IID requires that retention basins be sized to handle an entire rainfall event in case the IID system is at capacity. Additionally, IID requires that outlets to IID facilities be no larger than 12 inches in diameter and must contain a backflow prevention device (IID 2009).

3.10.3 Impacts and Mitigation Measures

Thresholds of Significance

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

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater water quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - Result in substantial erosion or siltation on or off site.
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site.
    - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
    - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Methodology

The drainage design will be conducted in accordance with the County of Imperial's design criteria, which establishes that 100 percent of the 100-year storm (3 inches of rain) will be stored on site and released into the IID drainage system using existing drainage connections.

Impact Analysis – Solar Energy Facility and Gen-Tie

Impact 3.10-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater water quality?

Construction

Construction of the proposed projects would include site preparation, foundation construction, erection of major equipment and structures, installation of electrical systems, control systems, and startup/ testing. In addition, the construction of transmission lines, utility pole pads, conductors, and associated structures will be required.

During the construction phase, sedimentation and erosion can occur because of tracking from earthmoving equipment, erosion and subsequent runoff of soil, or improperly designed. The utilization of proper erosion and sediment control BMPs is critical in preventing discharge to surface waters/ drains. The proposed projects would employ proper SWPPP practices to minimize any discharges in

order to meet the Best Available Technology/Best Conventional Technology standard set forth in the Construction General Permit.

The projects have the potential to affect surface water quality. Many different types of hazardous compounds will also be used during the construction phase, with proper application, management, and containment being of high importance. Poorly managed construction materials can lead to the possibility for exposure of potential contaminants to precipitation. When this occurs, these visible and/or non-visible constituents become entrained in storm water runoff. If they are not intercepted or are left uncontrolled, the polluted runoff would otherwise freely sheet flow from the project sites to the IID Imperial Valley Drains and could result in the accumulation of these pollutants in the receiving waters. This potential impact is considered a significant impact. With the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the projects would be reduced to a level less than significant.

Prior to construction and grading activities, the project applicant is required to file an NOI with the SWRCB to comply with the General NPDES Construction Permit and prepare an SWPPP, which addresses the measures that would be included during construction of the projects to minimize and control construction and post-construction runoff to the “maximum extent practicable.” In addition, NPDES permits require the implementation of BMPs that achieve a level of pollution control to the maximum extent practical. With the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the projects would be reduced to a level less than significant through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction. In addition, given that site decommissioning would result in similar activities as identified for construction, these impacts could also occur in the future during site restoration activities. This is considered a less than significant impact after mitigation has been incorporated.

Operation

As runoff flows over-developed surfaces, water can entrain a variety of potential pollutants including, but not limited to, oil and grease, pesticides, trace metals, and nutrients. These pollutants can become suspended in runoff and carried to receiving waters. As mentioned in Section 3.10.1, 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 projects would be subject to the County’s Grading Regulations as specified in Section 91010.02 of the Ordinance Code. However, since the project sites are located in unincorporated Imperial County and not subject to a Municipal Separate Storm Sewer System or NPDES General Industrial Permit, there is no regulatory mechanism in place to address post-construction water quality concerns. Based on this consideration, the projects have the potential to result in both direct and indirect water quality impacts that could be significant. Implementation of Mitigation Measure HYD-2 would require the projects to incorporate post-construction source control and treatment control BMPs into the projects’ final drainage plans. Implementation of the project-specific source control and treatment BMPs into the final drainage plans would result in a decreased potential for storm water pollution.

While source control and treatment control BMPs would be finalized during preparation of the final drainage plans, the following are examples of BMPs that could be utilized to reduce the potential for storm water pollution.

Source Control BMPs. Source control BMPs (both structural and non-structural) means land use or site planning practices, or structures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff. Table 3.10-3 identifies examples of source control BMPs that could be implemented into the proposed projects.

Table 3.10-3. Source Control Best Management Practices

Design Concept		Description
1	Design Trash Storage Areas to Reduce Pollution Introduction	Design outdoor trash storage areas so that run-on from adjoining areas cannot enter. Screen or wall trash enclosures to prevent the off-site transport of trash.
2	Activity Restrictions	Restrict activities that have the potential to create adverse impacts on water quality.
3	Non-storm Water Discharges	Provide educational materials on illegal dumping and spill response to employees.
4	Outdoor Loading and Unloading	Handle materials in a manner that prevents any storm water pollution.
5	Spill Prevention, Control, and Cleanup	Require a Spill Prevention, Control, and Countermeasure Plan, and a Hazardous Materials Business Plan in accordance with Federal and State requirements.
6	Education	Provide employees with materials for storm water pollution prevention in the form of brochures and other information in a format approved by the County of Imperial.
7	Integrated Pest Management	Reduce the need for pesticide use on site by: • Keeping pests out of buildings using barriers, screens, and caulking • Eliminating pests through squashing, trapping, washing or pruning • Relying on natural enemies to eat pests • Using pesticides correctly as a last line of defense
8	Vehicle and Equipment Fueling, Cleaning, and Repair	Service all vehicles off site whenever possible. If servicing is required on site, it must be conducted in an area isolated from storm drain inlets or drainage ditch inlets. The area must be bermed and precluded from run-on. Any spillage must be fully contained and captured and disposed of per County of Imperial Hazardous Waste requirements.
9	Waste Handling and Disposal	Dispose of materials in accordance with Imperial County Hazardous Material Management guidelines. Under no circumstances shall any waste or hazardous materials be stored outside without secondary containment.

Treatment Control BMPs. Treatment control BMPs include both short-term and long-term drainage solutions to ensure the proper sequencing of drainage facilities and treatment of runoff generated from project impervious surfaces prior to off-site discharge.

Mitigation Measure(s)

HYD-1 **Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration.** The project applicant or its contractor shall prepare an SWPPP specific to the projects and be responsible for securing coverage under SWRCB's NPDES storm water permit for general construction activity (Order 2009-0009-DWQ). The

SWPPP shall identify specific actions and BMPs relating to the prevention of storm water pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the projects. The SWPPP shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching)
- Sediment control practices (e.g., temporary sediment basins, fiber rolls)
- Temporary and post-construction on- and off-site runoff controls
- Special considerations and BMPs for water crossings and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

HYD-2 **Incorporate Post-Construction Runoff BMPs into Project Drainage Plan.** The project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of storm water to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.

Significance after Mitigation

With the implementation of Mitigation Measure HYD-1, impacts related to surface water quality as attributable to the proposed projects would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction.

With the implementation of Mitigation Measure HYD-2, potential water quality impacts resulting from post-construction discharges during operation for the proposed projects would be reduced to a less than significant level. Implementation of Mitigation Measure HYD-2 would require the proposed projects to incorporate post-construction BMPs into the respective drainage plans of the proposed projects. The use of source control and treatment BMPs would result in a decrease potential for storm water pollution.

Impact 3.10-2 ***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?***

Water for construction, primarily for dust control, and water for washing the PV modules during operation of the proposed project would be obtained from the proposed groundwater supply wells. As described in Chapter 2 Project Description, there are no public water systems that will serve the projects. The water supply will be provided by new onsite groundwater supply wells to be drilled and installed as part of the projects. As described in Chapter 2, Project Description, the construction of a groundwater well requires approval of a CUP. Approval of the CUP would be contingent upon the availability of groundwater to serve the projects and ability to recharge the aquifer so that groundwater supplies are not substantially decreased by the proposed project. As described in Section 3.15, Utilities and Service Systems, adequate groundwater resources are available to serve the projects.

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

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.10-3 ***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?

Construction

Project construction activities, specifically grading and excavation, have the potential to temporarily alter the existing drainage pattern of the sites such that soil erosion occurs. However, to the extent feasible, site preparation would be planned and designed to minimize the amount of earth movement. Compaction of the soil to support building and traffic loads as well as the PV module supports may be required and is dependent on final engineering design. During construction, erosion would be controlled in accordance with County standards which include preparation, review, and approval of a grading plan by the County Engineer; implementation of a Dust Control Plan (Rule 801); and compliance with the NPDES General Construction Permit. Additionally, with implementation of Mitigation Measure HYD-1, which requires the preparation of a project-specific SWPPP and construction BMPs, project construction would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial on- or off-site erosion or siltation. This is considered a less than significant impact after mitigation has been incorporated.

Operation

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

Mitigation Measure(s)

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

Significance after Mitigation

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

Impact 3.10-4 ***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?

Construction

Implementation of the projects would not substantially alter the existing drainage pattern of the sites or area. The majority of the project sites would continue to sheet flow through the pervious native soils. The projects will be designed to meet County of Imperial storage requirements (100 percent of the 100-year storm (3 inches of rain)) (refer to the County's *Engineering Guidelines Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage and Grading Plans within Imperial County* (2008)) for storm water runoff, which will result in an impoundment of runoff in excess of the anticipated volume of runoff to be generated by the 100-year storm event. Additionally, implementation of Mitigation Measure HYD-2 requires that the projects' Drainage Plans adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of storm water to existing drainage systems. As such, infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.

Operation

Additionally, after construction is complete, all existing roads would be left in a condition equal to or better than their pre-construction condition. All other areas disturbed by construction activities would be recontoured and decompacted. As such, daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to alter the existing drainage pattern such that flooding (on or off site) increases when compared to existing conditions. Lastly, the project sites would remain largely pervious over the operational life of the project. Therefore, the proposed projects would result in no significant impacts associated with the alteration of drainage patterns resulting in on- or off-site flooding.

Mitigation Measure(s)

No mitigation measures beyond Mitigation Measure HYD-2 are required.

Significance after Mitigation

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

Impact 3.10-5 ***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 storm water drainage systems or provide substantial additional sources of polluted runoff?

Construction

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

Operation

After construction is complete, all existing roads would be left in a condition equal to or better than their pre-construction condition. All other areas disturbed by construction activities would be recontoured and decompacted. The proposed projects are not anticipated to generate a significant increase in the amount of runoff water when compared to existing conditions. As such, daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to alter the existing drainage pattern such that runoff increases would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The project sites would remain largely pervious over the operational life of the projects. Water will continue to percolate through the ground, as a majority of the surfaces on the project sites will remain pervious. The proposed projects would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. This is considered a less than significant impact.

Mitigation Measure(s)

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

Significance after Mitigation

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

Impact 3.10-6 ***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:***

Impede or redirect flood flows?

As shown in Figure 3.10-1, there are dry (ephemeral) wash beds that transect the VEGA 2 and 3 Project sites (northwest corner of APN 025-010-006, northwest and southern portions of APN 025-270-023), and the VEGA SES 5 Project site. These areas are designated as Zone A or Special Flood Hazard Areas and are subject to flash flooding.

The proposed projects would be designed to comply with the *County of Imperial Engineering Design Guidelines Manual for the Preparation and Checking of Street Improvements, Drainage and Grading Plans within Imperial County* (2008). The proposed retention basins would be sized to capture storm water runoff as if none of it would penetrate into the ground. The County requirement to provide 3 inches of detention per tributary acre would be met and detained runoff would infiltrate the underlying soil.

Any improvements within the Flood Zone A would be designed to comply with the County of Imperial Flood Zone Ordinances and guidelines. Section 91603.01 of Division 16 of Title 9 of the Imperial County Land Use Code designates any lands so identified by the FEMA on the Imperial County Flood Insurance Rate Maps, and any area of land located around the Salton Sea and lying at or below the -220-foot elevation contour, to be areas of special flood hazard. No portion of the project sites lie at or below the -220-foot elevation contour. Section 91604.00 states that “A Development Permit shall be obtained before construction or development begins within any area of special flood hazards or areas of mudslide (i.e., mudflow) established in Section 91603.01.” The project sites are not located in an area subject to mudflow.

Based on the proposed drainage described above, and the projects’ mandatory compliance with regulations regarding hydrology and drainage at the project sites, implementation of the proposed projects would not have a substantial impact on the hydrology of the surrounding area. Peak flow runoff from the project sites would be directed to and infiltrated in designated retention basins and/or percolate into the ground, such that there would be no increase in on-site or off-site flooding potential. Therefore, on- and off-site drainage and flooding impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.10-7 ***In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?***

The project sites are not located near any large bodies of water. The Salton Sea is located approximately 10 miles west of the project sites. Because of the distance, the Salton Sea does not pose a particularly significant danger of inundation from seiche or tsunami as related to the project sites. Furthermore, the project sites are over 100 miles inland from the Pacific Ocean. In addition, the project sites are relatively flat. Therefore, there is no potential for the project sites to be inundated by seiches or tsunamis.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.10-8 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As described under Impact 3.10-1 above, with the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the proposed projects would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Implementation of Mitigation Measure HYD-2 would require the proposed projects to incorporate post-construction BMPs into their respective drainage plans. The use of source control and treatment BMPs would result in a decrease potential for storm water pollution. Therefore, the proposed projects would not pose a significant threat to local surface water features or shallow groundwater resources. Implementation of Mitigation Measures HYD-1 and HYD-2 would reduce impacts to a level less than significant.

Mitigation Measure(s)

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

Significance after Mitigation

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

3.10.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration activities would result in similar impacts on hydrology and water quality as would occur during construction of the proposed projects. The primary water quality issue associated with decommissioning/restoration would be potential impacts on surface water quality, as the decommissioning activities would be similar to construction activities and would be considered a significant impact. However, during decommissioning, soil erosion would be controlled in accordance with NPDES General Construction Permit(s) and project-specific SWPPP. Compliance with requirements and best available control technologies in place at the time of decommissioning are anticipated to be similar to, or more stringent than, those currently required. Compliance with all applicable water quality regulations would reduce the projects' impacts during decommissioning to a level less than significant. Impacts on other water resource issues, including alteration of drainage patterns, contributing to off-site flooding, impacts on groundwater recharge and supply, would be less than significant. There would be no impact associated with inundation from flooding or mudflows.

Residual

With implementation of the mitigation measures listed above, implementation of the proposed projects would not result in any residual significant impacts related to increased risk of flooding from stormwater runoff, from water quality effects from long-term urban runoff, or from short-term alteration of drainages and associated surface water quality and sedimentation. With the implementation of the required mitigation measures during construction and decommissioning of the projects, water quality impacts

would be minimized to a less than significant level. Based on these circumstances, the proposed projects would not result in any residential significant and unmitigable adverse impacts on surface water hydrology and water quality.

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3.11 Land Use Planning

This section provides information regarding current land use, land use designations, and land use policies within, and in the vicinity of, the project sites. Section 15125(d) of the CEQA Guidelines states that "[t]he EIR shall discuss any inconsistencies between the project and applicable general plans and regional plans." This section fulfills this requirement for the project. In this context, this section reviews the land use assumptions, designations, and policies of the County General Plan and other applicable federal, state, and local requirements, which governs land use within the project area and evaluates the projects' potential to conflict and/or adherence with policies adopted for the purpose of avoiding or mitigating significant environmental effects. Where appropriate, mitigation is applied and the resulting level of impact identified.

3.11.1 Existing Conditions

The project sites are located on approximately 1,963 acres of privately-owned land zoned for agricultural and open space/preservation uses within unincorporated Imperial County. The VEGA SES 2 and 3 and a portion of the VEGA SES 5 project sites east of the East Highline Canal are not currently under cultivation and contain scattered desert vegetation. Meanwhile, the VEGA SES 5 project site west of the East Highline Canal contains fallow agricultural land.

Three separate Conditional Use Permits (CUPs) have been filed with the County for the construction and operation of the solar facilities, which together define the project sites. The three CUP applications or individual site locations consist of the following:

- CUP 20-0021: VEGA SES 2
- CUP 20-0022: VEGA SES 3
- CUP 20-0023: VEGA SES 5

Table 3.11-1 identifies the individual assessor parcel numbers (APN) associated with the VEGA SES 2, 3, and 5 project sites with their respective acreage, General Plan land use designation, and zoning.

Table 3.11-1.Solar Energy Facility Site Assessor Parcel Numbers, Acreages, and Zoning

Project	APN	Acreage	General Plan Land Use	Zoning
VEGA SES 2 (CUP 20-0021)	025-010-006 (partial)	410	Recreation	S-2-RE
	025-260-011 (partial)	288	Recreation	S-2-RE
	025-270-023	625	Recreation	S-2-RE
	Subtotal	***1,323***	**--**	**--**
VEGA SES 3 (CUP 20-0022)	025-010-006 (partial)	230	Recreation	S-2-RE
	Subtotal	***230***	**--**	**--**
VEGA SES 5	025-260-011 (partial)	160	Recreation	S-2-RE

Table 3.11-1.Solar Energy Facility Site Assessor Parcel Numbers, Acreages, and Zoning

Project	APN	Acreage	General Plan Land Use	Zoning
(CUP 20-0023)	025-260-019	90	Agriculture	S-2-RE
	025-260-022	160	Recreation and Agriculture	A-2-RE, A-3-RE, S-2-RE
	Subtotal	***410***	**--**	**--**
Total Gross Acres		**1,963**	**--**	**--**

Notes:
APN = assessor parcel number; A-2-RE = General Agriculture with a Renewable Energy Zone Overlay A-3-RE = Heavy Agriculture with a Renewable Energy Zone Overlay; S-2-RE = Open Space/Preservation with a Renewable Energy Zone Overlay

VEGA SES 2

The VEGA SES 2 project site is located on three non-contiguous parcels (APNs 025-010-006 [partial], 025-260-011 [partial], and 025-270-023). The northernmost parcel, APN 025-010-006, comprises 640 acres. The VEGA SES 2 project site is located on the southern 410 acres of the 640-acre parcel. This parcel is approximately 2.31 miles northeast of the East Highline Canal Road/Wiest Road/Flowing Wells Road intersection. This parcel is transected by Coachella Canal Road (intersected by Flowing Wells Road approximately halfway through the parcel) and the Coachella Canal, which runs southeast parallel to the roadway.

The southwestern parcel, APN 025-260-011, encompasses approximately 488 acres. The VEGA SES 2 project is located on the northern 288 acres of the 488-acre parcel.

The southeastern parcel, APN 025-270-023, encompasses approximately 625 acres and is adjacent to the southeast corner of APN 025-010-006. An approximately 934-foot segment of the Coachella Canal traverses the southwestern corner of the parcel. This parcel is transected by Niland Pegleg Well Road and Ted Kipf Road in the northern half of the parcel.

As shown in Figure 3.11-1, the VEGA SES 2 project site is designated as Recreation under the County's General Plan. As shown in Figure 3.11-2, the VEGA SES 2 project site is currently zoned Open Space/Preservation with a Renewable Energy Zone Overlay (S-2-RE).

VEGA SES 3

The VEGA SES 3 project site is located on the northern portion of APN 025-010-006, comprising the remaining 230 acres of the 640-acre parcel. The Coachella Canal runs along the western edge of the site. As shown in Figure 3.11-1, the VEGA SES 3 project site is designated as Recreation under the County's General Plan. As shown in Figure 3.11-2, the VEGA SES 3 project site is currently zoned S-2-RE.

VEGA SES 5

The VEGA SES 5 project site is located on three parcels (APNs 025-260-011 [partial], 025-260-019 and 025-260-022) encompassing approximately 410 acres. A portion of the VEGA SES 5 project site

is located on the southern 160 acres of APN 025-260-011. APN 025-260-019 is adjacent to the Union Pacific Railway and Noffsinger Road to the northeast. APN 025-260-022 is adjacent to Wiest Road to the west and MacDonald Road to the north and transected by East Highline Canal Road and the East Highline Canal.

Figure 3.11-1. General Plan Land Use Designations

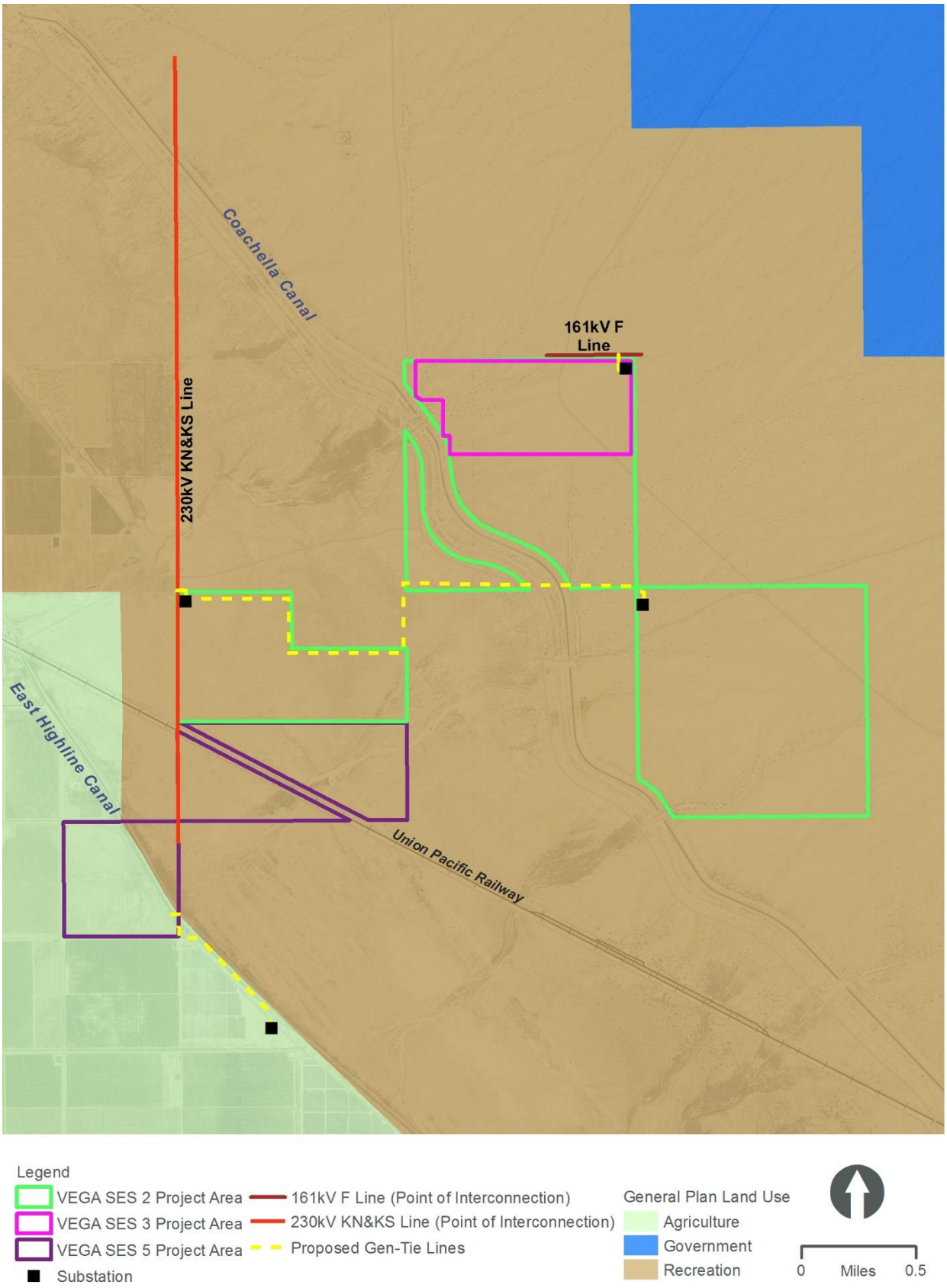
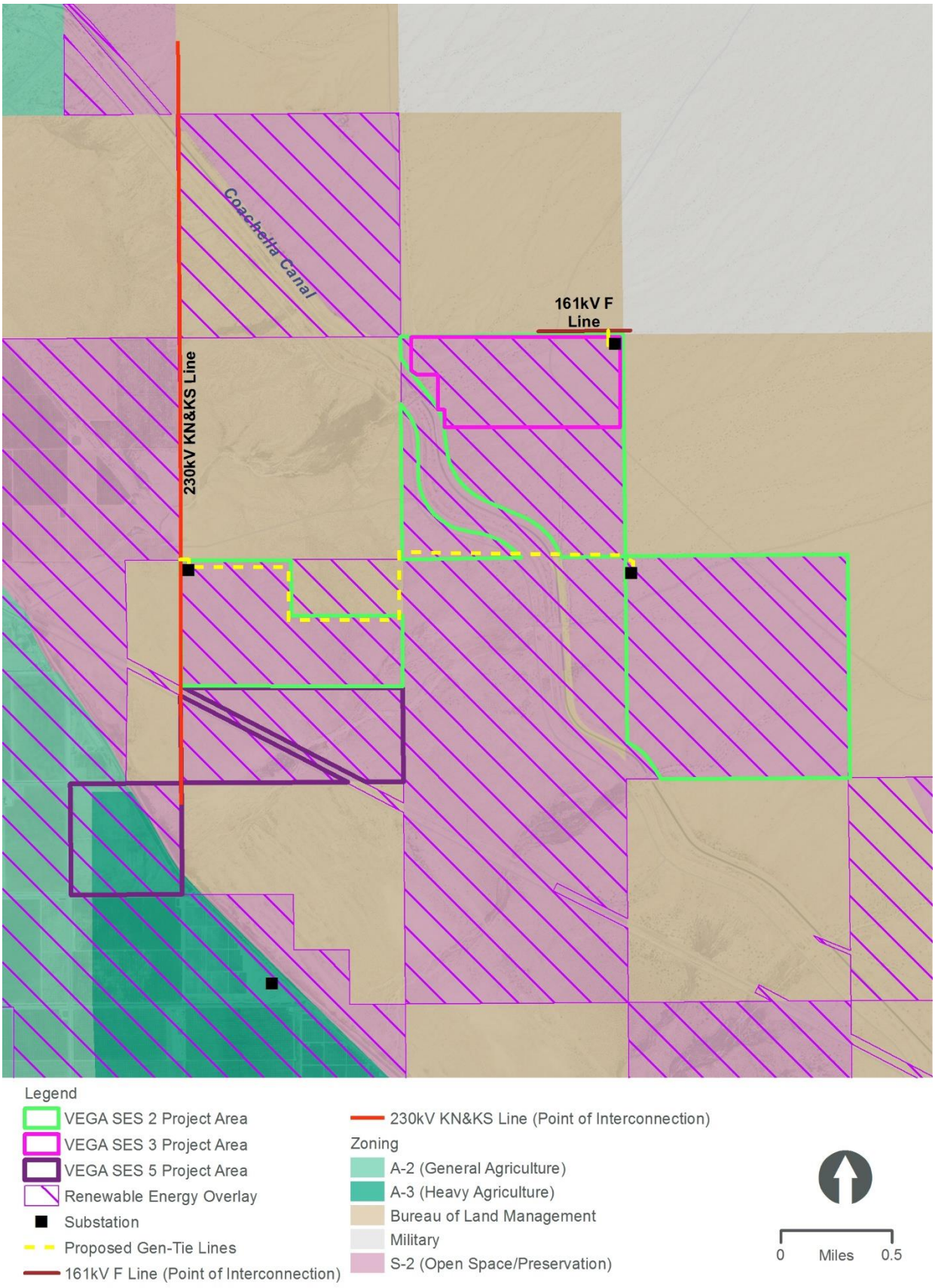


Figure 3.11-2. Zoning Designations



As shown in Figure 3.11-1, APNs 025-260-011, 025-260-019 and the portion of APN 025-260-022 located east of the East Highline Canal are designated as Recreation under the County's General Plan. The portion of APN 025-260-022 located west of the East Highline Canal is designated as Agriculture under the County's General Plan. As shown in Figure 3.11-2, APNs 025-260-011 and 025-260-019 are currently zoned S-2-RE and APN 025-260-022 is currently zoned General Agriculture with a Renewable Energy Zone Overlay (A-2-RE), Heavy Agriculture with a Renewable Energy Zone Overlay (A-3-RE), and S-2-RE.

Renewable Energy Overlay Zone

The County adopted the RE and Transmission Element, which includes a RE Zone (RE Overlay Map). The RE Overlay Zones are designated within the RE and Transmission Element, which was adopted by the County in 2016. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As shown on Figure 3.11-2, the project sites are located within the RE Overlay Zone.

Established Residential Communities

The project sites are located in a sparsely populated portion of Imperial County. There are no established residential communities located within or in the vicinity of the project sites. The nearest established residential community is located approximately 5.67 miles northwest of the project sites in the unincorporated community of Niland.

Nearby Airports

The nearest airport to the project sites is the Calipatria Municipal Airport, located approximately 6 miles southwest of the VEGA SES 5 project site. According to Figure 3C of the ALUCP, no portion of the project sites is located within the Calipatria Municipal Airport's land use compatibility zones (ALUC 1996).

3.11.2 Regulatory Setting

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

Federal

Federal Land Policy and Management Act

The United States Congress passed the Federal Land Policy and Management Act (FLPMA) in 1976. Title V, "Rights-of-Way" of the FLPMA establishes public land policy, guidelines for administration, provides for management, protection, development, and enhancement of public lands, and provides the BLM authorization to grant right-of-way. Authorization of systems for generation, transmission, and distribution of electric energy is addressed in Section 501(4) of Title V. In addition, Section 503 specifically addresses "Right of Way Corridors" and requires common right-of-ways "to the extent practical". FLMPA, Title V, Section 501(a)(6) states, "The Secretary, with respect to the public lands (including public lands, as defined in section 103(e) of this Act, which are reserved from entry pursuant to section 24 of the Federal Power Act (16 U.S.C. 818)) [P.L. 102-486, 1992] and, the Secretary of Agriculture, with respect to lands within the National Forest System (except in each case land designated as wilderness), are authorized to grant, issue, or renew rights-of-way over, upon, under,

or through such lands for roads, trails, highways, railroads, canals, tunnels, tramways, airways, livestock driveways, or other means of transportation except where such facilities are constructed and maintained in connection with commercial recreation facilities on lands in the National Forest System" (BLM 2016). The proposed right-of-way requests associated with the projects are subject to review and approval by the BLM.

California Desert Conservation Area Plan

Section 601 of the FLMPA required preparation of a long-range plan for the California Desert Conservation Area (CDCA). The CDCA Plan was adopted in 1980 to provide for the use of public lands and resources of the CDCA in a manner which enhances wherever possible and, which does not diminish, on balance, the environmental, cultural, and aesthetic values of the Desert and its productivity. The CDCA Plan is a comprehensive, long-range plan covering 25 million-acres. Approximately 12 million acres of this total are public lands administered by the BLM on behalf of the CDCA. These public lands are dispersed throughout the California Desert which includes the Mojave Desert, the Sonoran Desert and a small portion of the Great Basin Desert. The 12 million acres of public lands administered by the BLM make-up approximately half of the CDCA. The CDCA is applicable to the federal (i.e., BLM) actions associated with implementation of the proposed projects (those portions of the projects not otherwise located on private lands).

State

State Planning and Zoning Laws

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning.

The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period or more.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific zone district, are required to be consistent with the general plan and any applicable specific plans.

Regional

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

SCAG is the designated metropolitan planning organization for Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. CEQA requires that regional agencies like SCAG review projects and plans throughout its jurisdiction. SCAG, as the region's "Clearinghouse," collects information on projects of varying size and scope to provide a central point to monitor regional activity. SCAG has the responsibility of reviewing dozens of projects, plans, and programs every month. Projects and plans that are regionally significant must demonstrate to SCAG their consistency with a range of adopted regional plans and policies.

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

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

Local

County of Imperial General Plan

The purpose of the County's General Plan (as amended through 2008) is to direct growth, particularly urban development, to areas where public infrastructure exists or can be provided, where public health and safety hazards are limited, and where impacts to the County's abundant natural, cultural, and economic resources can be avoided. The following 10 elements comprise the County's General Plan: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; RE and Transmission Element; Water; and Parks and Recreation. Together, these elements satisfy the seven mandatory general plan elements as established in the California Government Code. Goals, objectives, and implementing policies and actions programs have been established for each of the elements.

Imperial County received funding from the California Energy Commission RE and Conservation Planning Grant to amend and update the County's General Plan in order to facilitate future development of RE projects. The Geothermal/Alternative Energy and Transmission Element was last updated in 2006. Since then there have been numerous renewable projects proposed, approved, and constructed within Imperial County as a result of California's move to reduce GHG emissions, develop alternative fuel sources and implement its Renewable Portfolio Standard. The County prepared an update to the Geothermal/Alternative Energy and Transmission Element of its General Plan, called the RE and Transmission Element. This Element is designed to provide guidance and approaches with respect to the future siting of RE projects and electrical transmission lines in the County. The County adopted this element in 2016, which has been amended several times to incorporate additional overlay zones.

The RE and Transmission Element includes a RE Zone (RE Overlay Map). The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of RE projects, with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As shown in Figure 3.11-2, the project sites are located within the RE Overlay Zone.

An analysis of the projects' consistency with the General Plan goals and objectives relevant to the projects are provided in Table 3.11-2. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Planning Commission and Board of Supervisors retain final authority for the determination of the projects' consistency with the General Plan.

Table 3.11-2. Project Consistency with Applicable General Plan Policies

Applicable Policies	Consistency Determination	Analysis
Land Use Element		
Public Facilities. Objective 8.7: Ensure the development, improvement, timing, and location of community sewer, water, and drainage facilities will meet the needs of existing communities and new developing areas.	Consistent	The proposed projects include the necessary supporting infrastructure and would not require new community-based infrastructure. The proposed projects would be required to construct supporting drainage infrastructure on-site consistent with County requirements and mitigation measures prescribed in Section 3.10 Hydrology/Water Quality of the EIR. Once the proposed projects are operational, a limited amount of water would be required for solar panel washing and fire protection. The proposed projects would not require an operations and maintenance building. Therefore, no septic system would be required for the proposed projects.
Public Facilities. Objective 8.8: Ensure that the siting of future facilities for the transmission of electricity, gas, and telecommunications is compatible with the environment and County regulation.	Consistent	The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of RE projects with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. The project sites are located within the RE Overlay Zone. Therefore, the proposed projects would be sited in a suitable location for the transmission of electricity.
Public Facilities. Objective 8.9: Require necessary public utility rights-of-way when appropriate.	Consistent	The proposed projects would include the dedication of ROW, if necessary, to facilitate the placement of electrical distribution and transmission infrastructure.
Protection of Environmental Resources. Objective 9.6: Incorporate the strategies of the Imperial County AQAP in land use planning decisions and as amended.	Consistent	Dust suppression will be implemented in accordance with a dust control plan approved by the ICAPCD. Section 3.4, Air Quality, discusses the projects' consistency with the AQAP in more detail.
Circulation and Scenic Highways Element		
Safe, Convenient, and Efficient Transportation System. Objective 1.1: Maintain and improve the existing road and highway network, while providing for future expansion and improvement based on travel demand and the development of alternative travel modes.	Consistent	The proposed projects would include limited operational vehicle trips and would not be expected to reduce the current LOS at affected intersections, roadway segments, and highways. The proposed projects do not propose residential or commercial development and therefore would not require new forms of alternative transportation to minimize impacts to existing roadways.

Table 3.11-2. Project Consistency with Applicable General Plan Policies

Applicable Policies	Consistency Determination	Analysis
Safe, Convenient, and Efficient Transportation System. Objective 1.2: Require a traffic analysis for any new development which may have a significant impact on County roads.	Consistent	As described in Section 3.13, Transportation, traffic studies were prepared for the projects and determined that proposed projects would have a less than significant impact on the circulation network. Once construction is completed, the projects would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. The projects would include limited operational vehicle trips and would not reduce the current level of service at affected intersections, roadway segments, and highways.
Noise Element		
Noise Environment. Objective 1.3: Control noise levels at the source where feasible.	Consistent	As discussed in Section 3.12, Noise and Vibration, no individual or cumulative pieces of construction equipment would exceed the 75 dBA Imperial County construction noise standard during any phase of construction at the nearest noise-sensitive receptor. Project operational noise would not exceed County daytime or nighttime standards.
Project/Land Use Planning. Goal 2: Review Proposed Actions for noise impacts and require design which will provide acceptable indoor and outdoor noise environments.	Consistent	The projects would be required to comply with the County's noise standards during both construction and operation. As discussed in Section 3.12, Noise and Vibration, no individual or cumulative pieces of construction equipment would exceed the 75 dBA Imperial County construction noise standard during any phase of construction at the nearest noise-sensitive receptor. Project operational noise would not exceed County daytime or nighttime standards.
Conservation and Open Space Element		
Conservation of Environmental Resources for Future Generations Goal 1: Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.	Consistent	The project sites would be converted from vacant and fallow agricultural land to solar energy facilities. The proposed projects are a response to the state's need for renewable energy to meet its Renewable Portfolio Standard, and while it would increase the availability of renewable energy, it would also replace existing sources of non-renewable energy. The power generated by the proposed projects would be added to the state's electricity grid with the intent that it would displace fossil fueled power plants and their associated environmental impacts (i.e., air quality and GHG emissions). The proposed projects would ensure future generations have access to a broad array of renewable energy sources, providing the public with alternative choices to fossil fuels.

Table 3.11-2. Project Consistency with Applicable General Plan Policies

Applicable Policies	Consistency Determination	Analysis
Conservation of Biological Resources. Goal 2: The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability.	Consistent	Biological resources surveys were conducted for the project sites. As discussed in Section 3.5, Biological Resources, there are potentially significant biological resources located within the project site. However, with the implementation of Mitigation Measures BIO-1 through BIO-9 these impacts would be reduced to a level less than significant. The site is not designated or otherwise identified as critical habitat for any species.
Preservation of Cultural Resources. Objective 3.1: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	A cultural resources report was prepared for the project sites. As discussed in Section 3.6, Cultural Resources, the proposed projects have the potential to encounter undocumented archaeological resources and human remains. Mitigation Measures CR-1 through CR-5 have been identified to reduce potential impacts to a level less than significant.
Conservation of Water Resources. Objective 6.1: Ensure the use and protection of all the rivers, waterways, and groundwater sources in the County for use by future generations.	Consistent	As discussed in Section 3.10, Hydrology/Water Quality, the projects will prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.
Conservation of Energy Sources. Objective 6.2: Encourage the utilization of alternative passive and renewable energy resources.	Consistent	The proposed projects entail the construction and operation of solar energy facility, which is considered an alternative source of energy.
Conservation of Energy Sources. Objective 6.6: Encourage compatibility with National and State energy goals and city and community general plans.	Consistent	The proposed projects are consistent with California Public Utilities Code § 399.11 et seq., “Increasing the Diversity, Reliability, Public Health and Environmental Benefits of the Energy Mix.” California’s electric utility companies are required to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Additionally, the proposed projects would contribute toward the state’s need for renewable energy to meet the goals of its Renewable Portfolio Standard.
Protection of Air Quality and Addressing Climate Change. Goal 7: The County shall actively seek to improve the quality of air in the region.	Consistent	The proposed projects would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed projects would improve air quality and reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from a fossil fuel burning facility. Therefore, the proposed projects are consistent with this goal.

Table 3.11-2. Project Consistency with Applicable General Plan Policies

Applicable Policies	Consistency Determination	Analysis
Protection of Air Quality and Addressing Climate Change. Objective 7.1: Ensure that all project and facilities comply with current Federal, State and local requirements for attainment of air quality objectives.	Consistent	The proposed projects would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the proposed project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures (Mitigation Measure AQ-1). Therefore, the proposed projects are consistent with this objective.
Protection of Air Quality and Addressing Climate Change. Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Consistent	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures (Mitigation Measure AQ-1). Therefore, the proposed projects are consistent with this objective.
Protection of Open Space and Recreational Opportunities. Objective 8.2: Focus all new renewable energy development within adopted Renewable Energy Overlay Zones.	Consistent	The project sites are located entirely within the RE Overlay Zone.
RE and Transmission Element		
Objective 1.4: Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate.	Consistent	This EIR has been prepared to meet the requirements of CEQA for purposes of evaluating the potential environmental impacts associated with the proposed projects, which includes analysis on applicable environmental topics that analyze impacts on agricultural, natural, and cultural resources.
Objective 1.5: Require appropriate mitigation and monitoring for environmental issues associated with developing RE facilities.	Consistent	Biological resources reports have been prepared for the projects, which is summarized in Section 3.5, Biological Resources, along with potential impacts attributable to the proposed projects. With incorporation of Mitigation Measures BIO-1 through BIO-9 identified in Section 3.5, Biological Resources, less than significant impacts would result.

Table 3.11-2. Project Consistency with Applicable General Plan Policies

Applicable Policies	Consistency Determination	Analysis
Objective 1.6: Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.	Consistent	As previously mentioned, water consumption during construction would be used primarily for dust control, and obtained from proposed on-site groundwater wells. As described in Chapter 2, Project Description, the construction of a groundwater well requires approval of a CUP. Approval of the CUP would be contingent upon the availability of groundwater to serve the projects and ability to recharge the aquifer so that groundwater supplies are not substantially decreased by the proposed project.
Objective 1.7: Assure that development of RE facilities and transmission lines comply with ICAPCD's regulations and mitigation measures.	Consistent	Dust suppression will be implemented including the use of water and soil binders during construction. Section 3.4, Air Quality, discusses the proposed projects' consistency with ICAPCD's regulations in more detail.
Objective 2.1: To the extent practicable, maximize utilization of IID's transmission capacity in existing easements or rights-of-way. Encourage the location of all major transmission lines within designated corridors easements, and rights-of-way.	Consistent	The proposed projects involve the construction and operation of new RE infrastructure that would interconnect with existing IID transmission infrastructure thereby maximizing the use of existing facilities located within existing easements and/or ROW. As discussed in Chapter 2, Project Description, the power produced by the proposed projects would be conveyed to the local power grid via multiple substations which would connect to IID's existing 230 kV KN/KS Line, 161 kV "F" line, and the 92kV Midway Substation.
Seismic and Public Safety Element		
Land Use Planning and Public Safety. Goal 1: Include public health and safety considerations in land use planning.	Consistent	Division 5 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. 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. Since the project sites are located in a seismically active area, the projects are required
Land Use Planning and Public Safety. Objective 1.1: Ensure that data on geological hazards is incorporated into the land use review process, and future development process.		
Land Use Planning and Public Safety. Objective 1.3: Regulate development adjacent to or near all mineral deposits and geothermal operations.		

Table 3.11-2. Project Consistency with Applicable General Plan Policies

Applicable Policies	Consistency Determination	Analysis
Land Use Planning and Public Safety. Objective 1.4: Require, where possessing the authority, that avoidable seismic risks be avoided; and that measures, commensurate with risks, be taken to reduce injury, loss of life, destruction of property, and disruption of service.		to be designed in accordance with the CBC for near source factors derived from a design basis earthquake based on a peak ground acceleration of 0.50 gravity. It should be noted that, the projects 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. A preliminary geotechnical report has been prepared for the proposed projects. The preliminary geotechnical report has been referenced in this environmental document. Additionally, a design-level geotechnical investigation would be conducted to evaluate the potential for site specific hazards associated with seismic activity.
Land Use Planning and Public Safety. Objective 1.7: Require developers to provide information related to geologic and seismic hazards when siting a proposed projects.		
Emergency Preparedness. Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.		
Emergency Preparedness. Objective 2.2: Reduce risk and damage due to seismic hazards by appropriate regulation.		
Emergency Preparedness. Objective 2.5: Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		
Emergency Preparedness. Objective 2.8: Prevent and reduce death, injuries, property damage, and economic and social dislocation resulting from natural hazards including flooding, land subsidence, earthquakes, other geologic phenomena, levee or dam failure, urban and wildland fires and building collapse by appropriate planning and emergency measures.		
Water Element		
Protection of Water Resources from Hazardous Materials. Program: The County of Imperial shall make every reasonable effort to limit or preclude the contamination or degradation of all groundwater and surface water resources in the County.	Consistent	Mitigation measures will require that the applicant of the proposed projects prepare site-specific drainage plans and water quality management plans to minimize adverse effects to local water resources.

Table 3.11-2. Project Consistency with Applicable General Plan Policies

Applicable Policies	Consistency Determination	Analysis
Protection of Water Resources from Hazardous Materials. Program: All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity, and shall be required to implement appropriate mitigation measures for any significant impacts.	Consistent	See previous response.
Housing Element		
Not Applicable. The proposed projects are solar energy projects and do not include the development of housing.		

Source: County of Imperial 2008

Notes:
AQAP=air quality attainment plan; CBC=California Building Code; CUP=conditional use permit; EIR=environmental impact report; GHG=greenhouse gas; ICAPCD=Imperial County Air Pollution Control District; IID=Imperial Control District; LOS=level of service; RE=renewable energy; ROW=right-of-way

County of Imperial Land Use Ordinance

The County's Land Use Ordinance provides the physical land use planning criteria for development within the jurisdiction of the County. The Land Use Ordinance identifies the permitted and conditional uses within a zoning designation. Uses identified as conditionally permitted require a CUP, which is subject to the discretionary approval of the County Board of Supervisors per a recommendation by the County Planning Commission.

PERMITTED AND CONDITIONAL USES

A-2 Zoning. As shown in As shown in Figure 3.11-2, the western portion of the VEGA SES 5 project site (APN 025-260-022) is zoned A-2-RE. Pursuant to Title 9, Division 5, Chapter 8 of the Land Use Ordinance the purpose of the A-2 zone is to "designate areas that are suitable and intended primarily for agricultural uses (limited) and agricultural related compatible uses" (County of Imperial 2020).

According to Title 9, Division 5, Chapter 8 of the Land Use Ordinance the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County:

> *j) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)*
>
> *s) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *z) Electrical substations in an electrical transmission system (500 kv/230 kv/161 kv)*
>
> *bb) Facilities for the transmission of electrical energy (100-200 kv)*
>
> *ww) Resource extraction and energy development as per Division 17*
>
> *aaa) Solar energy electrical generator*

Height Limit in A-2 Zone. Section 90508.07 of the Land Use Ordinance limits the height of all non-residential structures and specifically states in Section 90508.07(c) that, "Non-Residential structures and commercial communication towers shall not exceed one hundred twenty (120) feet in height, and as may be required by the ALUC plan."

A-3 Zoning. As shown in As shown in Figure 3.11-2, the middle portion of the VEGA SES 5 project site (APN 025-260-022) is zoned A-3-RE. Pursuant to Title 9, Division 5, Chapter 9 of the Land Use Ordinance uses in the A-3 zoning designations are "limited primarily to agricultural-related uses and agricultural activities that are compatible with agricultural uses" (County of Imperial 2020).

Pursuant to Title 9, Division 5, Chapter 9, the following uses are permitted in the A-3 zone subject to approval of a CUP from Imperial County:

> *i) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)*
>
> *o) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *oo) 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 or Federal government, and provided such facilities shall be approved subsequent to coordination review of the Imperial Irrigation District for electrical matters, meeting the requirements in Division 17.*
>
> *zz) Solar energy plants meeting the requirements in Division 17*

Height Limit in A-3 Zone. Section 90509.07 of the Land Use Ordinance limits the height of all non-residential structures and specifically states in Section 90509.07(c) that, "Non-Residential structures and commercial communication towers shall not exceed one hundred twenty (120) feet in height, and as may be required by the ALUC plan."

S-2 Zoning. As shown in Figure 3.11-2, the VEGA SES 2 and 3 project sites are zoned S-2-RE, and the eastern portion of the VEGA SES 5 project site (APN 025-260-019) and the portion of APN 025-260-022 located east of the East Highline Canal are also zoned S-2-RE. The purpose of the S-2 zoning designation is to "preserve the cultural, biological, and open space areas that are rich and natural as well as cultural resources" (County of Imperial 2020). While certain uses are allowed within the S-2 zone, such uses must be compatible with the intent of the Conservation and Open Space Element of the General Plan.

Pursuant to Title 9, Division 5, Chapter 19, the following uses are permitted in the S-2 zone subject to approval of a CUP from Imperial County:

> *d) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *i) Major facilities relating to the generation and transmission of electrical energy provide[d] such facilities are not under State or Federal law, to [be] 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*

- *Facilities for the transmission of electrical energy (100-200 kV)*
- *Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV)*

Height Limit in S-2 Zone. Pursuant to Section 90519.07 of the Land Use Ordinance, the maximum height limit in the S-2 zone is 40 feet, except for communication towers, which have a maximum height limit of 100 feet.

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

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

Imperial County Airport Land Use Compatibility Plan

The Imperial County Airport Land Use Compatibility Plan (ALUCP) provides the criteria and policies used by the Imperial County Airport Land Use Commission to assess compatibility between the principal airports in Imperial County and proposed land use development in the areas surrounding the airports. The ALUCP emphasizes review of local general and specific plans, zoning ordinances, and other land use documents covering broad geographic areas.

The nearest airport to the project sites is the Calipatria Municipal Airport, located approximately 6 miles southwest of the VEGA SES 5 project site. According to Figure 3C of the ALUCP, no portion of the project sites is located within the Calipatria Municipal Airport's land use compatibility zones (ALUC 1996).

3.11.3 Impacts and Mitigation Measures

Thresholds of Significance

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

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

Impact Analysis

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

The project sites are located in a sparsely populated portion of Imperial County. There is a single-family residence located approximately 523 feet from the southwestern corner of the VEGA SES 5 project site (APN 025-260-022). However, there are no established residential communities located in

the vicinity of the project sites. The nearest established residential community is located approximately 5.67 miles northwest of the project sites in the unincorporated community of Niland. Therefore, implementation of the proposed projects would not divide an established community and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.11-2 ***Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?***

The projects' consistency with applicable land use plans, policies, and regulations is evaluated below.

SCAG 2020-2045 RTP/SCS (Connect SoCal)

As noted above, the 2020-2045 RTP/SCS (Connect SoCal) (SCAG 2020) identifies two goals which include reducing GHG emissions to improve air quality (Goal 5), and to promote conservation of natural and agricultural lands (Goal 10).

The 2020-2045 RTP/SCS (Connect SoCal), identifies strategies to support the goal of reducing regional GHG and improve air quality. Strategies include leveraging technological innovations including incorporating solar energy, hydrogen fuel cell power storage, and power generation. Once in operation, the proposed projects would contribute to SCAG's goal in reducing GHG emissions and improving air quality.

The 2020-2045 RTP/SCS (Connect SoCal) also discusses the decline of agricultural land as an issue for the economy. As discussed in Section 3.3, Agricultural Resources, a portion of the VEGA SES 5 project site (APN 025-260-022) is designated as Farmland of Local Importance. The VEGA SES 5 project would temporarily convert Farmland of Local Importance to non-agricultural uses. However, as a condition of project approval (CUP condition), the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan. The reclamation plan includes the removal, recycling, and/or disposal of all solar arrays, inverters, transformers, and other structures on the project site, as well as restoration of the site to its pre-project condition. Therefore, the proposed project would not permanently convert Farmland of Local Importance to non-agricultural uses. Therefore, no impacts due to a conflict with the 2020-2045 RTP/SCS (Connect SoCal) would occur.

County of Imperial General Plan

The County's General Plan applies to the solar energy facility and supporting infrastructure portions associated with the projects. An analysis of the projects' consistency with the General Plan goals and objectives relevant to the projects is provided in Table 3.11-2. As shown in Table 3.11-2, the proposed projects would generally be consistent with the goals and objectives of the General Plan. No amendment to the General Plan for a zone change would be required because the project sites are entirely within the RE Overlay Zone. Therefore, no impacts due to a conflict with the General Plan would occur.

County of Imperial Land Use Ordinance

Development of the solar energy facilities and supporting infrastructure is subject to the County's zoning ordinance. The projects are located on five privately-owned legal parcels zoned A-2-RE, A-3-RE, and S-2-RE.

A-2 Zoning. Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County:

> *j) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)*
>
> *s) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *z) Electrical substations in an electrical transmission system (500 kv/230 kv/161 kv)*
>
> *bb) Facilities for the transmission of electrical energy (100-200 kv)*
>
> *ww) Resource extraction and energy development as per Division 17*
>
> *aaa) Solar energy electrical generator*

Height Limit in A-2 Zone. The maximum height limit for non-residential structures and commercial communication towers in the A-2 zone is 120 feet. The proposed projects' 40-foot-high gen-tie poles would not exceed the height limit in the A-2 zone.

A-3 Zoning. Pursuant to Title 9, Division 5, Chapter 9, the following uses are permitted in the A-3 zone subject to approval of a CUP from Imperial County:

> *i) Battery Storage Facility (must be connected to an existing electrical power generation plant such as solar, geothermal, wind, natural gas, or other renewable energy generator, as an accessory unit to said power plant)*
>
> *o) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *oo) 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 or Federal government, and provided such facilities shall be approved subsequent to coordination review of the Imperial Irrigation District for electrical matters, meeting the requirements in Division 17.*
>
> *zz) Solar energy plants meeting the requirements in Division 17*

Height Limit in A-3 Zone. The maximum height limit for non-residential structures and commercial communication towers in the A-3 zone is 120 feet. The proposed projects' 40-foot-high gen-tie poles would not exceed the height limit in the A-3 zone.

S-2 Zoning. Pursuant to Title 9, Division 5, Chapter 19, the following uses are permitted in the S-2 zone subject to approval of a CUP from Imperial County:

> *d) Communication Towers: including radio, television, cellular, digital, along with the necessary support equipment such as receivers, transmitters, antennas, satellite dishes, relays, etc.*
>
> *i) Major facilities relating to the generation and transmission of electrical energy provide[d] such facilities are not under State or Federal law, to [be] 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*
- *Facilities for the transmission of electrical energy (100-200 kV)*
- *Electrical substations in an electrical transmission system (500 kv/230 kv/161 kV)*

Further, Title 9, Division 17 of the Land use Ordinance, includes the RE Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved CUP (County of Imperial 20017). Therefore, the proposed projects qualify as permitted uses with the approval of the CUPs by the County to allow for the construction and operation of the proposed solar energy facilities. With approval of the CUPs, the proposed projects would not conflict with the County's zoning ordinance. No impacts due to a conflict with the County of Imperial Land Use Ordinance(s) would occur.

Height Limit in S-2 Zone. The maximum height limit in the S-2 zone is 40 feet. The proposed projects' 40-foot-high gen-tie poles would not exceed the height limit in the S-2 zone.

Imperial County Airport Land Use Compatibility Plan

The nearest airport to the project sites is the Calipatria Municipal Airport, located approximately 6 miles southwest of the VEGA SES 5 project site. According to Figure 3C of the ALUCP, no portion of the project sites is located within the Calipatria Municipal Airport's land use compatibility zones (ALUC 1996). On March 16, 2022, the Imperial County Airport Land Use Commission determined that the proposed project is compatible with the ALUCP. Therefore, the proposed projects would not conflict with the Imperial County ALUCP, and no significant impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

3.11.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning and restoration would not physically divide an established community or conflict with any applicable land use plans, policies, or regulations. Decommissioning would be conducted in compliance with a required Reclamation Plan that would be implemented at the end of the proposed projects' life and would adhere to Imperial County's decommissioning requirements. Further, decommissioning activities would be subject to mandatory compliance with applicable local, State, and federal regulations designed to avoid adverse impacts to the project area and surrounding environment. Therefore, environmental impacts due to a conflict with an applicable land use plan, policy or regulation would be less than significant.

Residual

With the approval of CUPs and reclamation plans to address post-project decommissioning, the proposed projects would generally be consistent with applicable state, regional, and local plans and policies. Based on these circumstances, the proposed projects would not result in any residual significant and unmitigable land use impacts.

3.12 Noise and Vibration

This section identifies the ambient noise environment for the project area and describes applicable federal, state, and local regulations, potential project-related noise and vibration impacts, and recommended mitigation measures to avoid or reduce potential impacts of the proposed VEGA 2, 3 & 5 Solar Energy Projects. The information for this section is summarized from a project-specific Noise Impact Assessment, prepared by ECORP Consulting, Inc. This report is included in Appendix J of this EIR.

3.12.1 Existing Conditions

Noise

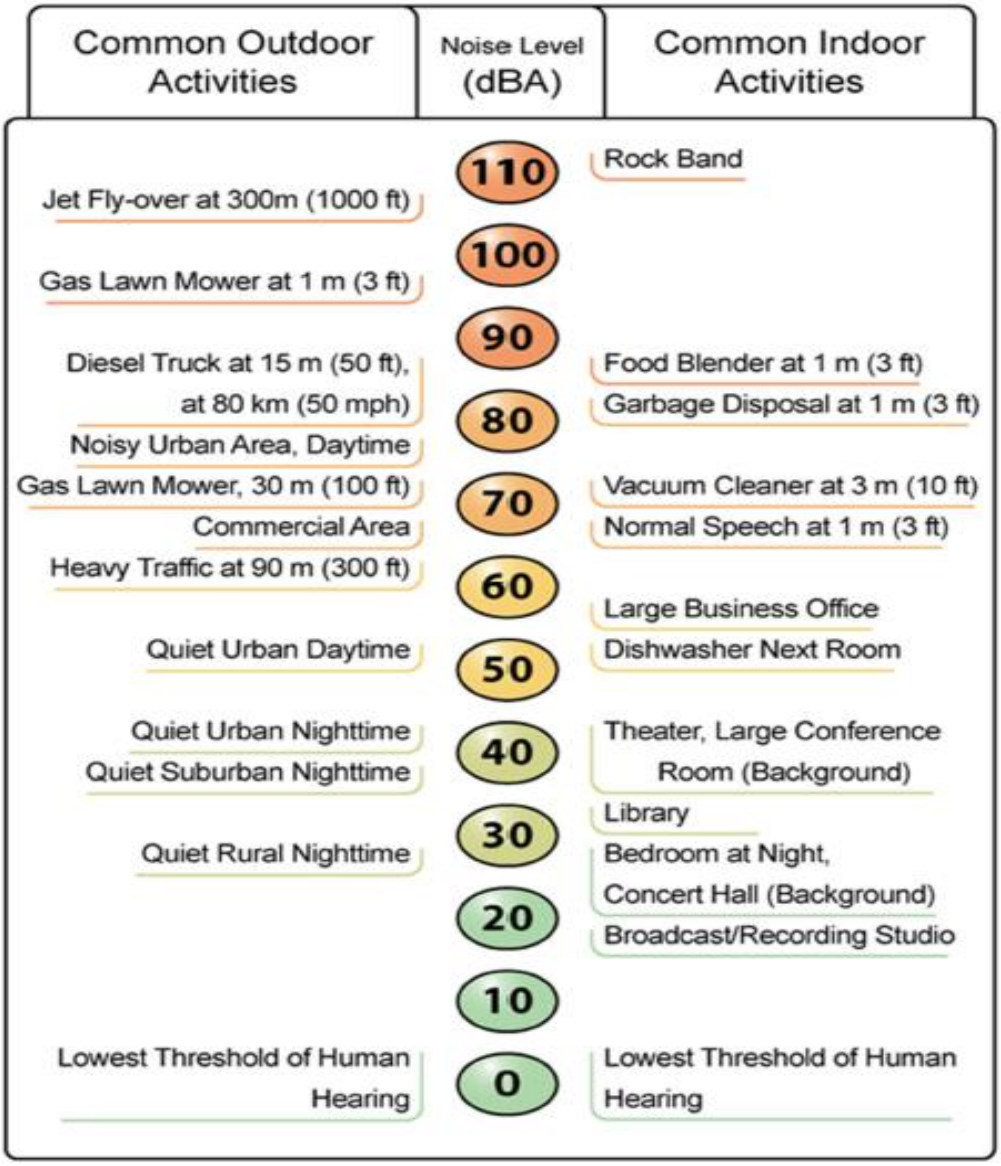
Noise is defined as unwanted sound. Pressure waves traveling through air exert a force registered by the human ear as sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level), which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. Consequently, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 hertz (Hz) and above 5,000 Hz to imitate the human ear's decreased sensitivity to low and extremely high frequencies. This emulation of the human ear's frequency sensitivity is referred to as A-weighting and is expressed in units of dBA. Frequency A weighting follows an international standard method of frequency de-emphasis and is typically applied to community noise measurements. In practice, the specific sound level from a source is measured using a meter incorporating an electrical filter corresponding to the A-weighting curve. All noise levels reported are A-weighted unless otherwise stated.

The dB scale is logarithmic and an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound.

Typical noise levels associated with common noise sources are depicted in Figure 3.12-1.

Figure 3.12-1. Common Noise Levels



Source: Appendix J of this EIR

Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation

value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed (Appendix J of this EIR).

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm generally reduces noise levels by 10 to 20 dBA. However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction of 35 dBA or greater. To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces (Appendix J of this EIR).

The manner in which older homes in California were constructed 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 is generally 30 dBA or more. Generally, in exterior noise environments ranging from 60 dBA Community Noise Equivalent Level (CNEL) to 65 dBA CNEL, interior noise levels can typically be maintained below 45 dBA, a typically residential interior noise standard, with the incorporation of an adequate forced air mechanical ventilation system in each residential building, and standard thermal-pane residential windows/doors with a minimum rating of Sound Transmission Class (STC) 28. (STC is an integer rating of how well a building partition attenuates airborne sound (Appendix J of this EIR).

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL (Community Noise Equivalent Level) are measures of community noise.

The A weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20

dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Existing Ambient Noise Levels

The project sites are bound mostly by vacant undisturbed land, with the exception of agricultural lands and county roadways adjacent to the VEGA SES 5 project site. Noffsinger Road and the Union Pacific Railway traverse the VEGA SES 5 project site and the Coachella Canal crosses the VEGA SES 2 project site. In order to quantify existing ambient noise levels in the project area, ECORP Consulting, Inc. conducted four short-term noise measurements on January 12, 2021. The noise measurement sites (Figure 3.12-2) were representative of typical existing noise exposure within and adjacent to the project sites during the daytime. The 15-minute measurements were taken between 11:35 a.m. and 12:54 p.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. As shown in Table 3.12-1, the existing noise levels (baseline) in the project-vicinity range from 45.5 to 48.1 dBA L_{eq}.

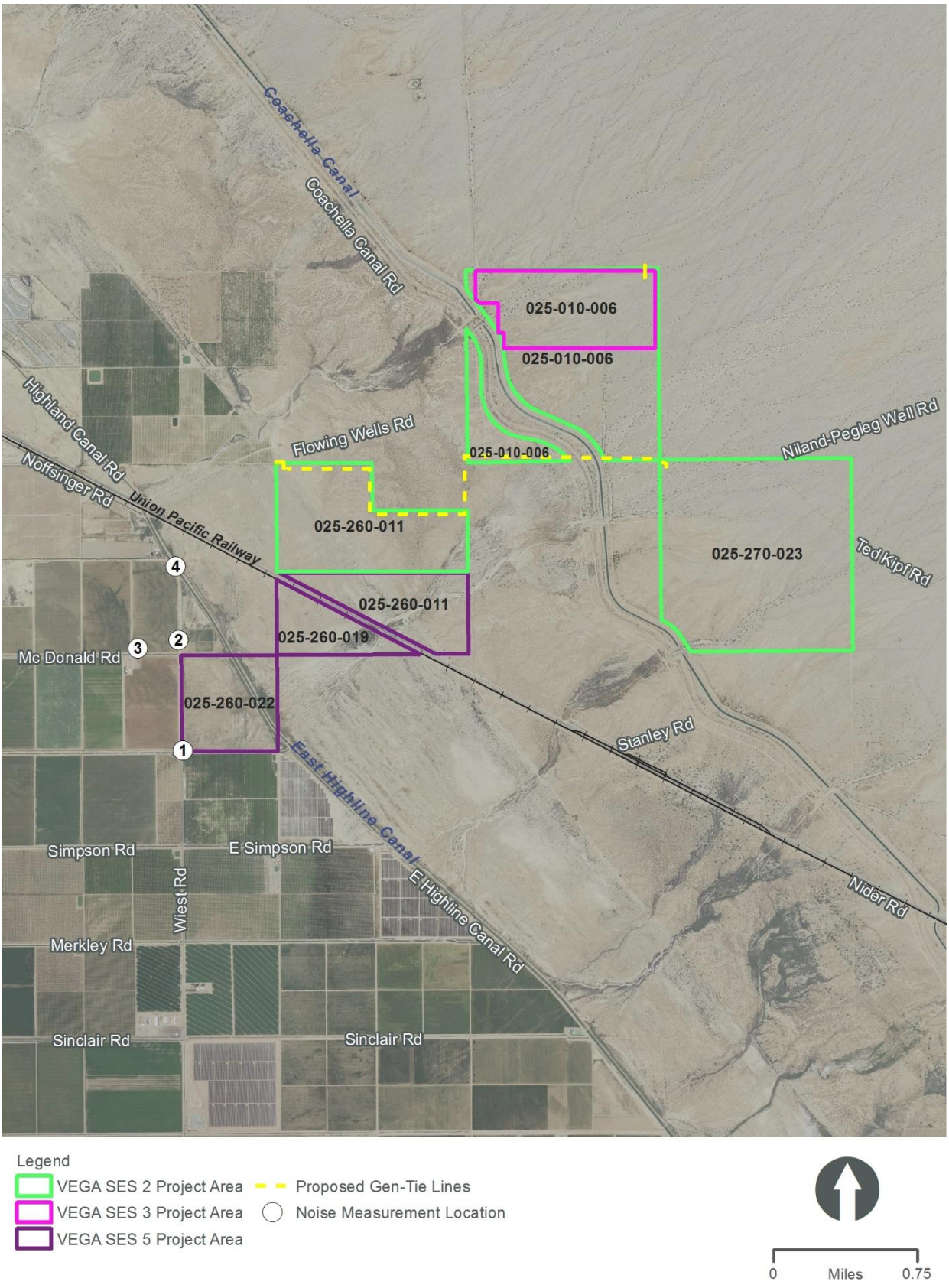
Table 3.12-1. Existing (Baseline) Noise Measurements

Measurement Location Number	Location	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
1	West Schrimpf Road and Wiest Road	45.5	43.1	52.0	11:35 a.m. – 11:50 a.m.
2	Wiest Road and McDonald Road	47.5	37.2	61.9	11:57 a.m. – 12:12 p.m.
3	McDonald Road, ~700 feet west of Wiest Road	45.8	31.6	70.7	12:16 p.m. – 12:31 p.m.
4	Wiest Road, ~1,000 feet south of Wiest Road's intersection with Noffsinger Road	48.1	32.2	69.1	12:39 p.m. – 12:54 p.m.

Source: Appendix J of this EIR

The most common noise in the project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) traversing country roads adjacent to the project sites. Traffic moving along streets produces a sound level that remains relatively constant and is part of the minimum ambient noise level in the project vicinity.

Figure 3.12-2. Noise Measurement Locations



Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest existing noise-sensitive land use to the project sites is a single-family residence located approximately 523 feet from the southwestern corner of the VEGA SES 5 project site (APN 025-260-022).

Vibration

Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or manmade causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage. For human response, however, an average vibration amplitude is more appropriate because it takes time for the human body to respond to the excitation (the human body responds to an average vibration amplitude, not a peak amplitude). Because the average particle velocity over time is zero, the RMS amplitude is typically used to assess human response. The RMS value is the average of the amplitude squared over time, typically a 1- sec. period (Appendix J of this EIR).

Table 3.12-2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high-noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in Table 3.12-2 is considered very unlikely to cause damage to buildings of any type.

Table 3.12-2. Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006 – 0.019	67 – 74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4 – 0.6	98 - 104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Appendix J of this EIR

Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance. Groundborne vibration levels associated with typical construction equipment at 25 feet distant are summarized in Table 3.12-3.

Table 3.12-3. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 25 Feet (Inches per Second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Vibratory Roller	0.210

Source: Appendix J of this EIR

Proximity to Airports

The project sites are not located within 2 miles of a public airport or a public use airport. The nearest airport to the proposed projects is the Calipatria Municipal Airport, located approximately 6 miles southwest of the VEGA SES 5 project site.

3.12.2 Regulatory Setting

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

Federal

Occupational Safety and Health Act of 1970

OSHA regulates onsite noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 dBA over an eight-hour work shift (29 Code of Regulations 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

State

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines, published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State Office of Planning and Research Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a Land Use Compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL. The County of Imperial has utilized the adjustment factors provided and has modified the state's Land Use Compatibility standards for the purpose of implementing the Noise Element of its General Plan. Table 3.12-4 summarizes the acceptable and unacceptable community noise exposure limits for various land use categories as currently defined by the State of California. These community noise exposure limits are also incorporated into the County of Imperial General Plan Noise Element.

Table 3.12-4. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure – L_{dn} or CNEL (dBA)						
	50	55	60	65	70	75	80
Residential							
Transient Lodging – Motel, Hotel							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditorium, Concert Hall, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business, Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Table 3.12-4. Land Use Compatibility for Community Noise Environments

Land Use Category		Community Noise Exposure – L_{dn} or CNEL (dBA)						
		50	55	60	65	70	75	80
	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.						
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design.						
	Normally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.						
	Clearly Unacceptable	New construction or development generally should not be undertaken.						

Source: OPR 2017; ICPDS 1993
Notes:
CNEL - community noise equivalent level; dBA – A-weighted decibel; Ldn – day-night average sound level

Local

County of Imperial General Plan Noise Element

The County of Imperial General Plan Noise Element identifies and defines existing and future environmental noise levels from sources of noise within or adjacent to the County of Imperial; establishes goals and objectives to address noise impacts and provides Implementation Programs to implement adopted goals and objectives. Table 3.12-5 summarizes the projects' consistency with the applicable General Plan noise policies. While this EIR analyzes the projects' 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.

The County of Imperial has established the following interior noise standards to be considered in acoustical analyses:

- The interior noise standard for detached single family dwellings shall be 45 dB CNEL.
- The interior noise standard for schools, libraries, offices and other noise-sensitive areas where the occupancy is normally only in the day time, shall be 50 dB averaged over a 1-hour period ($L_{eq}(1)$).

Table 3.12-5. Projects' Consistency with Applicable General Plan Noise Policies

General Plan Policies	Consistency with General Plan	Analysis
1. Acoustical Analysis of proposed projects. The County shall require the analysis of proposed discretionary projects, which may generate excessive noise, or which may be impacted by existing excessive noise levels.	Consistent	Under existing conditions, the ambient noise environment is characterized as relatively quiet with peak noise levels influenced by vehicular traffic traveling on SR 78, SR 111, and SR 115. Given that the projects are not characterized as a sensitive land use, project facilities would be unaffected by existing noise levels. The project facilities would be constructed within areas zoned for agricultural use with noise levels up to 69 dBA identified as normally acceptable. Project operations are expected to produce noise levels that would not exceed County standards and, hence impacts are expected to be less than significant. This EIR provides an analysis of the potential short- and long-term noise impacts of the projects. As discussed, short-term and long-term noise levels were found to be less than significant.
2. Noise/Land Use Compatibility. Where acoustical analysis of a proposed project is required, the County shall identify and evaluate potential noise/land use conflicts that could result from the implementation of the project. Projects which may result in noise levels that exceed the "Normally Acceptable" criteria of the Noise/Land Use Compatibility Guidelines shall include mitigation measures to eliminate or reduce the adverse noise impacts to an acceptable level.	Consistent	Noise levels associated with project operations would not exceed noise limits for the A-2-RE, A-3-RE, and S-2-RE zones. See Section 3.12.3 for additional discussion.
4. Interior Noise Environment. Where acoustical analysis of a proposed project is required, the County shall identify and evaluate projects to ensure compliance to the California (Title 24) interior noise standards and the additional requirements of this Element.	Consistent	This EIR provides an analysis of the potential short- and long-term noise impacts of the projects. As discussed, short-term and long-term noise levels were found to be less than significant. Noise levels associated with project operations would be unlikely to exceed noise limits for the A-2-RE, A-3-RE, and S-2-RE zones.
5. New Noise Generating projects. The County shall identify and evaluate projects which have the potential to generate noise in excess of the Property Line Noise Limits. An acoustical analysis must be submitted which demonstrates the project's compliance.	Consistent	This EIR provides an analysis of the potential short- and long-term noise impacts of the projects. As discussed, short-term and long-term noise levels were found to be less than significant. Noise levels associated with project operations would be unlikely to exceed noise limits for the A-2-RE, A-3-RE, and S-2-RE zones.

Table 3.12-5. Projects' Consistency with Applicable General Plan Noise Policies

General Plan Policies	Consistency with General Plan	Analysis
6. Projects Which Generate Off-site Traffic Noise. The acoustical analysis shall identify and evaluate projects, which would generate traffic and increase noise levels on off-site roadways. If the project site has the potential to cause a significant noise impact on sensitive receptors along those roadways, the acoustical analysis report shall consider noise reduction measures to reduce the impact to a level less than significant.	Consistent	As described in Chapter 2, the projects would involve a minimal number of operational related vehicle trips and therefore, is unlikely to produce any increase in traffic noise levels on local roadways.

Source: ICPDS 1993

Construction Noise Standards

Construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq}, when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB L_{eq} when averaged over a one (1) hour period.

Construction equipment operation are required to be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays. In cases of a person constructing or modifying a residence for himself/herself, and if the work is not being performed as a business, construction equipment operations may be performed on Sundays and holidays between the hours of 9:00 a.m. and 5:00 p.m. Such non-commercial construction activities may be further restricted where disturbing, excessive, or offensive noise causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

County of Imperial Noise Ordinance

Noise generating sources in Imperial County are regulated under the County of Imperial Codified Ordinances, Title 9, Division 7 (Noise Abatement and Control). Noise limits are established in Chapter 2 of this ordinance. Under Section 90702.00 of this rule, 70 dB is the normally acceptable limit for the Industrial, Manufacturing, Utilities, and Agricultural category of land use (Table 3.12-6).

Table 3.12-6. Imperial County Exterior Noise Standards

Land Use Zone	Time Period	Noise Level, L_{eq} 1-hour
R-1 Residential	Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)	45 dBA 50 dBA
R-2 Residential	Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)	50 dBA 55 dBA
R-3, R-4, and all other residential	Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)	50 dBA 55 dBA
Commercial	Night (10 p.m. to 7 a.m.) Day (7 a.m. to 10 p.m.)	55 dBA 60 dBA
Manufacturing, other industrial, agricultural, and extraction industry	Anytime	70 dBA
Industrial	Anytime	75 dBA

Notes:
dBA – A-weighted decibel; L_{eq} – equivalent sound level

Imperial County Right-to-Farm Ordinance

In recognition of the role of agriculture in the county, the County of Imperial has adopted a "right-to-farm" ordinance (County of Imperial Codified Ordinances, Division 2, Title 6: Right to Farm). A "right-to-farm" ordinance creates a legal presumption that ongoing standard farming practices are not a nuisance to adjoining residences and requires a disclosure to landowners near agricultural land operations or areas zoned for agricultural purposes. The disclosure advises persons regarding potential discomfort and inconvenience that may occur from operating machinery as a result of conforming and accepted agricultural operations.

3.12.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

- Generate 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.
- Generate excessive groundborne vibration or groundborne noise levels.
- For a project located in the vicinity of a private airstrip of 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.

Methodology

Noise and Vibration

This analysis of the existing and future noise environments is based on empirical observations. Predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Model (see Appendix J of this EIR for details). Groundborne vibration levels associated with construction-related activities for the projects were evaluated utilizing typical groundborne vibration levels associated with construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby structures and typically applied criteria for structural damage and human annoyance.

In order to estimate the worst-case operational noise levels that may occur at the nearest noise-sensitive receptor, onsite operational noise levels have been calculated with the SoundPLAN 3D noise model (which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings, and barriers), coupled with noise measurements that were taken by ECORP Consulting, Inc. (ECORP) at an existing solar energy generation facility. Specifically, ECORP conducted a 30-minute reference noise measurement within the IVC solar generation facility in Imperial County with a Larson Davis SoundExpert LxT precision sound-level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. This reference measurement identified an ambient noise environment of 47.1 dBA at the existing solar energy generation facility (see Appendix J of this EIR for details). Therefore, a noise level of 47.1 dBA was employed as the reference noise level in the SoundPLAN 3D noise model to determine noise-level propagation associated with project operations.

Impact Analysis

Impact 3.12-1 Would the project generate 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?

Onsite Construction Noise

Construction noise associated with the proposed projects would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic

movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The nearest existing noise-sensitive land use to the project site is a single-family residence located 523 feet from the southwestern corner of the VEGA SES 5 project site. However, VEGA SES 2 and 3 are located on a different set of parcels than VEGA SES 5. Therefore, the closest residence to VEGA SES 2 and 3 projects is approximately 3,154 feet west of the VEGA SES 2 project boundary.

As previously described, the County's General Plan Noise Element states construction equipment operation shall be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays. No commercial construction operations are permitted on Sundays or holidays. Construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq}, when averaged over an 8-hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB L_{eq} when averaged over a one 1-hour period.

The anticipated short-term construction noise levels generated for the necessary construction equipment are presented in Table 3.12-7.

Table 3.12-7. Construction Average Noise Levels (dBA) at the Nearest Receptor

Combined Equipment	Estimated Exterior Construction Noise Level at Nearest Receptor (dBA L_{eq})	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
VEGA SES 2 and 3			
Demolition and Grubbing	50.4	75	**No**
Grading	52.2	75	**No**
Construction and Paving	54.6	75	**No**
VEGA SES 5			
Demolition and Grubbing	66.0	75	**No**
Grading	67.8	75	**No**
Construction and Paving	70.2	75	**No**

Source: Appendix J of this EIR

Notes:

The nearest residence is located approximately 3,154 feet from the VEGA SES 2 western boundary. The nearest residence is located approximately 523 feet from the Project's VEGA SES 5 southwestern boundary.

L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown in Table 3.12-7, the individual or cumulative pieces of construction equipment during construction of the VEGA SES 2 and 3 projects in 2023 and VEGA SES 5 project in 2024 would not exceed the 75 dBA Imperial County construction noise standard at the nearest noise-sensitive

receptor. Therefore, the proposed projects would not generate a substantial temporary increase in ambient noise levels in the vicinity of the project sites in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction. Impacts would be less than significant.

Offsite Construction Worker Traffic Noise

Project construction would also result in additional traffic on adjacent roadways over the time period that construction occurs. The number of on–site construction workers for the solar project facilities are 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. Onsite parking would be provided for all construction workers. According to the Traffic Impact Study prepared for the VEGA SES 2, 3, & 5 Solar Energy Projects (Appendices K1 and K2 of this EIR), a maximum of 510 daily automobile trips would be generated during project construction, accounting for construction worker commutes and equipment deliveries. The majority of these trips are expected to be accommodated on SR 78, SR 111, and SR 115. Construction workers would access the VEGA 5 project site from SR 111 onto east on McDonald Road. The VEGA 2 and 3 project sites require an additional 1.65 miles of travel on Wiest Road and Flowing Wells Road.

Doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). The roadway segment of SR 111 closest to the project site currently accommodates 3,500 average daily traffic trips (ADT). The County General Plan Circulation and Scenic Highways Element (2008) designates the roadway segments of McDonald Road and Weist Road as Minor (Local) Collector, which on average can accommodate 1,900 to 16,200 ADT. Flowing Wells Road does not have a designation within the General Plan, but there are no sensitive receptors along Flowing Wells Road that would experience any sounds changes along this roadway. Additionally, construction is temporary and once project construction is complete, all construction-related traffic noise would cease. Thus, the estimated 510 daily trips during project construction would not result in a doubling of traffic on these facilities, and its contribution to existing traffic noise would not be perceptible.

Based on the considerations above, the proposed projects would not generate a substantial temporary increase in ambient noise levels related to construction worker traffic in the vicinity of the project sites in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction. Impacts would be less than significant.

Operation

The main stationary operational noise associated with the projects would be from the proposed transformers, inverters, substation, and transmission lines. Onsite project operations have been calculated using the SoundPLAN 3D noise model. As previously stated, a noise level of 47.1 dBA was employed as the reference noise level in the SoundPLAN 3D noise model to determine noise-level propagation associated with the project operations. Table 3.12-8 shows the predicted project noise levels at the nearest noise-sensitive land use, a single-family residence located approximately 523 feet southwest of the VEGA 5 project site (APN 025-260-022).

Table 3.12-8. Modeled Operational Noise Levels at Nearest Sensitive Receptor

Location	Modeled Operational Noise Attributed to Project (L_{eq} dBA)	County Daytime Standard (L_{eq} dB)	County Nighttime Standard (L_{eq} dB)	Exceed Standard?
Property line of the nearest residence	36.7	50.0	45.0	**No**

Source: Appendix J of this EIR

Notes:

Reference noise measurement used to calculate Project onsite noise propagation identified at 47.1 dBA, per 30-minute measurements taken at a VEGA SES solar generation facility in Imperial County.

As shown in Table 3.12-8, project operational noise would not exceed County daytime or nighttime standards.

Project operations would result in minimal additional traffic on adjacent roadways. The only visitors to the site would be that of repair or maintenance workers, whose presence at the site would be infrequent. Sporadic vehicle activity resulting from maintenance and operations trips would not result in a doubling of traffic, and therefore its contribution to existing traffic noise would not be perceptible.

Given the above, project operation would not generate a substantial permanent increase in ambient noise levels in the vicinity of the project sites in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction. Impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.12-2 Would the project generate excessive groundborne vibration or groundborne noise levels?

Construction

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the projects would be primarily associated with short-term construction-related activities. Construction on the project sites would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

As stated in Section 3.12.1, construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the project sites and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with typical construction equipment at 25 feet distant are summarized in Table 3.12-3.

The County of Imperial does not regulate vibrations associated with construction. However, a discussion of construction vibration is included for informational purposes. Caltrans and the Federal

Transit Authority (FTA) have developed two of the decisive works in the assessment of vibrations from transportation and construction sources (Caltrans 2020; FTA 2018). Caltrans recommends a standard threshold of 0.2 inch per second PPV with respect to the prevention of structural damage for older residential buildings (Caltrans 2020). This is also the level at which vibrations may begin to annoy people in buildings. Consistent with FTA recommendations (FTA 2018) for calculating construction vibration, construction vibration was measured from the center of the project site. The nearest structure of concern to the construction site, with regard to groundborne vibrations, is the Coachella Canal located within the proposed project boundary and approximately 30 feet across the Coachella Canal Access Road (Appendix J of this EIR).

Potential project construction vibration levels were calculated based on the representative vibration levels presented for various construction equipment types in Table 3.12-3 and the construction vibration assessment methodology published by the FTA (FTA 2018). Table 3.12-9 presents the expected project-related vibration levels at a distance of 30 feet.

Table 3.12-9. Project Construction Vibration Levels at 30 Feet

Receiver PPV Levels (Inch per Second)							
Large Bulldozer, Caisson Drilling, and Hoe Ram	Loaded Trucks	Jackhammer	Small Bulldozer	Vibratory Roller	Peak Vibration	Threshold	Exceed Threshold?
0.068	0.058	0.027	0.002	0.160	**0.160**	**0.3**	**No**

Source: Appendix J of this EIR

As shown in Table 3.12-9, vibration as a result of construction activities would not exceed 0.3 PPV at the nearest structure. Thus, project construction would not exceed the recommended vibration threshold and this impact would be less than significant.

Operation

Project operations would not include the use of any large-scale stationary equipment that would result in excessive vibration levels, nor would it involve any operational activities that would result in excessive vibration. Therefore, the projects would result in no impact associated with groundborne vibration during operations.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.12-3 For a project located in the vicinity of a private airstrip of 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 project sites are not located within 2 miles of a public airport or a public use airport. The nearest airport to the proposed projects is the Calipatria Municipal Airport, located approximately 6 miles southwest of the VEGA SES 5 project site. The Imperial County Airport Land Use Commission has established a set of land use compatibility criteria for lands surrounding the airports in Imperial County

in the Imperial County Airport Land Use Compatibility Plan (ALUCP). According to Figure 3C of the ALUCP, the project sites are outside of the noise contours of the Calipatria Municipal Airport. Therefore, the projects would not expose people residing or working in the project area to excessive noise levels and no impact would occur.

Mitigation Measure(s)

No mitigation measures are required.

3.12.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

Decommissioning or restoration of the solar facilities would use similar equipment to what was evaluated in the construction noise and vibration analysis. Adhering to Imperial County standards for construction noise levels would reduce the noise and vibration impacts to below a level of significance.

Residual

Adhering to the Imperial County standards for construction noise levels would reduce the noise and vibration impacts to below a level of significance.

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3.13 Transportation

This section addresses the proposed projects' impacts on traffic and the surrounding roadway network associated with construction and operation of the proposed projects. The following discussion describes the existing conditions in the surrounding area, the existing federal, state, and local regulations regarding transportation, and an analysis of the potential impacts of the proposed projects.

Information in this section is summarized from the VEGA SES 2/3 Solar Energy Storage Project Traffic Impact Study and the VEGA SES 5 Solar Energy Storage Project Traffic Impact Study prepared by KOA. These reports are included in Appendix K1 and K2 of this EIR, respectively.

3.13.1 Existing Conditions

Traffic Study Area

The traffic study area is determined based on the County of Imperial Department of Public Works *Traffic Study and Report Policy* dated March 12, 2007, revised June 29, 2007, and approved by the Board of Supervisors of the County of Imperial on August 7, 2007 ("Traffic Study and Report Policy"). The traffic study area for the projects includes those locations that will likely be affected by the projects where a minimum of 50 peak hour vehicles impacts the location.

Intersections

The traffic study area for the proposed projects includes the following intersections:

1. McDonald Road and Weist Road
2. McDonald Road and SR-111
3. SR-111 and SR-115
4. SR-111 and north ramps with SR-78
5. SR-111 and south ramps with SR-78

Roadway Segments

The traffic study area for the proposed projects includes the following roadway segments:

1. McDonald Road from SR-111 to Weist Road
2. SR-111 from McDonald Road to Niland Avenue
3. SR-111 from McDonald Road to SR-115
4. SR-111 from SR-115 to SR-78 north ramps
5. SR-111 from SR-78 north ramps to SR-78 south ramps

Existing Roadway Network

Each of the key roadways, as well as associated study intersections within the traffic study area, are discussed below.

1. State Route 111 (SR-111) is a two-lane highway with no median and a posted speed limit of 65 mph.

2. McDonald Road is a two-lane paved local roadway that runs in an east-west direction. This road provides access from the site to/from SR-111.
3. Weist Road is a north-south roadway that connects to McDonald Road. North of McDonald Road, Weist Road is unpaved.

Existing Level of Service

Level of service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. LOS ranges from A through F, where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free-flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating needs.

Intersections

All of the study area intersections analyzed currently operate at acceptable LOS B or better during the AM and PM peak hours under existing conditions.

Roadway Segments

All of the roadway segments analyzed currently operate at acceptable LOS B or better under existing conditions.

Alternative/Public Transportation

Fixed Route Transportation

Imperial Valley Transit (IVT) is an inter-city fixed route bus system, subsidized by the Imperial Valley Association of Governments (IVAG), administered by the County Department of Public Works and operated by a public transit bus service. The service is wheelchair accessible and Americans with Disabilities Act compliant. IVT Routes are defined categorized in the following manner:

- **Fixed Routes.** Fixed routes operate over a set pattern of travel and with a published schedule. The fixed route provides a low cost, reliable, accessible, and comfortable way to travel.
- **Deviated Fixed Route.** In several service areas, IVT operates on a deviated fixed-route basis so that persons with disabilities and limited mobility are able to travel on the bus. Passengers must call and request this service the day before service is desired in the communities of Seeley and Ocotillo and the east side of the Salton Sea.
- **Remote Zone Routes.** Remote zone routes operate once a week. These routes are “lifelines” in nature in that they provide connections from some of the more distant communities in the Imperial County area (IVT 2021).

The project sites are not within the Fixed Route Transportation system and, therefore, would not receive regular bus service to the project sites or within the vicinity of the project sites. The nearest IVT bus stop is the 51N Brawley to Bombay Beach bus stop at the northwest quadrant of the Beal Road and Low Road intersection in the community of Slab City. VEGA SES 5 is the closest project site to this bus stop and is approximately 4 miles southeast from the bus stop.

Bicycle Facilities

The project sites are located within a rural portion of Imperial County. There are no bicycle facilities in the immediate proximity of the project sites.

Project Site Access

VEGA SES 2 and 3

The project sites are located within an unincorporated area of Imperial County, approximately 5.67 miles southeast of the unincorporated community of Niland between the unincorporated communities of Iris and Slab City. As shown in Figure 3.13-1, primary access to and from the site will be from SR-111 along McDonald Road to Weist Road. Construction-related traffic would cross the East Highline Canal at Noffsinger Road. Weist Road continues to Flowing Wells Road. The crossing of the UP railroad tracks is at an unsignalized crossing on Weist Road. The site will be accessed from Flowing Wells Road. Weist Road, Noffsinger Road, and Flowing Wells Road are unpaved roadways.

VEGA SES 5

As shown in Figure 3.13-2, access to and from the site will be from SR-111 along McDonald Road. A portion of the site construction traffic will travel to the east side of the channel, by using Weist Road and Noffsinger Road. To access the portion of the site east of the UP railroad tracks, access across the tracks will be at Flowing Wells Road.

3.13.2 Regulatory Setting

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

State

California Department of Transportation

Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Specifically, Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System.

As it relates to the proposed project and potential construction access routes within the County, Caltrans District 11 is responsible for maintaining and managing SR-111.

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Figure 3.13-1. VEGA SES 2 and 3 Access Route

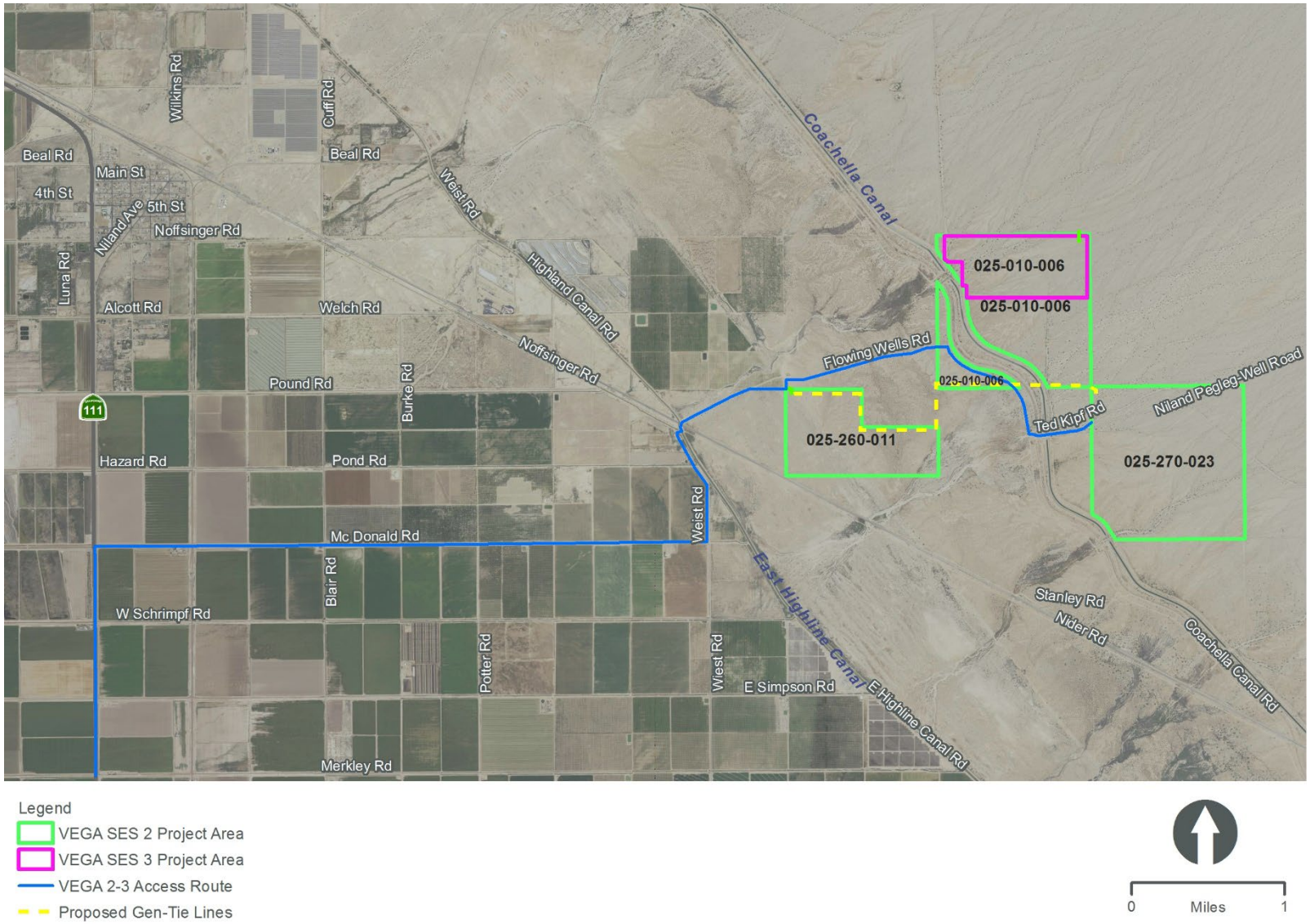
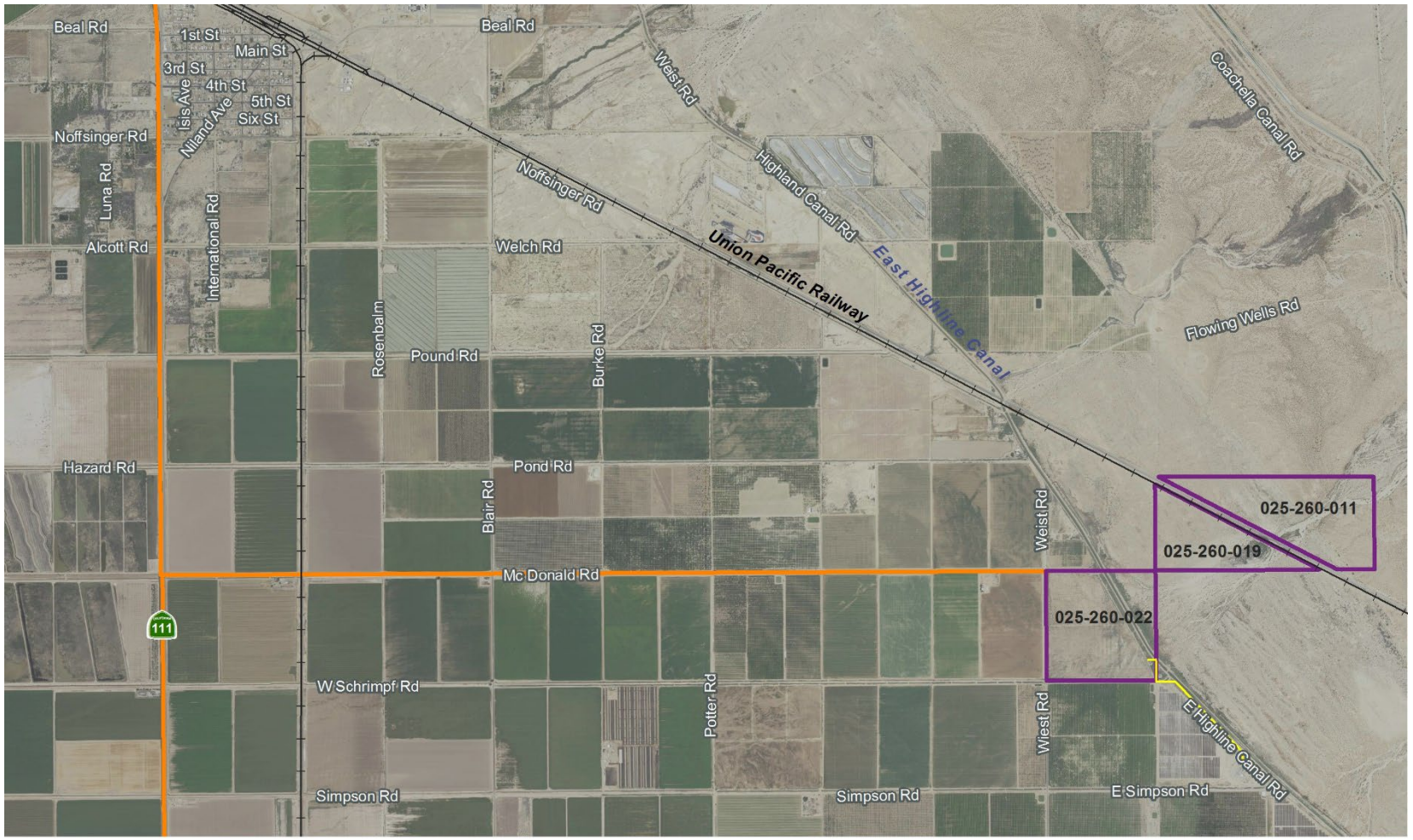


Figure 3.13-2. VEGA SES 5 Access Route



Regional

SCAG 2020-2045 RTP/SCS (Connect SoCal)

On September 3,2020, SCAG adopted the 2020–2045 RTP/SCS (SCAG 2020). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The 2020–2045 RTP/SCS demonstrates how the region will reduce emissions from transportation sources to comply with SB 375 and meet the NAAQS set forth by the Clean Air Act.

The updated RTP/SCS contains thousands of individual transportation projects that aim to improve the region's mobility and air quality and revitalize the economy. Since the RTP/SCS's adoption, the county transportation commissions have identified new project priorities and have experienced technical changes that are time-sensitive. Additionally, the new amendments for the plan have outlined minor modifications to project scopes, costs and/or funding and updates to completion years. The amendments to the RTP/SCS do not change any other policies, programs, or projects in the plan.

Local

County of Imperial Circulation and Scenic Highways Element

The Circulation and Scenic Highways Element identifies the location and extent of transportation routes and facilities. It is intended to meet the transportation needs of local residents and businesses and as a source for regional coordination. The inclusion of Scenic Highways provides a means of protecting and enhancing scenic resources within highway corridors in Imperial County. The purpose of the Circulation and Scenic Highways Element is to provide a comprehensive document that contains the latest knowledge about the transportation needs of the County and the various modes available to meet these needs. Additionally, the purpose of this Element is to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

Coordination across jurisdictional standards for road classification and design standards was identified as a crucial component to the 2008 update of the Circulation and Scenic Highways Element. The intent of this element is to provide a system of roads and streets that operate at an LOS "C" or better (County of Imperial 2008).

Level of Service

LOS is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. LOS ranges from A through F, where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free-flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating needs. Additionally, with the growth of Imperial County, transportation management and systems management will be necessary to preserve and increase roadway "capacity." LOS standards are used to assess the performance of a street or highway system and the capacity of a roadway.

County of Imperial Bicycle Master Plan Update: Final Plan

In 2012, the County of Imperial adopted an updated Bicycle Master Plan to serve as the guiding document for the development of an integrated network of bicycle facilities and supporting programs designed to link the unincorporated areas and attractive land uses throughout the County. This document is an update to the previously adopted Countywide Bicycle Master Plan; and was prepared to accomplish the following goals:

1. To promote bicycling as a viable travel choice for users of all abilities in the County.
2. To provide a safe and comprehensive regional connected bikeway network.
3. To enhance environmental quality, public health, recreation, and mobility benefits for the County through increased bicycling.

The County of Imperial's General Plan, Circulation and Scenic Highways Element, and Conservation and Open Space Element, provide a solid planning basis for the Bicycle Master Plan. In spite of the fact that there are a limited number of bicycle facilities in Imperial County and no comprehensive bicycle system, there is a growing interest in cycling and numerous cyclists bike on a regular basis for both recreation and commuting to work and school.

3.13.3 Impacts and Mitigation Measures

Thresholds of Significance

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

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

Methodology

The assessment evaluates the proposed projects' trip generation during and after construction, and roadway conditions for roads that would be utilized to access the project sites for construction.

County of Imperial

ROADWAY SEGMENT LEVEL OF SERVICE STANDARDS

The County of Imperial does not have published significance criteria for traffic impacts. However, the Circulation and Scenic Highways Element of the County General Plan does state that the LOS goal for intersections and roadway segments is to operate at LOS C or better. Therefore, if an intersection or segment degrades from LOS C or better to LOS D or worse with the addition of project traffic, the impact is considered significant.

PEAK HOUR INTERSECTION LEVEL OF SERVICE STANDARDS

The County of Imperial traffic impact study guidelines consider LOS C or better during the AM and PM peak hours to be the threshold of significance for intersection LOS. Therefore, if the proposed projects exceed the County's LOS C threshold for surrounding roadways intersections, then the proposed projects may have a significant project impact.

California Department of Transportation

Freeway LOS analysis is based upon procedures developed by Caltrans. Consistent with Caltrans requirements, LOS D or better is used as the threshold for acceptable freeway operations. For freeway segments that operate at LOS D or lower, an incremental increase in volume/capacity (v/c) of greater than 0.01 is considered to be a significant impact.

Project Trip Generation

The construction of the VEGA SES 2 and 3 Projects is estimated to take 12–18 months and would begin in 2023. The number of on-site construction workers for the VEGA SES 2 and 3 solar facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the VEGA SES 2 and 3 battery storage facility and substations is not expected to exceed 100 workers at any one time.

The construction of the VEGA SES 5 Project is estimated to take 12 months and would begin in 2024. The number of on-site construction workers for the VEGA SES 5 solar facility is not expected to exceed 75 workers at any one time. The number of on-site construction workers for the VEGA SES 5 battery storage facility and substation is not expected to exceed 50 workers at any one time.

The trip generation was estimated if the construction phases were to overlap. Delivery trucks are expected to follow the same routes as the construction workers. An estimated two trucks would arrive at the project site each day during the first few weeks of construction of the solar generating facility. Truck trips have been converted into passenger equivalent volumes (PCE) using a PCE factor of 2.5.

Table 3.13-3 provides the estimated average daily on-road project trip generation (i.e., trips to and from the site) for the construction phases of the proposed projects. As shown, the maximum number of on-road trips during construction would be approximately 510 daily trips ends (500 worker trips and 10 truck trips) for the VEGA SES 2 and 3 Projects and 260 daily trips (250 worker trips and 10 truck trips) for the VEGA SES 5 Project.

The proposed projects require minimal operations and maintenance activities and would not require presence of full-time employees. However, it is conservatively assumed that for day-to-day inspection and minor maintenance, some employees would commute to the project sites. The annual operations are assumed to be as follows:

- Routine maintenance activities would include panel washing, which is expected to occur two times annually.
- Periodic (approximately every 3 months) removal of vegetation manually and/or by treatment with herbicides.

Table 3.13-1. Construction Phase Trip Generation

Construction Phase (Duration)	Intensity (Unit)		Daily Rate	Daily Trips	
	VEGA SES 2&3	VEGA SES 5		VEGA SES 2&3	VEGA SES 5
Solar Facility Construction Workers	150 (Employees)	75 (Employee)	2	300	150
Battery Storage Workers	100 (Employees)	50 (Employee)	2	200	100
Equipment Deliveries and Construction Truck Trips (PCE)	4 (trucks)	4 (Trucks)	2.5	10	10
Total Daily Trips				**510**	**260**

Source: Appendix K1 and K2 of this EIR
PCE = passenger equivalent volumes

Impact Analysis

Impact 3.13-1 Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

During the construction phase of the proposed projects, the maximum number of trip ends generated on a daily basis would be approximately 510 trips for the VEGA SES 2 and 3 Projects and 260 trips for the VEGA SES 5 Project. Under construction year conditions with and without the proposed projects, all roadway segments analyzed would operate at LOS A, and all intersections would operate at a LOS B or better during both AM and PM peak hours.

Implementation of the proposed projects would not require any public road widening to accommodate vehicular trips associated with the proposed projects (construction phase and operational phase), while maintaining adequate LOS. Additionally, future operations and maintenance would be conducted remotely, with minimal trips to the project sites for panel washing and other solar maintenance.

There is no regular bus service to the general area and project-related construction and operations and maintenance phases would not impact mass transit. The proposed projects would not interfere with bicycle facilities because the proposed projects are located in a rural portion of the County with no existing or potential future designated bike routes in the area.

Therefore, the proposed projects would not result in any significant impacts to any roadway segments or transportation-related facilities/infrastructure within the area surrounding the project sites during construction and operation; and would not conflict with a program plan, ordinance, or policy as it relates to transportation. Impacts are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.13-2 Would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Section 15064.3(b) of the CEQA Guidelines provides guidance on determining the significance of transportation impacts and focuses on the use of vehicle miles traveled (VMT), which is defined as the amount and distance of automobile travel associated with a project. The Natural Resources Agency (NRA) has adopted guidance to incorporate SB 743 into CEQA analysis. The NRA's Technical Advisory on Evaluating Transportation Impacts in CEQA (NRA 2018), includes screening thresholds for small projects. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact. Although the proposed projects would increase VMT during the construction phase as a result of trips made by construction workers and transportation of construction material and equipment, these increases are temporary in nature. Further, as discussed above, operation of proposed projects would only require intermittent maintenance (including inspection, panel washing, and vegetation removal), which would be a nominal amount of vehicle trips generated. Therefore, the proposed projects would not conflict or be inconsistent with Section 15064.3(b) of the CEQA Guidelines this impact is considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.13-3 Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The solar projects would occur on privately-owned land located in a rural area. To accommodate emergency access, PV panels would be spaced to maintain proper clearance. Internal access roads, up to 30 feet wide, would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. Access roads would be graded and compacted (native soils) as required for construction, operations, maintenance, and emergency vehicle access. Additionally, any proposed haul routes would be submitted to the County for approval prior to construction. Therefore, the projects would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Impacts are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.13-4 Would the project result in inadequate emergency access?

The project sites would include both a primary and secondary access driveway (if required). As previously stated, PV panels would be spaced to maintain proper clearance for emergency access. Internal access roads, up to 30 feet wide, would be constructed along the perimeter fence and solar panels to facilitate vehicle access and maneuverability for emergency unit vehicles. Access roads 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. If needed, the access

and service roads would also have turnaround areas at any dead-end to allow clearance for fire trucks per fire department standards.

As previously described, the VEGA SES 2 and 3 Project sites will be accessed from Flowing Wells Road. Weist Road, Noffsinger Road, and Flowing Wells Road are unpaved roadways. Flowing Wells Road, although occasionally maintained by the County of Imperial, is on BLM land and a right-of-way (ROW) approval from the BLM is required. There is no alternative route that either exists or can be used to gain access to the VEGA SES 2 and 3 Project sites that do not cross some federal lands; hence Flowing Wells Road, is the only viable route. The VEGA SES 2 and 3 Projects would not require changes to Flowing Wells Road in terms of alignment, cross-section, width, or length. The project applicant is requesting a 24-foot-wide ROW given that the road currently has no designated width. The VEGA SES 2 and 3 projects, if required as part of the permitting or ROW approval, would grade and maintain Flowing Wells Road during construction as required by the BLM, County and/or Air District, including future years maintenance for safe access to the sites. A maintenance agreement with the County/BLM will be included in the conditions of approval.

To access the portion of the VEGA SES 5 Project site east of the UP railroad tracks, access across the tracks will be at Flowing Wells Road and access to the property will be via an easement that will be acquired. The easement will be a direct vertical south from Flowing Wells Road at the western boundary of APN 025-260-011.

Based on this context, impacts on this issue area are considered less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.13.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

This section included an analysis of construction traffic for the proposed projects. As presented above, construction traffic would not result in a significant impact on any of the roadway segments or intersections because of the low volume of traffic. A similar scenario would occur during the decommissioning and site restoration stage for the proposed projects. ADT would be similar to or less than the ADT required for construction. Similarly, the decommissioning activities would not result in a significant impact related to possible safety hazards, or possible conflicts with adopted policies, plans, or programs as the decommissioning and subsequent restoration would revert the project sites to pre-project conditions. Therefore, decommissioning and restoration of the project sites would not generate traffic resulting in a significant impact on the circulation network. A less than significant impact is identified and no mitigation is required.

Residual

The construction and operation of the proposed projects would not result in direct impacts on intersections and roadway segments. Therefore, less than significant impacts have been identified. No mitigation is required and no residual unmitigated impacts would occur with implementation of the proposed projects.

3.14 Tribal Cultural Resources

This section discusses tribal cultural resources that may be potentially impacted by the proposed projects. The following identifies the existing cultural resources within the project sites, analyzes potential impacts of the proposed projects, and recommends mitigation measures to avoid or reduce potential impacts of the proposed projects.

3.14.1 Existing Conditions

Tribal Cultural Setting

See Section 3.6, Cultural Resources of this EIR, for description of the regional ethnohistory.

Records Search

A records search from the SCIC of the CHRIS at San Diego State University was requested in November 2020 to determine the extent of previous surveys within a 1-mile of the project area, and whether previously documented pre-contact or historic-period archaeological sites, architectural resources, or traditional cultural properties exist within the project areas.

The results from the CHRIS records search revealed that 22 previous cultural resources investigations have been conducted within 1 mile of the project sites between 1979 and 2016.

The CHRIS records search determined that 28 previously recorded cultural resources are located within 1 mile of the project areas. Previously recorded resources comprise of dumps/trash scatters, trash scatter and foundation, a railroad, a canal, trash scatter and ceramic scatter (multi-component), lithic scatter, ceramic scatters, lithic and ceramic scatters, a village, and ceramic isolates on the VEGA SES 2 and 3 project area; as well as pre-contact resources consisting of lithic scatters, hearths, milling features, and cremation burials; and historic-period resources consisting of a railroad, refuse scatters, a canal, and the historic town site of Flowing Well on the VEGA SES 5 project area. Seven of these previously recorded resources which include the Coachella Canal, a pre-contact seasonal camp, a precontact fishing village, a historic General Land Office survey marker with a glass shard and a plate, historic refuse scatters and the historic period East Highline Canal.

Sacred Lands File Results

The California Native American Heritage Commission (NAHC) identifies, catalogs, and protects Native American cultural resources on private and public lands in California. Tribal Cultural Resources defined in Public Resources Code Section 21074 include sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American tribe. The NAHC also records the historical territories of state recognized tribes into a database called the Sacred Lands File (SLF). A records search of the SLF is conducted to ensure that the tribes potentially affected by a project are properly notified and consulted.

A SLF search request was submitted on November 6 and November 16, 2020 to the California NAHC and the search results were received on December 22, 2020, and January 8, 2021. The search of the SLF was negative and failed to indicate the presence of Native American cultural resources in the project areas.

3.14.2 Regulatory Setting

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

Federal

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

The Native American Graves Protection and Repatriation Act defines “cultural items,” “sacred objects,” and “objects of cultural patrimony;” establishes an ownership hierarchy; provides for review; allows excavation of human remains but stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for the return of specified cultural items.

State

Assembly Bill 52

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

Public Resources Code Section 21074

PRC Section 21074 defines a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, and any object with cultural value to a California Native American Tribe. A tribal cultural resource must be on or eligible for the CRHR or must be included in a local register of historical resources. The lead agency can determine if a tribal cultural resource is significant even if it has not been evaluated for the CRHR or is not included on a local register.

Assembly Bill 4239

AB 4239, passed in 1976, established the NAHC as the primary government agency responsible for identifying and cataloging Native American cultural resources. The bill authorized the Commission to act in order to prevent damage to and insure Native American access to sacred sites and authorized the Commission to prepare an inventory of Native American sacred sites located on public lands.

Public Resources Code Section 21074

PRC Section 21074 defines a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, and any object with cultural value to a California Native American Tribe. A tribal cultural resource must be on or eligible for the CRHR or must be included in a local register of historical resources. The lead agency can determine if a tribal cultural resource is significant even if it has not been evaluated for the CRHR or is not included on a local register.

Public Resources Code 5097.97

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

Public Resources Code 5097.98 (b) and (e)

PRC 5097.98 (b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified most likely descendants (MLD) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reenter the remains elsewhere on the property in a location not subject to further disturbance.

California Health and Safety Code, Section 7050.5

California HSC 7050.5 makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the County Coroner.

Local

Imperial County General Plan

The Imperial County General Plan provides goals, objectives, and policies for the identification and protection of significant cultural resources. The Conservation and Open Space Element of the General Plan includes goals, objectives, and policies for the protection of cultural resources and scientific sites that emphasize identification, documentation, and protection of cultural resources. While Section 3.11, Land Use Planning, of this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors and Planning Commission ultimately make a determination as to the project's consistency with the General Plan. Goals and Objectives applicable to the proposed project are summarized in Table 3.14-1.

Table 3.14-1. Project Consistency with Applicable General Plan Goals and Objectives

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element - *Open Space and Recreation Conservation* **Goal 1** - Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value. **Objective 1.4** - Ensure the conservation and management of the County's natural and cultural resources.	Consistent	Cultural Resources Inventory reports were prepared for the proposed projects. Based on the SLF search, there are no known tribal cultural resources within the project sites. However, as discussed below, the proposed projects have the potential to encounter undocumented tribal cultural resources and Native American human remains. Implementation of Mitigation Measure CR-1 would reduce potentially significant impacts on unknown historic or unique archaeological materials during construction of the project sites. Implementation of Mitigation Measure CR-2 would reduce potential impacts on human remains to a level less than significant.
Objective 3.1 - Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	

Source: County of Imperial 1993
Notes:
SLF=sacred lands file

3.14.3 Impacts and Mitigation Measures

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

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to tribal cultural resources are considered significant if the project causes a substantial adverse change in the significance of a tribal cultural resource defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC section 5020.1(k)
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

Methodology

This analysis evaluates the potential for the projects, as described in Chapter 2, Project Description, to interact with tribal cultural resources on the project sites. Based on the extent of these interactions, this analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As indicated in the environmental setting, cultural resources inventory reports were prepared for the project sites. The reports provide the results of a records search, a SLF search conducted by the NAHC, and field survey, which have been completed for the project sites pursuant to CEQA. These reports are included in Appendix G1. The information from these cultural resources inventory reports were reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with tribal cultural resources that could result from the proposed projects' construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, and duration of project construction and related activities.

Impact Analysis

Impact 3.14-1 ***Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:***

- *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)*
- *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

The NAHC maintains the confidential SLF which contains sites of traditional, cultural, or religious value to the Native American community. A SLF search request was submitted on November 6 and November 16, 2020 to the California NAHC and the search results were received on December 22, 2020, and January 8, 2021. The search of the SLF was negative and failed to indicate the presence of Native American cultural resources in the project area. AB 52 requires a lead agency to begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic areas of the proposed project. In accordance with AB 52, the County provided notification of the proposed project to Native American tribes that the County understands to be traditionally and culturally affiliated with the geographic area of the proposed project. This notification was provided in a letter sent via email on April 7, 2021, to the Quechan Indian Tribe. On April 8, 2021, the Quechan Indian Tribe requested consultation with the County on the proposed projects. The County is in the process of consulting with the Quechan Indian Tribe and has requested that they provide any information regarding any Traditional Cultural Properties, Sacred Sites, resource collecting areas, or any other areas of concern known to occur in the project area.

To date, no tribes have indicated the potential for traditional cultural properties or sacred sites. Therefore, the project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1, and, per the criteria set forth in Section 5024.1, considering the significance of the resource to a California Native American tribe. As stated in Section 3.6 Cultural Resources, potential impacts to archaeological resources and human remains would be less than significant with implementation of Mitigation Measures CR-1 to CR-5. Impacts specifically related to tribal cultural resources would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.14.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the projects, the projects will be decommissioned and dismantled. No impact is anticipated from restoration activities as the ground disturbance and associated impacts on tribal cultural resources will have occurred during the construction phase of the proposed projects.

Residual

No unmitigable impacts on tribal cultural resources would occur with implementation of the proposed projects.

3.15 Utilities and Service Systems

This section includes an evaluation of potential impacts for identified Utilities/Service Systems that could result from implementation of the projects. Utilities/Service Systems include wastewater treatment facilities, stormwater drainage facilities, water supply and treatment, and solid waste disposal. The impact analysis provides an evaluation of potential impacts to Utilities/Service Systems based on criteria derived from CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description. The information for this section is summarized from the following technical reports:

- Water Supply Assessment for the ZGlobal VEGA SES 2, LLC and VEGA SES 3, LLC Solar Energy Projects (Appendix L1 of this EIR)
- SB 610 – Water Supply Assessment for the ZGlobal VEGA SES 5,LLC Solar Energy Project (Appendix L2 of this EIR)

The IS/NOP prepared for this EIR determined that impacts with regards to solid waste disposal, storm drainage, and wastewater treatment would be less than significant. Therefore, these impacts are not addressed in detail in this EIR; however, the rationale for eliminating these issues is discussed in Chapter 6.0, Effects Found Not Significant.

3.15.1 Existing Conditions

Water Service

The Imperial Irrigation District (IID) is a public entity organized in 1911 pursuant to the Irrigation District Law (California Water Code sections 20500 et. seq.). IID is empowered to provide irrigation and energy related services to customers within its district boundaries and, through service contracts, to customers outside of its district boundaries.

IID is located in Imperial County in southeastern California. The District is bounded to the south by Mexico. The district boundaries are comprised of four units: the Imperial Unit which is centrally located encompassing the Imperial Valley, the West Mesa Unit and the East Mesa Unit which are located immediately to the west and east, respectively, of the Imperial Unit. Pilot Knob Unit is located further east. The East Highline and Westside Main canals generally form the two sides of the water service area while the Central Main runs up the middle. To the north is the Salton Sea, into which all drainage from the IID water service area flows. IID delivers water to a few users in the East Mesa via the Coachella Canal (IID 2021).

VEGA SES 2 and 3

APN 025-260-011 and parts of APN 025-010-006 and APN 025-270-023 are located within IID's East Mesa Unit service area where water is only available for agricultural uses.

VEGA SES 5

VEGA SES 5 APN 025-260-011, APN 025-260-019, and the area of APN 025-260-022 east of the East Highline Canal are located within IID's East Mesa Unit, while 114.4 acres of the area of APN 025-260-022 west of the East Highline Canal is within IID's Imperial Unit. The VEGA SES 5 project parcel areas within the IID's East Mesa Unit do not currently have water service from IID.

Groundwater

VEGA SES 2 and 3

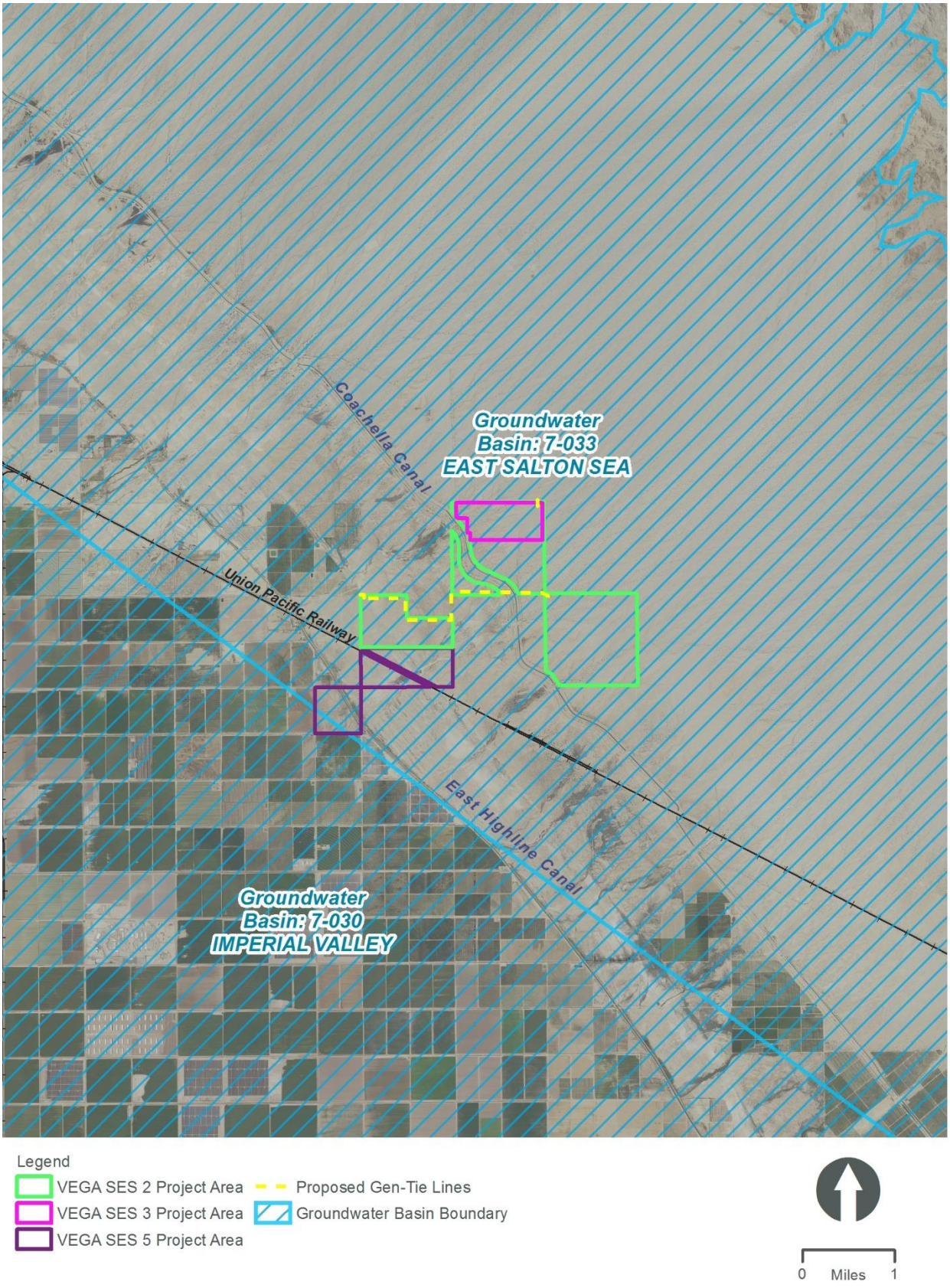
As shown in Figure 3.15-1, the VEGA SES 2 and 3 projects are located within the western part of the East Salton Sea Groundwater Basin (Basin), designated as basin number 7-033, as defined by the Department of Water Resources (DWR). The Basin is bounded on the northeast by the Chocolate Mountains and on the southwest by the San Andreas and Banning Mission Creek fault zones. The northwest and southeast edges of the groundwater basin are approximately defined by transitions between major surface drainages coming off of the Chocolate Mountains. The groundwater basin has an area of approximately 196,000 acres, or 306 square miles. The Basin has not been adjudicated (Appendix L1 of this EIR).

Groundwater occurs within unconsolidated to semi-consolidated coarse sediment eroded from the Chocolate Mountains. The sediment generally occurs within large alluvial fans that originate at drainages and canyons within the bedrock formations in the mountains and spread out as they decrease in elevation toward the floor of the Imperial Valley or the Salton Sea. The alluvial fan sediments range in age from Tertiary to Quaternary. DWR reports that the alluvium is at least 400 feet thick (Appendix L1 of this EIR).

VEGA SES 5

As shown in Figure 3.15-1, the majority of the VEGA SES 5 project is located within the western part of the East Salton Sea Groundwater Basin. However, approximately 20 acres in the southwest corner of APN 025-260-022 of the VEGA SES 5 site overlies the adjacent Imperial Valley Groundwater Basin, designated as basin number 7-030. All groundwater for the VEGA SES 5 project would be sourced from the East Salton Sea Groundwater Basin (Basin). Therefore, the Imperial Valley Groundwater Basin is not addressed further in this EIR (Appendix L2 of this EIR).

Figure 3.15-1. Groundwater Basins



East Salton Sea Groundwater Basin - Groundwater Supply and Recharge

DWR reports that the population in the East Salton Sea Groundwater Basin in 2010 was approximately 1,093 persons and that the population is expected to decrease 10 percent by 2030. There are no public water supply wells in the Basin and 11 total wells present. Only 4,906 acres of the 196,000-acre Basin, or 2.54 percent, are irrigated. The total groundwater storage capacity of the groundwater basin is estimated to be 360,000 acre-feet (Appendix L1 of this EIR).

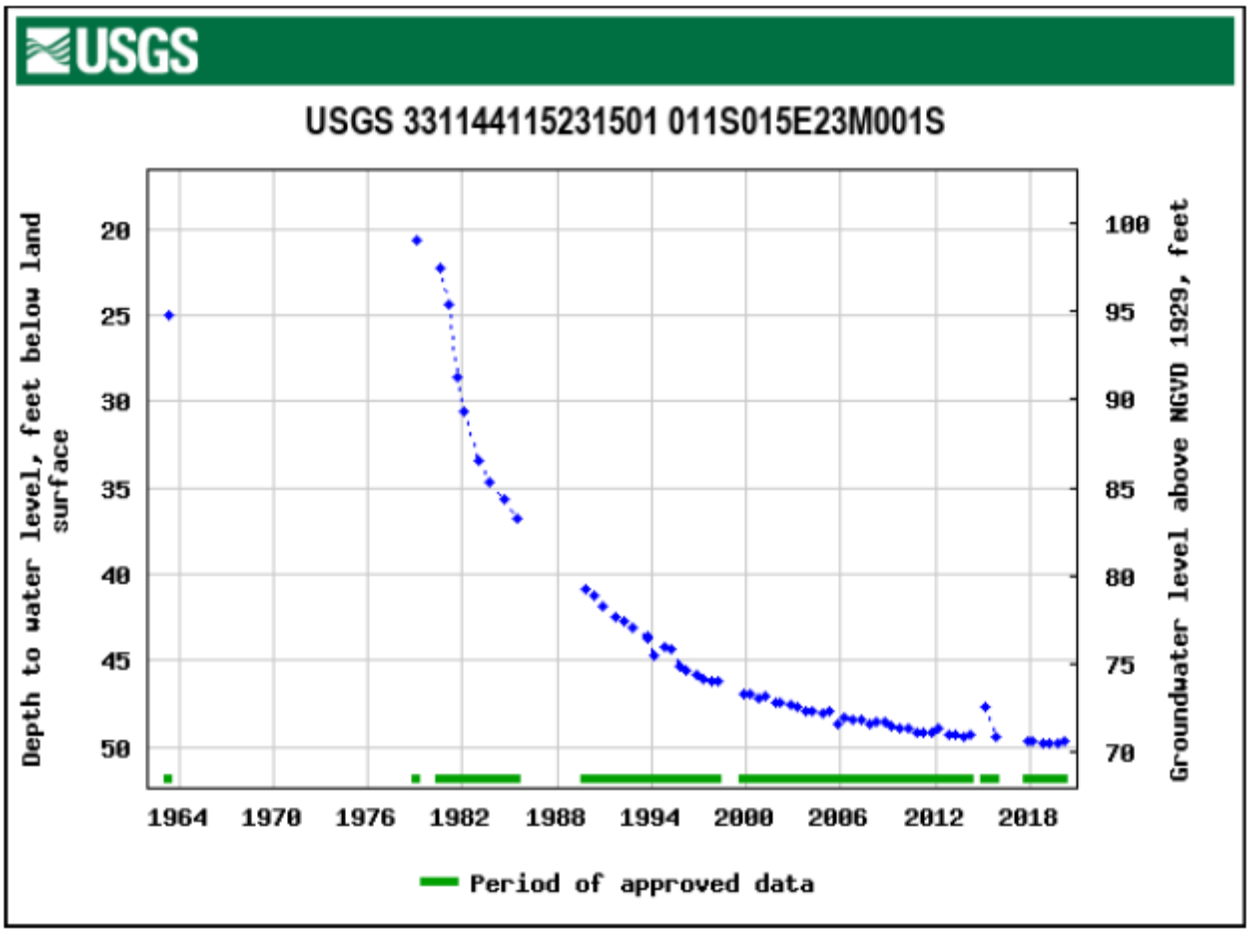
The average annual rainfall is very low and typically does not provide a sufficient quantity of moisture to percolate deep into the alluvial sediments. As a result, recharge of groundwater occurs primarily due to runoff from the Chocolate Mountains during major storm events, which may not occur every year. The average annual recharge is estimated to be 200 acre-feet per year. That estimate is from a 1975 version of DWR Bulletin 118. No changes to basin conditions are reported in the most recent updates to DWR Bulletin 118 (Appendix L1 of this EIR).

According to DWR's California Data Exchange Center and the USGS's National Water Information System mapping application, only one active groundwater monitoring location within the Basin was prepared and that well is located approximately 3,600 feet southeast of the southeast corner of the project and 950 feet northeast of the Coachella Canal. The well has USGS identification number 331144115231501, which identifies the latitude and longitude of the well (i.e., 33°11'44" latitude, -115°23'15" longitude), and California state well number 011S015E23M001, which indicates the township, range, and quarter-quarter section (i.e., northwest quarter or the southwest quarter of township 11S, range 15E, San Bernardino Base and Meridian). The ground surface elevation at the well location is reported to be 120 feet above mean sea level (ft msl) while the borehole in which the well was installed is reported to have been drilled to a depth of 550 feet below ground surface (ft bgs) (Appendix L1 of this EIR).

Figure 3.15-2 is a hydrograph from USGS showing the groundwater level and groundwater elevation measured since 1963 in the sole active monitoring well in the Basin. As indicated on Figure 3.15-2, the groundwater level decreased at a relatively rapid rate from 1979 to approximately 2000, with the depth to water dropping from approximately 21 ft bgs to approximately 47 ft bgs over that period. Since 2000, the groundwater level has continued to decrease, but at a slower rate, with the level in March 2020 (the last date with a reported measurement by USGS) being approximately 50 ft bgs. While the groundwater level has decreased by almost 30 feet since 1979, it has changed by less than one foot over the past decade. Based on the depth to groundwater and the borehole depth for the monitoring well, the potential loss of aquifer volume since 1979 is only six percent of the total available storage reported by DWR (Appendix L1 of this EIR).

Water quality samples were collected and analyzed from the monitoring well within the Basin in June and September 1963. Table 1 in Appendix L1 of this EIR shows the water quality results from June 1963. The September results were comparable. The groundwater sampled from the monitoring well has a normal pH but the levels of sodium, chloride, and sulfate are elevated compared to what would be expected from percolation of local rainfall. The dissolved solids concentration of 2,190 milligrams per liter (mg/L) is more than twice the value of the high end of the range of the secondary maximum contaminant level (MCL) for drinking water of 1,000 mg/L. The high dissolved solids concentration renders the water unsuitable for potable or agricultural uses without treatment. However, the existing water quality is suitable for use for construction and maintenance purposes (Appendix L1 of this EIR).

Figure 3.15-2. USGS Groundwater Level Hydrograph



Source: Appendix L1 of this EIR

Groundwater Sustainability

A series of three bills passed by the California legislature and were signed by Governor Brown on September 16, 2014. These three bills, Assembly Bill (AB) 1739, SB 1168, and SB 1319, together comprise the Sustainable Groundwater Management Act of 2014 (SGMA). SGMA provides a structure under which local agencies are to develop a sustainable groundwater management program. SGMA focuses on basins or subbasins designated by DWR as high or medium priority basins, and those with critical conditions of overdraft.

According to DWR, the East Salton Sea Groundwater Basin is a very low priority basin. DWR has not identified the Basin as over drafted, nor has it projected that the basin will become over drafted if present management conditions continue. Thus, the Basin is not subject to the current requirements of the SGMA, including the formation of a groundwater sustainability agency (GSA) and preparation of a groundwater sustainability plan (GSP) (Appendix L1 and L2 of this EIR).

3.15.2 Regulatory Setting

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

State

Senate Bill 610

With the introduction of SB 610, any project under CEQA shall provide a WSA if:

- The project meets the definition of the Water Code Section 10912:

  For the purposes of this part, the following terms have the following meanings:

  (a) ‘‘Project’’ means any of the following:

  (1) A proposed residential development of more than 500 dwelling units.

  (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

  (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

  (4) A proposed hotel or motel, or both, having more than 500 rooms.

  (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

  (6) A mixed-use project that includes one or more of the projects specified in this subdivision.

  (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

  (b) If a public water system has fewer than 5,000 service connections, then ‘‘project’’ means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system’s existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections.

After review of Water Code Section 10912, the solar facility is deemed a “project” because it is a proposed industrial use occupying more than 40 acres of land.

California Water Code

Water Code Sections 10656 and 10657 restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resources. In addition, Water Code Section 10910 describes the WSA that must be undertaken for projects referred under PRC Section 21151.9, including an analysis of groundwater supplies. Water agencies are given 90 days from the start of consultation in which to provide a WSA to the CEQA lead agency. Water Code Section 10910 also

specifies the circumstances under which a project for which a WSA was once prepared would be required to obtain another assessment. Water Code Section 10631, directs that contents of the urban water management plans include further information on future water supply projects and programs and groundwater supplies.

Water Quality Control Plan for the Colorado River Basin

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) prepared by the Colorado River RWQCB (Region 7) identifies beneficial uses of surface waters within the Colorado River Basin region, establishes quantitative and qualitative water quality objectives for protection of beneficial uses, and establishes policies to guide the implementation of these water quality objectives.

3.15.3 Impacts and Mitigation Measures

Thresholds of Significance

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

Water Supply

- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years

Methodology

The WSAs (Appendix L1 and L2 of this EIR) were prepared using project-specific data to calculate the project's water consumption during construction and at build-out collectively ("operational").

Impact Analysis

Impact 3.15-1 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

VEGA SES 2, 3 and 5

Construction is anticipated to require 12 to 18 months to complete each project (VEGA SES 2, 3, and 5). Water demand varies depending on the project phase. During construction, water will be needed for dust control and soil conditioning during installation of the photovoltaic panels, battery storage units, and related infrastructure. During the operational phase of the project, water will be needed for routine maintenance activities, which primarily consists of washing the photovoltaic panels to maintain generation efficiency.

Table 3.15-1 provides the estimated water needs for construction and operation of the projects. The construction water demand is primarily for dust control. Thus, the water needs are proportional to the size of the disturbed area and the local climate. Construction of the VEGA SES 2 and 3 projects is expected to occur simultaneously, and the combined construction water demand is approximately 630 acre-feet. Construction is anticipated to require 12 to 18 months to complete. Thus, the monthly water demand during that period may range from 35 acre-feet to 52.5 acre-feet, on average (Appendix L1 of this EIR).

Table 3.15-1. Project Water Demand

Site	Area (acres)	Output (megawatts)	Construction Water (acre-feet)	Operational Water (acre-feet per year)
VEGA SES 2	1,323	240	630 (Total combined)	10
VEGA SES 3	230	60		2
VEGA SES 5	410	50	365	20

Source: Appendix L1 and L2 of this EIR

Construction of the VEGA SES 5 project would have a construction water demand of approximately 365 acre-feet. Construction is anticipated to require 12 months to complete. Thus, the monthly water demand during that period will average about 30 acre-feet (Appendix L2 of this EIR).

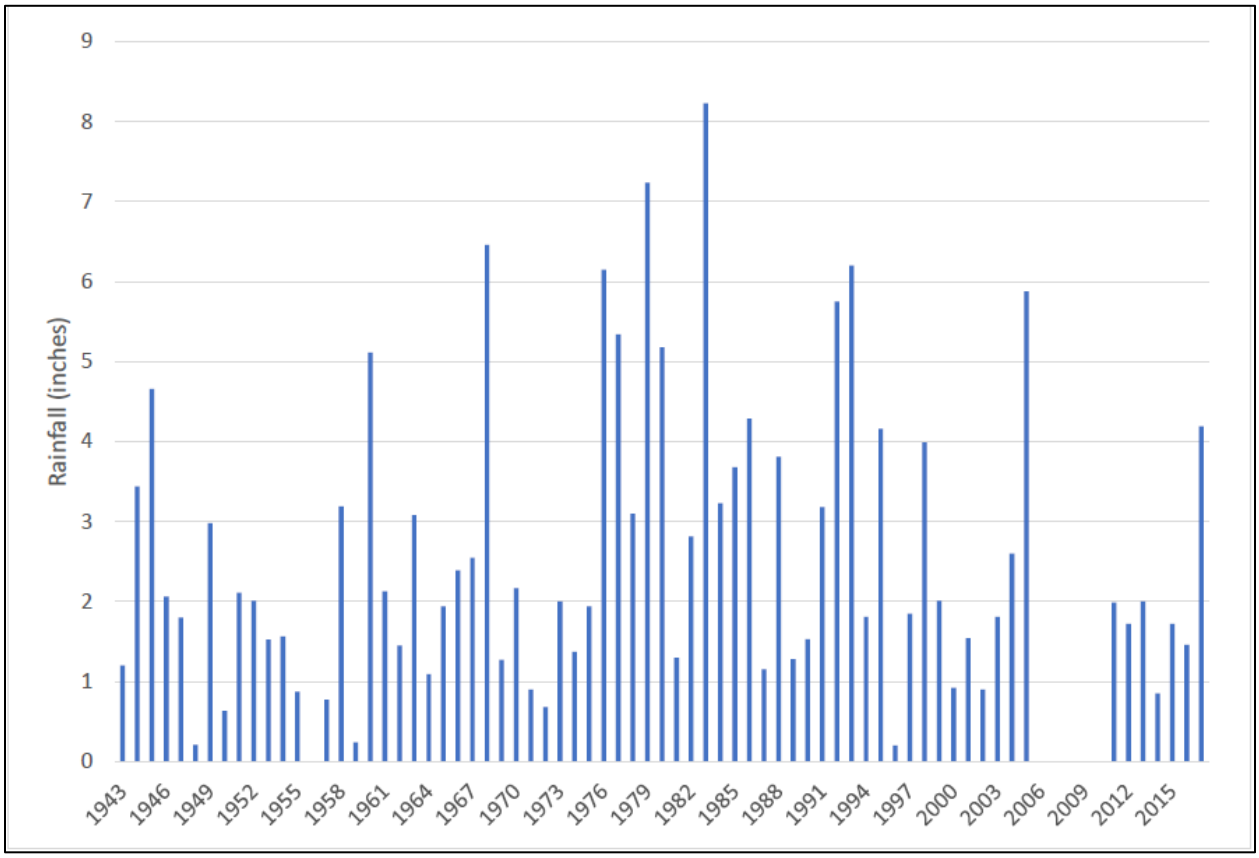
The operational water demand for panel washing and other maintenance needs is based primarily on the number of panels, which relates to the energy production or output, in megawatts. The operational water demand is anticipated to range from 10 acre-feet per year for VEGA SES 2 to two acre-feet per year for VEGA SES 3. The operational water demand is anticipated to be 20 acre-feet per year for VEGA SES 5. The maintenance activities for each system are anticipated to be conducted up to twice a year over a one-to-two-week period each event, so the maintenance water demand is intermittent and not spread throughout the year. The operational water demand will occur throughout the life of the projects.

Dry Year Supply

The volume and sustainability of dry-year water supply for the proposed projects was analyzed by comparing annual rainfall with changes in groundwater levels in the Basin. This comparison is made for a normal or average water year, for single dry year, and for multiple dry water years. Local rainfall data were obtained from the Western Region Climate Center for Niland, California, located approximately four miles northwest of the projects.

Figure 3.15-3 shows the annual water year rainfall for Niland, California from 1943 through 2017. The average water year rainfall during this period is 2.58 inches. The driest year was 1956, when no precipitation was recorded. The driest year during the period of available groundwater elevation data (see Figure 3.15-2) was 1996, with only 0.2 inch of rainfall reported. The wettest year was 1983, when 8.23 inches of rain was measured. As indicated on Figure 3.15-3, a relatively wet period occurred from 1976 to 1986, with 10 of 11 water years exceeding the average annual rainfall. In comparison, the period from 1996 to 2016 was relatively dry, with 18 of 21 water years having below normal rainfall (Appendix L1 of this EIR).

Figure 3.15-3. Water Year Rainfall at Niland



Source: Appendix L1 of this EIR

The historic rainfall data on Figure 3.15-3 can be compared with the groundwater levels shown on Figure 3.15-2 to assess the effects of wet and dry periods on groundwater supply in the Basin. The wettest year recorded, 1983, and the relatively wet period from 1976 to 1986, correspond to a period when groundwater levels were dropping rapidly. In contrast, the dry period from 1996 to 2016 corresponds to a period when the rate of decline of the groundwater elevation was attenuating rapidly and beginning to stabilize. Thus, the available groundwater level and rainfall data do not indicate any relationship between wet, normal, single dry year, or multiple dry years and available groundwater supply. As noted previously, recharge of groundwater occurs primarily due to runoff from the mountains during individual major storm events (Appendix L1 of this EIR).

The total groundwater storage capacity of the Basin is estimated to be 360,000 acre-feet and the groundwater level decline from 1979 to 2018 decreased groundwater storage by approximately six percent. Thus, the current storage in the Basin may be in the range of 335,000 to 340,000 acre-feet. The VEGA SES 2 and 3 projects' single year combined construction water demand of 630 acre-feet and the annual combined operational water needs of 12 acre-feet are miniscule (0.2 percent and 0.004 percent, respectively) compared to the available groundwater in storage (Appendix L1 of this EIR). The VEGA SES 5 project's single year construction water demand of 365 acre-feet and the annual combined operational water needs of 20 acre-feet are miniscule (0.1 percent and 0.006 percent, respectively) compared to the available groundwater in storage (Appendix L1 and L2 of this EIR). Furthermore, the long term annual operational water needs are much less than the estimated annual recharge of 200 acre-feet per year. Overall, there is adequate water available to supply the projects' water needs during single dry, and multiple dry year periods.

On a cumulative basis, the construction water demand for the VEGA SES 2, 3, and 5 solar energy projects is equivalent to 0.3 percent of the available groundwater in storage. The annual cumulative operational water needs for all three solar energy projects is equivalent to 0.01 percent of the available groundwater in storage in the Basin. Thus, the cumulative effect on groundwater availability in the Basin would also be miniscule such that there would be adequate water available to supply the water needs of all three solar projects during single dry, and multiple dry year periods.

Conclusion

The WSAs (Appendix L1 and L2 of this EIR) have determined that the groundwater water supply is adequate for the proposed projects.

The VEGA SES 2 and 3 projects have a maximum estimated cumulative one-year total water demand of 630 AF over 12 to 18 months, primarily for dust control. The operational demand is anticipated to be a combined total of 12 acre-feet per year for panel washing and other maintenance activities. The annual operational water needs are equivalent to six percent of the average annual recharge and 0.004 percent of the estimated current storage volume of the Basin (Appendix L1 of this EIR).

The VEGA SES 5 project has a maximum estimated cumulative one-year total water demand of 365 AF over 12 months, primarily for dust control. The operational demand is anticipated to be 20 acre-feet per year for panel washing and other maintenance activities. The annual operational water needs are equivalent to 10 percent of the average annual recharge and 0.006 percent of the estimated current storage volume of the Basin (Appendix L2 of this EIR).

The construction water demand exceeds the reported average annual recharge to the Basin of 200 acre-feet per year. However, the construction water needs are short-term and temporary. This temporary water use is not anticipated to cause persistent and long-term lowering of groundwater levels. Therefore, the construction water demand will not cause or contribute to overdraft, exhaustion of water supplies, lowering of groundwater levels to depths that would be uneconomic for pumping, land subsidence, or significant alteration of groundwater quality.

The annual operational water needs of the projects combined would be 16 percent of the annual recharge and 0.0010 percent of the estimated current storage volume of the Basin. Therefore, the long-term operation and maintenance of the projects would not have any measurable effect or impact on groundwater resources in the Basin.

For all the reasons described herein, there will be sufficient water available for existing water uses in the Basin, along with the projects' water demands during normal, single dry year, and multiple dry year periods for the anticipated life of the projects.

Mitigation Measure(s)

No mitigation measures are required.

3.15.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the projects, the projects will be decommissioned and dismantled. Water demand for decommissioning activities is assumed to be similar to construction activities. As described above, there will be sufficient water available for existing

water uses in the Basin, along with the projects' water demands during normal, single dry year, and multiple dry year periods for the anticipated life of the projects. The proposed projects would have sufficient water supplies available to serve the projects from existing entitlements and resources, and impacts would be less than significant.

Residual

The proposed projects would not result in significant impacts on the water supply of Imperial County; therefore, no mitigation is required. The proposed projects would not result in residual impacts.

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4 Analysis of Long-Term Effects

4.1 Growth-Inducing Impacts

In accordance with Section 15126.2(d) of CEQA Guidelines, an EIR must:

> *"discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth ... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*

Projects promoting direct growth will impose burdens on a community by directly inducing an increase in population or resulting in the construction of additional developments in the same area. For example, projects involving the expansion, modifications, or additions to infrastructure, such as sewer, water, and roads, could have the potential to directly promote growth by removing existing physical barriers or allowing for additional development through capacity increases. New roadways leading into a previously undeveloped area directly promote growth by removing previously existing physical barriers to development and a new wastewater treatment plant would allow for further development within a community by increasing infrastructure capacity. Because these types of infrastructure projects directly serve related projects and result in an overall impact to the local community, associated impacts cannot be considered isolated. Indirect growth typically includes substantial new permanent employment opportunities and can result from these aforementioned modifications.

The proposed projects are 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 unemployment rate in Imperial County, as of September 2022, was 16.0 percent (State of California Employment Development Department 2022). The applicant expects to utilize construction workers from the local and regional area, a workforce similar to that involved in the development of other utility-scale solar facilities. Based on the unemployment rate, and the availability of the local workforce, construction of the proposed projects would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services.

Once construction is completed, the facilities would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Security personnel may conduct unscheduled security rounds and would be dispatched to the project sites in response to a fence breach or other alarm. It is anticipated that maintenance of the facilities would require minimal site presence to perform periodic visual inspections and minor repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, because of the nature of the facilities, such actions would likely occur infrequently. Overall, minimal maintenance requirements are anticipated. The proposed projects would not result in substantial population growth, as the number of employees required to operate and maintain the facility is minimal.

While the proposed projects would contribute to energy supply, which indirectly supports population growth, the proposed projects are a response to the state's need for renewable energy to meet its

Renewable Portfolio Standard, and while it would increase the availability of renewable energy, it would also replace existing sources of non-renewable energy. Unlike a gas-fired power plant, the proposed projects are not being developed as a source of base-load power in response to growth in demand for electricity. The power generated would be added to the state's electricity grid with the intent that it would displace fossil fueled power plants and their associated environmental impacts, consistent with the findings and declarations in SB 100 that a benefit of the Renewable Portfolio Standard is displacing fossil fuel consumption within the state. The projects are being proposed in response to state policy and legislation promoting development of renewable energy.

The proposed projects would supply energy to accommodate and support existing demand and projected growth, but the energy provided by the projects 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 sites; (2) the energy would be used to support already-projected growth; or, (3) the factors affecting growth are so diverse that any potential connection between additional energy production and growth would necessarily be too speculative and uncertain to merit further analysis.

Under CEQA, an EIR should consider potentially significant energy implications of a project (CEQA Guidelines Appendix F(II); PRC Section 21100(b)(3)). However, the relationship between the proposed projects' increased electrical capacity and the growth-inducing impacts outside the surrounding area is too speculative and uncertain to warrant further analysis. When a project's growth-inducing impacts are speculative, the lead agency should consider 14 CCR §15145, which provides that, if an impact is too speculative for evaluation, the agency should note this conclusion and terminate discussion of the impact. As the court explained in Napa Citizens for Honest Gov't v. Napa County Board of Supervisors, 91 Cal. App.4th 342, 368: "Nothing in the Guidelines, or in the cases, requires more than a general analysis of projected growth" *Napa Citizens, 91* CA4th at 369. The problem of uncertainty of the proposed projects' growth-inducing effects cannot be resolved by collection of further data because of the diversity of factors affecting growth.

While this document has considered that the proposed projects, as energy projects, might foster regional growth, the particular growth that could be attributed to the proposed projects are unpredictable, given the multitude of variables at play, including uncertainty about the nature, extent, and location of growth and the effect of other contributors to growth besides the proposed projects. No accurate and reliable data is available that could be used to predict the amount of growth outside the area that would result from the proposed projects' contribution of additional electrical capacity. The County of Imperial has not adopted a threshold of significance for determining when an energy project is growth-inducing. Further evaluation of this impact is not required under CEQA.

Additionally, the projects would not involve the development of any new roadways, new water systems, or sewer; and thus, the projects would not further facilitate additional development into outlying areas. For these reasons, the proposed projects would not be growth-inducing.

4.2 Significant Irreversible Environmental Changes

In accordance with CEQA Guidelines Section 15126.2(c), an EIR must identify any significant irreversible environmental changes that would be caused by implementation of the proposed project being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources or secondary growth-inducing impacts that commit future generations to similar uses.

Energy resources needed for the construction of the proposed projects 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 projects.

At the end of the projects' operation term, the applicant may determine that the projects should be decommissioned and deconstructed. Should the projects be decommissioned, the project applicant is required to restore land to its pre-project state. Consequently, some of the resources on the sites could potentially be retrieved after the sites have been decommissioned. Concrete footings, foundations, and pads would be removed and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. The applicant anticipates using the best available recycling measures at the time of decommissioning.

Implementation and operation of the proposed projects 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 projects are consistent with the state's definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California PRC.

4.3 Unavoidable Adverse Impacts

In accordance with CEQA Guidelines Section 15126(b), EIRs must include a discussion of significant environmental effects that cannot be avoided if the proposed project is implemented. The impact analysis, as detailed in Section 3 of this EIR, concludes that no unavoidable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant.

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5 Cumulative Impacts

The CEQA Guidelines (Section 15355) define a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The CEQA Guidelines [Section 15130(a)(1)] further states that "an EIR should not discuss impacts which do not result in part from the project."

Section 15130(a) of the CEQA Guidelines provides that "[A]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable..." Cumulatively considerable, as defined in Section 15065(a)(3), "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

An adequate discussion of significant cumulative impacts requires either: (1) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency"; or (2) "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact."

The CEQA Guidelines recognize that cumulative impacts may require mitigation, such as new rules and regulations that go beyond project-by-project measures. An EIR may also determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency must identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable (CEQA Guidelines Section 15130(a)(3)).

This EIR evaluates the cumulative impacts of the projects for each resource area, using the following steps:

1. Define the geographic and temporal scope of cumulative impact analysis for each cumulative effects issue, based on the project's reasonably foreseeable direct and indirect effects.
2. Evaluate the cumulative effects of the project in combination with past and present (existing) and reasonably foreseeable future projects and, in the larger context of the Imperial Valley.
3. Evaluate the projects' incremental contribution to the cumulative effects on each resource considered in Chapter 3, Environmental Analysis. When the projects' incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the projects' "fair share" contribution to the cumulative effect are discussed, where required.

5.1 Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effects varies by each resource area considered in Chapter 3. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. Similarly, impacts on the habitats of special-status wildlife species need to be considered within its range of movement and associated habitat needs.

The analysis of cumulative effects in this EIR considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project 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. Evaluating the proposed projects' cumulative impacts when future facility decommissioning occurs is highly speculative because decommissioning is expected to occur in 25 to 30 years' time. Therefore, cumulative impacts during decommissioning are speculative for detailed consideration in this analysis.

5.2 Projects Contributing to Potential Cumulative Impacts

The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the projects are to be considered: the use of a list of past, present, and probable future projects (the "list approach") or the use of adopted projections from a general plan, other regional planning document, or certified EIR for such a planning document (the "plan approach").

For this EIR, the list approach has been utilized to generate the most reliable future projections of possible cumulative impacts. When the impacts of the projects are considered in combination with other past, present, and future projects to identify cumulative impacts, the other projects considered may also vary depending on the type of environmental impacts being assessed. As described above, the general geographic area associated with different environmental impacts of the projects defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Figure 5-1 provides the general location for each of these projects in relation to the project sites.

5.3 Cumulative Impact Analysis

This cumulative impact analysis utilizes an expanded list method (as defined under CEQA) and considers environmental effects associated with those projects identified in Table 5-1 in conjunction with the impacts identified for the projects in Chapter 3 of this EIR. Table 5-1 includes projects known at the time of release of the NOP of the Draft EIR, as well as additional projects that have been proposed since the NOP date. Figure 5-1 provides the general location for each of these projects in relation to the project sites.

Table 5-1. Projects Considered in the Cumulative Impact Analysis

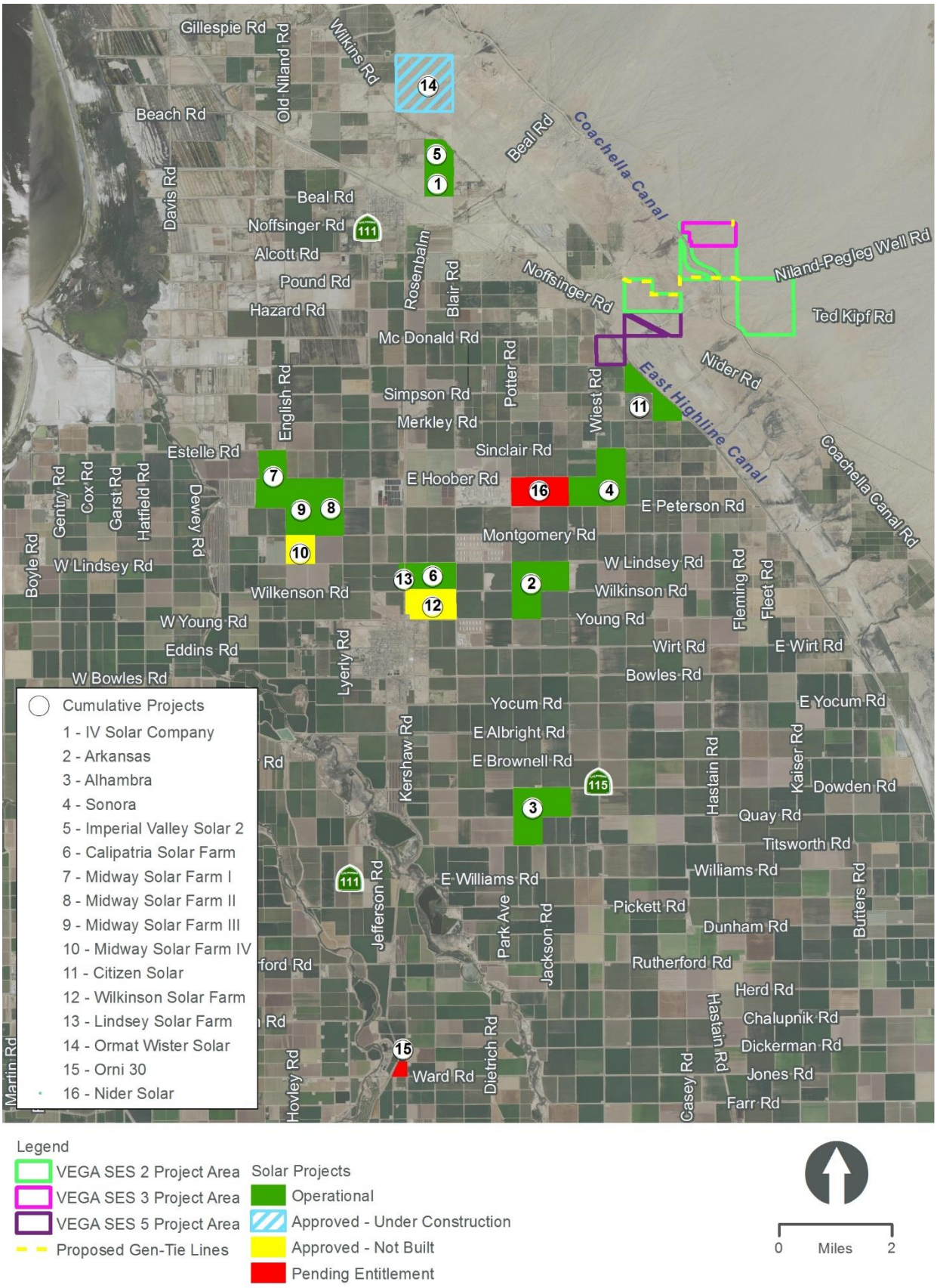
Map Label[1]	Project Name	Project Type	Distance from Project Sites (miles)	Size (acres)	Capacity (MW)	Status[2]
1	IV Solar Company	PV Solar Facility	3.4	123	23	Operational
2	Arkansas Solar	PV Solar Facility	3.5	481	50	Operational
3	Alhambra Solar	PV Solar Facility	7.5	482	50	Operational
4	Sonora Solar	PV Solar Facility	1.5	488	50	Operational
5	Imperial Valley Solar 2	PV Solar Facility	4.2	158.65	20	Operational
6	Calipatria Solar Farm	PV Solar Facility	4.3	159	20	Operational
7	Midway Solar Farm I	PV Solar Facility	5.7	480	50	Operational
8	Midway Solar Farm II	PV Solar Facility	4.9	320	30	Operational
9	Midway Solar Farm III	PV Solar Facility	5.4	162	20	Operational
10	Midway Solar Farm IV	PV Solar Facility	5.9	150	20	Approved – Not Built
11	Citizens Solar	PV Solar Facility	Adjacent to the south of VEGA SES 5 site	223	30	Operational
12	Wilkinson Solar Farm	PV Solar Facility	4.7	302	30	Approved – Not Built
13	Lindsey Solar Farm	PV Solar Facility	4.9	148	20	Operational
14	Ormat Wister Solar	PV Solar Facility	4.5	640	20	Approved – Under Construction
15	Orni 30	PV Solar Facility	12.9	225	40/160	Pending Entitlement
16	Nider Solar	PV Solar Facility		320	100	Pending Entitlement

1 – See Figure 5-1 for cumulative project location.

2 – Project status based on information provided by County staff and on Imperial County Planning & Development Service's RE Geographic Information System Mapping Application (https://icpds.maps.arcgis.com/apps/webappviewer/index.html?id=0d869c18d11645cc918391fdcac24b80). Accessed on December 6, 2022.

MW – megawatts; PV – photovoltaic

Figure 5-1. Cumulative Projects



5.3.1 Aesthetics

The cumulative study area for projects considered in the visual resources cumulative impact analysis considers a 5-mile radius from the project sites. Views beyond 5 miles are obstructed by a combination of the flat topography coupled with the Earth's curvature. The short-term visual impacts of the project would be in the form of general construction activities including grading, use of construction machinery, and installation of the transmission poles and stringing of transmission lines, but would only be available to a very limited amount of people and would have to be in relative close proximity to the project site. Longer-term visual impacts of the project would be in the form of the presence of solar array grids, an electrical distribution and transmission system, and substation.

As provided in Section 3.2, Aesthetics, implementation of the proposed projects would convert the project sites from vacant and fallow agricultural lands to solar energy facilities. In the context of topographical conditions and relatively low profile of the project components, the proposed projects would not create an adverse or permanent visual obstruction of the background views of the desert or mountain areas to the north and east of the project sites. Existing views of the Chocolate Mountains are already partially obstructed by existing tall vegetation and masked by atmospheric conditions (e.g., haze). Additionally, as previously identified, proposed onsite apparatus would be approximately 7.5 feet in height and the proposed security fencing would be approximately 6 feet in height. Solar PV arrays would be spaced approximately 15 to 25 feet apart allowing for views of the Chocolate Mountains from the public right-of-way. Further, views from project adjacent roadways that are publicly accessible, would be partially to fully obscured by roadside vegetation or berms, and such views would likely be of short duration given the probability of the viewers being in moving vehicles. Therefore, impacts to visual character would be less than significant.

The visual changes associated with the project would be located in a remote area viewed by a minimal number of people, the project site is not located within scenic vistas, and is not readily viewable from any frequently travelled interstates or scenic highways. Additionally, with the exception of the transmission line, the project's structural features would generally be less than 8 feet in height and, therefore, would not substantially disrupt background views of mountains to the north and east. Further, the project sites would be restored to their existing condition following the decommissioning of the solar uses. As a result, although the visual character of the project sites would change from undeveloped to one with developed characteristics, a less than significant impact associated with the proposed projects has been identified.

Development of the proposed projects in conjunction with the cumulative projects identified in Table 5-1 will gradually change the visual character of this portion of the Imperial Valley. However, projects located within private lands and/or under the jurisdiction of the County of Imperial are being designed in accordance with the County of Imperial's General Plan and Land Use Ordinance, which includes policies to protect visual resources in the County.

Finally, all projects listed in Table 5-1 would not produce a substantial amount of light and glare, as no significant source of light or glare is proposed; or the project will otherwise comply with the County lighting ordinance, as would all other related projects. Based on these considerations, there would be no significant cumulatively considerable aesthetic impact, and cumulative aesthetic impacts would be less than significant.

5.3.2 Agricultural Resources

Cumulative impacts on agricultural resources take into account the proposed projects' temporary impacts as well as those likely to occur as a result of other existing, proposed, and reasonably

foreseeable projects. To determine cumulative impacts on agricultural resources, an assessment is made of the temporal nature of the impacts on individual resources (e.g., temporary such as in solar projects versus permanent as in industrial or residential developments) as well as the inventory of agricultural resources within the cumulative setting.

As discussed in Section 3.3, Agricultural Resources, the project sites do not contain Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Therefore, the proposed projects would not convert land designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural uses or incrementally add to the conversion of agricultural land in Imperial County on a temporary or permanent basis. Furthermore, the project sites are located within the Renewable Energy Zone and is, therefore, considered an appropriate use in this area. Additionally, as a condition of project approval (CUP condition), the project applicant or its successor in interest will be responsible for implementing a reclamation plan when the project is decommissioned at the end of its lifespan.

The VEGA 2 and 3 project sites do not contain agricultural resources and are not mapped as agricultural land. The majority of the VEGA SES 5 project site is designated as Other Land with a portion of the VEGA SES 5 project site is designated as Farmland of Local Importance. It should be noted that analysis of Other Land and Farmland of Local Importance is not required under CEQA significance criteria, as these designations are not considered an “agricultural land” per CEQA Statute Section 21060.1(a). However, in terms of preservation of agricultural land Mitigation Measure AG-1 would be implemented to reduce potential impacts related to pests to a less than significant level.

Each individual cumulative project would be or would have been required to provide mitigation for any impacts on agricultural resources in accordance with the County’s policies directed at mitigating the impact associated with the conversion of important farmlands, the implementation of which would reduce the impact to less than significant. Because the project would not result in the conversion of farmland, the projects contribution to this impact would be less than cumulatively considerable.

5.3.3 Air Quality

Imperial County is used as the geographic scope for analysis of cumulative air quality impacts. As shown in Table 5-1, many of the cumulative projects are large-scale renewable energy generation projects, where the main source of air emissions would be generated during the construction phases of these projects; however, there would also be limited operational emissions associated with operations and maintenance activities for these facilities. Additionally, a majority of the projects listed in Table 5-1 are already constructed and operational. Furthermore, the remaining cumulative projects are currently under construction (Wister Solar), or approved and not built (Midway Solar Farm IV and Wilkinson Solar Farm), and not anticipated to involve overlapping construction activities with the proposed projects. Therefore the potential for a cumulative, short-term air quality impact as a result of construction activities is anticipated to be less than significant.

Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of 8-Hour O_3 and $PM_{2.5}$. On November 13, 2009, EPA published Air Quality Designations for the 2006 24-Hour Fine Particle ($PM_{2.5}$) NAAQS wherein Imperial County was listed as designated nonattainment for the 2006 24-hour $PM_{2.5}$ NAAQS. However, the nonattainment designation for Imperial County is only for the urban area within the County and it has been determined that the proposed project is not located within the nonattainment boundaries for $PM_{2.5}$.

The AQAP for the SSAB, through the implementation of the AQMP and SIP for PM_{10}, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. With respect to PM_{10}, the ICAPCD implements Regulation VIII – Fugitive Dust Rules, to

control these emissions and ultimately lead the basin into compliance with air standards, consistent with the AQAP. Within Regulation VIII are Rules 800 through 806, which address construction and earthmoving activities, bulk materials, carry-out and track-out, open areas, paved and unpaved roads, and conservation management practices. Best Available Control Measures to reduce fugitive dust during construction and earthmoving activities include but are not limited to:

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

Compliance with Regulation VIII is mandatory on all construction sites, regardless of size. However, compliance with Regulation VIII does not constitute mitigation under the reductions attributed to environmental impacts. In addition, compliance for a project includes: (1) the development of a dust control plan for the construction and operational phase; and (2) notification to the air district is required 10 days prior to the commencement of any construction activity.

Construction

The proposed projects would generate air emissions due to vehicle and dust emissions associated with construction activities. Similar effects would also be realized upon site decommissioning, which would be carried out in conjunction with the project's restoration plan, and subject to applicable ICAPCD standards. Likewise, the other cumulative projects that are approved, but not yet built (Midway Solar Farm IV and Wilkinson Solar Farm) or pending entitlement (Nider Solar Project and Orni 30) identified in Table 5-1 would result in the generation of air emissions during construction activities.

With respect to the proposed projects, during the construction and decommissioning phases, the project would generate PM_{10}, $PM_{2.5}$, ROG, CO, SO_2, and NO_X emissions during each active day of construction. As discussed in Section 3.4, Air Quality, the VEGA SES 2 and 3 projects' daily construction emissions daily construction emissions would not exceed the ICAPCD thresholds for ROG, NOx, CO, SO_2, and $PM_{2.5}$. However, the VEGA SES 2 and 3 projects' daily construction emissions would exceed the ICAPCD threshold for PM_{10} and represents a significant air quality impact. The VEGA SES 2 and 3 projects' impact could be cumulatively considerable because the Imperial County portion of the SSAB are nonattainment already for O_3 and PM_{10} under state standards and for O_3 and $PM_{2.5}$ federal standards. Thus, existing O_3 and PM_{10} levels in the SSAB are at unhealthy levels during certain periods. Additionally, the cumulative construction effects could again be experienced in the future during decommissioning and site restoration activities.

Several of the projects listed in Table 5-1 are already constructed and in operation. In the event the proposed projects are constructed in conjunction with the Nider Solar Project (pending entitlement), Midway Solar Farm IV and Wilkinson Solar Farm (approved but not built), each project would be subject to mitigation pursuant to ICAPCD's Regulations. Therefore, the cumulative impact would be reduced to a level less than significant through compliance with these measures. Further, because the proposed projects will be required to implement measures consistent with ICAPCD regulations designed to alleviate the cumulative impact associated with fugitive dust (PM_{10}) and NO_X, the projects contribution would be rendered less than cumulatively considerable and is therefore, less than significant.

Operation

As the proposed project would have no major stationary emission sources and would require minimal vehicular trips, operation of the proposed solar facilities would result in substantially lower emissions than project construction. The projects' operational emissions would not exceed the Tier I thresholds; therefore, the impact would be less than significant. Operational impacts of other renewable energy facilities identified in Table 5-1 would also be similar. Although these cumulative projects generally involve large areas, their operational requirements are very minimal, requiring minimal staff or use of machinery or equipment that generate emissions. Further, alternative energy projects, such as the project, would assist attainment of regional air quality standards and improvement of regional air quality by providing clean, renewable energy sources. Consequently, the projects would provide a positive contribution to the implementation of applicable air quality plan policies and compliance with EO S-3-05.

However, from a cumulative air quality standpoint, the potential cumulative impact associated with the generation of O_3, $PM_{2.5}$ and PM_{10} emissions during operation of the cumulative projects is a consideration because existing O_3 and PM_{10} levels in the SSAB are at unhealthy levels during certain periods. Imperial County is classified as non-attainment for $PM_{2.5}$ for the urban areas of Imperial County. However, the projects' operational contribution to O_3, $PM_{2.5}$ and PM_{10} would be below a level of significance. As with the construction phases, the cumulative projects would be required to comply with ICAPCD's Regulation VIII for dust control (Regulation VIII applies to both the construction and operational phases of projects). As a result, the ICAPCD would be required to comply with the various dust control measures and to prepare and implement operational dust control plans as approved by the ICAPCD, which is a component of ICAPCD's overall framework of the AQAP that sets forth a comprehensive program for SSAB's compliance with all federal and state air quality standards. Therefore, the projects would not contribute to long-term cumulatively considerable air quality impacts and the projects would not result in cumulatively significant air quality impacts, and cumulative impacts would be less than significant.

5.3.4 Biological Resources

The geographic scope for considering cumulative impacts on biological resources includes the Imperial Valley and related biological habitats. Table 5-1 lists the projects considered for the biological resources cumulative impact analysis.

In general terms, in instances where a potential impact could occur, CDFW and USFWS have promulgated a regulatory scheme that limits impacts on these species. The effects of the project would be rendered less than significant through mitigation requiring compliance with all applicable regulations that protect plant, fish, and animal species, as well as waters of the U.S. and state. Other cumulative projects would also be required to avoid impacts on special-status species and/or mitigate to the satisfaction of the CDFW and USFWS for the potential loss of habitat. As described in Section 3.4, Biological Resources, the projects have the potential to result in impacts on biological resources. These impacts are generally associated with the potential construction-related effects to burrowing owl, bird species, and bats (foraging only).

Burrowing Owls are protected by the CDFW mitigation guidelines for burrowing owl (CDFW 2012) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. Mitigation measures identified in Section 3.5, Biological Resources, contain these requirements thereby minimizing

potential impacts on these species to a less than significant level. Additionally, as provided in Section 3.5, Biological Resources, special-status bird species have a potential to be present. In addition, several common bird species could nest on the project site. As a result of project-related construction activities, one or more of these species could be impacted. However, with the implementation of mitigation as identified in Section 3.5, Biological Resources, these impacts would be reduced to a level of less than significant, primarily through avoidance of direct and indirect impacts to these species via pre-construction surveys and monitoring requirements during construction. Similarly, the cumulative projects within the geographic scope of the project would be required to comply with the legal framework as described above, and similar avoidance and minimization measures. Based on these considerations, impacts on biological resources would not be cumulatively considerable.

As with the proposed projects, each of the cumulative projects would be required to provide mitigation for impacts on biological resources. The analysis below is conducted qualitatively and in the context that the cumulative projects would be subject to a variety of statutes and administrative frameworks that require mitigation for impacts on biological resources.

Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by USFWS. This act prohibits the killing of any migratory birds without a valid permit. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under this act. With few exceptions, most birds are considered migratory under this act. Raptors and active raptor nests are protected under California FGCs 3503.5, 3503, and 3513.

The CWA and California's Porter-Cologne Water Quality Control Act provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit. Two types of jurisdictional features were documented within the BSA: USACE non-wetland Waters of the U.S. and CDFW State Waters. These drainages ultimately flow into the Salton Sea, which is considered a Traditionally Navigable Water. As such, these drainage features would likely be considered federally and state jurisdictional. Consultation will be initiated with USACE and CDFW to avoid or minimize impacts upon federally and state jurisdictional drainage features.

The proposed projects 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 projects within the geographic scope of the proposed projects will be required to comply with the legal frameworks set forth above, as well as others, and will be required to mitigate their impacts to a less than significant level. Therefore, the project would not contribute to a cumulatively considerable impact to biological resources, and cumulative impacts would be less than significant.

5.3.5 Cultural Resources

As discussed in Section 3.6, Cultural Resources, the Old Coachella Canal (P-13-7858) and East Highline Canal (P-13-8333) have been previously evaluated for potential eligibility for listing in the NRHP and CRHR. However, neither the Old Coachella Canal or the East Highline Canal would be impacted by project construction and no impact to historical resources would occur.

As discussed in Section 3.6, Cultural Resources, there are 168 cultural resources within the project area, therefore, there is potential of finding a buried archaeological site during construction. However, like all construction projects in the state, the possibility exists. This potential impact is considered

significant. Implementation of Mitigation Measures CR-1 through CR-4 would reduce potential impacts associated with the unanticipated discovery of unknown buried archaeological resources. Implementation of Mitigation Measure CR-5 would reduce potential impacts on human remains to a level less than significant.

Future projects with potentially significant impacts on cultural resources would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and Mitigation Measures CR-1 through CR-5, the proposed projects would have a less than cumulatively considerable contribution to impacts on cultural resources.

During operations and decommissioning of the projects, no additional impacts on archeological resources would be anticipated because the soil disturbance would have already occurred and been mitigated during construction.

As discussed in Section 3.6, Cultural Resources, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites. Therefore, the proposed projects are not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, and impacts on tribal cultural resources would be less than significant. Future cumulative projects would also be required to comply with the requirements of AB 52 to determine the presence/absence of tribal cultural resources and engage in consultation to determine appropriate mitigation measures to minimize or avoid impacts on tribal cultural resources. Based on these considerations, the projects would not contribute to or result in a significant cumulatively considerable impact tribal cultural resources.

5.3.6 Geology and Soils

The Imperial Valley portion of the Salton Trough physiographic province of Southern California is used as the geographic scope for the analysis of cumulative impacts on geology/soils and mineral resources. Cumulative development would result in an increase in population and development that could be exposed to hazardous geological conditions, depending on the location of proposed developments. Geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices. Cumulative impacts on geologic resources would be considered significant if the project would be impacted by geologic hazard(s) and if the impact could combine with off-site geologic hazards to be cumulatively considerable. None of the projects identified within the geographic scope of potential cumulative impacts would intersect or be additive to the project's site-specific geology and soils impacts; therefore, no cumulatively considerable effects are identified for geology/soils, and cumulative impacts would be less than significant.

Development of the proposed projects, in combination with other projects in the area, has the potential to contribute to a cumulatively significant paleontological resources impact due to the potential loss of paleontological resources unique to the region. However, mitigation is included in this EIR to reduce potentially significant project impacts to paleontological resources during construction of the proposed project. Implementation of Mitigation Measure GEO-2 would ensure that the potential impacts on paleontological resources do not rise to the level of significance. Future projects with potentially significant impacts on paleontological resources would be required to comply with federal, state, and local regulations and ordinances protecting paleontological resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and Mitigation Measure GEO-2, the

proposed projects would have a less than cumulatively considerable contribution to impacts on paleontological resources.

5.3.7 Hazards/Hazardous Materials

The geographic scope considered for cumulative impacts from health, safety, and hazardous materials is the area within 1 mile of the boundary of the project sites. One mile is the standard American Society of Testing and Materials (ASTM) standard search distance for hazardous materials.

Under cumulative conditions, implementation of the projects in conjunction with the projects listed in Table 5-1 is not anticipated to present a public health and safety hazard to residents. Additionally, the projects and related projects would all involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction, operation, and decommissioning. Impacts from these activities are less than significant for the projects because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various Federal, state, and local laws, regulations, and policies. It is foreseeable that the projects and related projects would implement and comply with these existing hazardous materials laws, regulations, and policies. Therefore, the related projects would not cause a cumulative impact, and the projects would not result in a cumulatively considerable incremental contribution to a cumulative impact related to use or routine transport of hazardous materials.

5.3.8 Greenhouse Gas Emissions

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Although the emissions of the projects alone would not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. In turn, global climate change has the potential to result in rising sea levels, which can inundate low-lying areas; affect rainfall and snowfall, leading to changes in water supply; and affect habitat, leading to adverse effects on biological resources. MDAQMD has proposed a threshold of 100,000 $MTCO_2e$ per year, for residential and commercial projects; which was applied to the projects' analysis as provided in Section 3.8, Greenhouse Gases. As provided, the proposed projects' CO_2 emissions would not exceed MDAQMD's threshold of 100,000 $MTCO_2e$ per year. As the projects' emissions do not exceed the MDAQMD's threshold, the proposed project would not result in a cumulatively considerable impact to GHG emissions and would not conflict with the State GHG reduction targets. Other cumulative projects identified in Table 5-1 largely consist of utility-scale solar facilities. The nature of these projects is such that, like the projects, they would be consistent with the strategies of the Climate Change Scoping Plan. In order to meet the AB 32 GHG emissions reduction mandate, the Scoping Plan relies on achievement of the RPS target of 33 percent of California's energy coming from renewable sources by 2020 and 50 percent by 2030. The RPS target was updated in September 2018 under SB 100 to 60 percent by 2030. The projects and other similar projects are essential to achieving the RPS.

Given that the projects are characterized as renewable energy projects and places emphasis on solar power generation, project operations would be almost carbon-neutral with the majority of the operational GHG emissions associated with vehicle trips. Based on these considerations, no significant long-term operational GHG impacts would occur and, therefore, project-related GHG impacts would not be cumulatively considerable.

5.3.9 Hydrology and Water Quality

Table 5-1 lists the projects considered for the hydrology and water quality cumulative impact analysis. The geographic scope for considering cumulative hydrology and water quality impacts is the Imperial Valley Hydrologic Unit as defined by the Colorado Basin RWQCB Basin Plan.

The construction of the projects is expected to result in short-term water quality impacts. Compliance with the SWRCB's NPDES general permit for activities associated with construction (2009-0009-DWQ) per Mitigation Measure HYD-1 would reduce water quality impacts. As with the proposed projects, each of the cumulative projects would be required to comply with the Construction General Permit. The SWRCB has determined that the Construction General Permit protects water quality, is consistent with the CWA, and addresses the cumulative impacts of numerous construction activities throughout the state. This determination in conjunction with the implementation of mitigation would ensure short-term water quality impacts are not cumulatively considerable.

The projects are not expected to result in long-term operations-related impacts related to water quality. The projects would mitigate potential water quality impacts by implementing site design, source control, and treatment control BMPs. Some cumulative projects would require compliance with the SWRCB's NPDES general permit for industrial activities, as well as rules found in the CWA, Section 402(p)(1) and 40 CFR 122.26, and implemented Order No. 90-42 of the RWQCB. With implementation of SWRCB, Colorado River RWQCB, and County policies, plans, and ordinances governing land use activities that may degrade or contribute to the violation of water quality standards, cumulatively considerable impacts on water quality would be minimized to a less than significant level.

Based on a review of the FEMA Flood Insurance Rate Map FIRM, the majority of the proposed projects are located within Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance floodplain. However, there are ephemeral wash beds that transect the project site parcels and these areas are designated as Zone A or Special Flood Hazard Areas and are subject to "flash flooding." Compliance with County Flood Zone Ordinances, guidelines, and regulations would be required alongside the construction of retention basins to reduce potential impacts. Cumulative projects listed in Table 5-1 that are located in similar locations would also comply with County ordinances, guidelines, and regulations therefore, cumulatively considerable impacts on floodplains would be considered less than significant.

Based on these considerations, the projects would not contribute to or result in a significant cumulatively considerable impact to hydrology or water quality, and cumulative impacts would be less than significant.

5.3.10 Land Use Planning

The geographic scope for the analysis of cumulative land use and planning impacts is typically defined by government jurisdiction. The geographic scope for considering potential inconsistencies with the General Plan's policies from a cumulative perspective includes all lands within the County's jurisdiction and governed by its currently adopted General Plan. In contrast, the geographic scope for considering potential land use impacts or incompatibilities include the project site plus a one-mile buffer to ensure a consideration for reasonably anticipated potential direct and indirect effects.

As provided in Section 3.11, Land Use/Planning, the projects would not involve any facilities that could otherwise divide an established community. Based on this circumstance, no cumulatively considerable impacts would occur. As discussed in Section 3.11, Land Use/Planning, the projects would not conflict with the goals and objectives of the County of Imperial General Plan if all entitlements (Conditional

Use Permits) are approved by the County Board of Supervisors. In addition, a majority of the cumulative projects identified in Table 5-1 would not result in a conflict with applicable land use plans, policies, or regulations. In the event that incompatibilities or land use conflicts are identified for other projects listed in Table 5-1, the County would require mitigation to avoid or minimize potential land use impacts. The proposed projects would be consistent with the goals and objectives of the General Plan and no amendment to the General Plan for a zone change would be required because the project sites are entirely within the RE Overlay Zone. However, where General Plan Amendments and/or Zone Changes are required to extend the RE Overlay Zone for cumulative projects listed in Table 5-1, that project would be required to demonstrate consistency with the overall goals and policies of the General Plan, and would be required to demonstrate meeting the criteria for extending the RE Overlay onto the project site. Based on these circumstances, no significant cumulatively considerable impact would occur, and cumulative impacts would be less than significant.

5.3.11 Noise and Vibration

When determining whether the overall noise (and vibration) impacts from related projects would be cumulatively significant and whether the projects' incremental contribution to any significant cumulative impacts would be cumulatively considerable, it is important to note that noise and vibration are localized occurrences; as such, they decrease rapidly in magnitude as the distance from the source to the receptor increases. Therefore, only those related projects and identified in Table 5-1 that are in the vicinity of the project site and those that are considered influential in regards to noise and vibration would have the potential to be considered in a cumulative context with the project's incremental contribution.

Two cumulative projects (Orni 30 and Nider Solar) listed in Table 5-1 are pending entitlement and it is not anticipated that construction of the cumulative projects and proposed project would overlap. As discussed in Section 3.12, Noise and Vibration, the projects' noise levels would not exceed the County's 75 dBA L_{eq} construction noise threshold. Therefore, impacts from construction noise are considered less than significant. Similar to the proposed projects, 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 projects to a cumulative noise impact would not be cumulatively considerable.

Stationary-source and vehicular noise from the aforementioned related projects would be similar in nature and magnitude to those discussed for the projects in Section 3.12, Noise and Vibration. For the proposed projects, no noise impacts have been identified. Operation of the other cumulative projects listed in Table 5-1 could result in the long-term stationary source noise levels that exceed applicable standards at nearby sensitive receptors and/or result in substantial increases in ambient noise levels. However, given that the project facilities would be constructed within the A-2-RE, A-3-RE, and S-2-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 (e.g., 70 dBA L_{dn}). Thus, the incremental contribution of the projects to significant cumulative noise impacts would not be cumulatively considerable.

5.3.12 Transportation/Traffic

During the construction phase of the project, the maximum number of trips generated on a daily basis would be approximately 510 daily trips ends for VEGA SES 2 and 3, and 260 daily trips ends for VEGA SES 5. Under construction year conditions with and without the proposed projects, all roadway segments analyzed would operate at LOS A, and all intersections would operate at LOS B or better during both AM and PM peak hours. Implementation of the proposed projects would not require any public road widening to accommodate vehicular trips associated with the proposed projects (construction phase and operational phase), while maintaining adequate LOS. Additionally, future operations and maintenance would be conducted remotely, with minimal trips to the project sites for panel washing and other solar maintenance.

Since the proposed projects are located in a rural portion of the County there are no fixed routes for alternative transportation or non-motorized travel within the general area of the project sites that would be impacted by project construction or operation. Although the proposed projects would increase VMT during the construction phase, these increases are temporary in nature. Operation of proposed projects would only require intermittent maintenance which would result in a nominal amount of vehicle trips generated.

A majority of the projects listed in Table 5-1 are already constructed and in operation. As shown on Table 5-1, there are cumulative projects that are approved under construction (Wister Solar), approved and not built (Midway Solar Farm IV and Wilkinson Solar Farm), or pending entitlement (Orni 30 and Nider Solar). The construction phasing of these projects is not anticipated to overlap with the proposed projects. Furthermore, the cumulative projects are not anticipated to use the same construction haul route as the proposed projects. Future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. Based on these findings, the projects would not result in cumulatively considerable roadway or intersection impacts, and this impact would be less than significant.

5.3.13 Tribal Cultural Resources

As discussed in Section 3.14, Tribal Cultural Resources, a SLF search request was submitted on November 6 and November 16, 2020 to the California NAHC and the search results were received on December 22, 2020, and January 8, 2021. The search of the SLF was negative and failed to indicate the presence of Native American cultural resources in the project area. Additionally, on April 8, 2021, the Quechan Indian Tribe requested consultation with the County on the proposed projects. The County is in the process of consulting with the Quechan Indian Tribe and has requested that they to provide any information regarding any Traditional Cultural Properties, Sacred Sites, resource collecting areas, or any other areas of concern known to occur in the project area. However, the proposed projects are not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1 and Section 5024.1.

Future cumulative projects would also be required to comply with the requirements of AB 52 to determine the presence/absence of tribal cultural resources and engage in consultation to determine appropriate mitigation measures to minimize or avoid impacts on tribal cultural resources. Based on these considerations, the projects would not contribute to or result in a significant cumulatively considerable impact to tribal cultural resources. During operations and decommissioning of the

projects, no impacts on tribal cultural resources are anticipated because the soil disturbance would have already occurred and been mitigated during construction.

5.3.14 Utilities/Service Systems

Future development in Imperial County would increase the demand for utility service in the region. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public utilities within their jurisdictional boundaries. The proposed projects would not require or result in the relocation or construction of new or expanded wastewater facilities, storm water facilities, or water facilities. Additionally, the projects would be comprised of mostly recyclable materials and would not generate significant volumes of solid waste that could otherwise contribute to significant decreases in landfill capacity. Based on these considerations, the projects would result in less than significant impacts on existing utility providers and, therefore, would not result in cumulatively considerable impacts.

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6 Effects Found Not Significant

In accordance with Section 15128 of the CEQA Guidelines, an EIR must contain a statement briefly indicating the reasons that various potential significant effects of a project were determined not to be significant. Based on the Initial Study and Notice of Preparation prepared for the proposed projects (Appendix A of this EIR), Imperial County has determined that the proposed projects would not have the potential to cause significant adverse effects associated with the topics identified below. Therefore, these topics are not addressed in this EIR; however, the rationale for eliminating these topics is briefly discussed below.

6.1 Agriculture and Forestry Resources

6.1.1 Forestry Resources

No portion of the project sites or the immediate vicinity is zoned or designated as forest lands, timberlands, or timberland production. As such, the proposed projects would not result in a conflict with existing zoning or cause the need for a zone change. Therefore, implementation of the proposed projects would not impact forestry resources.

6.2 Energy

Information for this section is summarized from the Energy Impact Assessment prepared by ECORP Consulting, Inc. This report is included in Appendix M of this EIR.

6.2.1 Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear. IID, the sixth largest electrical utility in California serving more than 150,000 customers in the Imperial Valley and parts of Riverside and San Diego counties, provides electrical services to the project area. IID controls more than 1,100 megawatts of energy derived from a diverse resource portfolio that includes its own generation, and long- and short-term power purchases. Located in a region with abundant sunshine, enviable geothermal capacity, wind and other renewable potential, IID has met or exceeded all Renewable Portfolio Standard requirements to date, procuring renewable energy from diverse sources, including biomass, biowaste, geothermal, hydroelectric, solar and wind (Appendix M of this EIR).

The Southern California Gas Company provides natural gas services to Imperial County. As the nation's largest natural gas distribution utility, the Southern California Gas Company delivers natural gas energy to 21.6 million consumers through 5.9 million meters in more than 500 communities. The Southern California Gas Company’s service territory encompasses approximately 24,000 square miles throughout Central and Southern California, from Visalia to the Mexican border (Appendix M of this EIR).

6.2.2 Imperial County Energy Consumption

Electricity

The non-residential electricity consumption associated with all uses in Imperial County from 2017 to 2021 is shown in Table 6-1. As shown, the demand has increased since 2017.

Table 6-1. Non-Residential Electricity Consumption in Imperial County 2017-2021

Year	Electricity Consumption (kilowatt hours)
2021	841,302,847
2020	834,483,019
2019	839,095,659
2018	831,318,925
2017	817,450,656

Source: Appendix M of this EIR

Natural Gas

The non-residential natural gas consumption associated with all uses in Imperial County from 2017 to 2021 is shown in Table 6-2. As shown, the demand has remained relatively constant since 2017.

Table 6-2. Non-Residential Natural Gas Consumption in Imperial County 2017-2021

Year	Natural Gas Consumption (therms)
2021	33,421,848
2020	33,813,700
2019	34,736,596
2018	31,159,562
2017	33,090,927

Source: Appendix M of this EIR

Automotive Fuel Consumption

Automotive fuel consumption in Imperial County from 2017 to 2021 is shown in Table 6-3. As shown, fuel consumption has decreased between 2016 and 2020.

Table 6-3. Automotive Fuel Consumption in Imperial County 2017-2021

Year	Total Fuel Consumption (gallons)
2021	217,447,173
2020	195,778,823
2019	219,032,998
2018	219,075,991
2017	220,921,357

Source: Appendix M of this EIR

6.2.3 Proposed Project Energy Consumption

Collectively, the proposed projects involve the construction of up to 350 MW alternating current PV solar energy facility with an integrated 350 MW battery storage system. Operation of the proposed projects would not result in the consumption of electricity or natural gas and thus, would not contribute to the County wide usage and would directly support the RPS goal of increasing the percentage of electricity procured from renewable sources.

Therefore, the energy analysis focuses on the two sources of energy that are most relevant to the projects: the equipment fuel necessary for construction and the automotive fuel necessary for ongoing maintenance activities. The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. The amount of operational fuel use was estimated using CARB's EMFAC2021 computer program, which provides projections for typical daily fuel usage in Imperial County. This analysis conservatively assumes that all of the automobile trips projected to arrive at the project sites during operations would be new to Imperial County.

Energy consumption associated with the proposed projects is summarized in Table 6-4. Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2021 (Table 6-3), the most recent full year of data.

Table 6-4. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption[1]	0 kilowatt-hours	0.00000 percent
Natural Gas[2]	0 therms	0.00000 percent
Automotive Fuel Consumption		
VEGA SES 2 and 3		
Project Construction 2023	94,680 gallons	0.0435 percent
VEGA SES 5		
Project Construction 2024	77,635 gallons	0.0357 percent
VEGA SES 2, 3, and 5 (combined)		
Construction	172,315 gallons	0.0792 percent
Operation[3]	225.5 gallons	0.0001 percent

Source: Appendix M of this EIR

Notes:

[1]CalEEMod; [2]Climate Registry 2016; [3]EMFAC2021

The project increases in electricity and natural gas consumption are compared with all uses in Imperial County in 2021, the latest data available. The project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2021, the most recent full year of data.

Fuel necessary for project construction would be required for the operation and maintenance of construction equipment and the transportation of materials to the project site. The fuel expenditure necessary to construct the solar facility and infrastructure would be temporary, lasting only as long as project construction. As shown in Table 6-4, the project's gasoline fuel consumption during the VEGA SES 2 and 3 construction period is estimated to be 94,680 gallons during 2023 construction, which would increase the annual countywide gasoline fuel usage by 0.0435 percent. The gasoline fuel consumption during VEGA SES 5 construction is estimated to be 77,635 gallons during 2024 construction, which would increase the annual countywide gasoline fuel usage by 0.0357 percent.

Additionally, the construction during the VEGA SES 2, 3, and 5 projects (combined) has an estimated gasoline usage of 172,315 gallons, which would increase the annual countywide gasoline fuel usage by 0.0792 percent. As such, project construction would have a nominal effect on local and regional energy supplies. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during project construction. For these reasons, it is expected that construction fuel consumption associated with the projects would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Once construction is completed the projects would be remotely controlled. No employees would be based at the project sites. The only operational emissions associated with the projects would be associated with motor vehicle use for routine maintenance work and site security as well as panel upkeep and cleaning. A conservative estimate of two vehicle trip per day was assumed. This is a conservative estimate as most days would require no operational related vehicle trips. As shown in Table 6-4, this would estimate to a consumption of approximately 225.5 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.0001 percent. Fuel consumption associated with both the construction equipment needed to construction the projects and the vehicle trips generated by the projects during ongoing maintenance activities would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. The proposed projects would result in a less than significant impact related to energy.

6.2.4 Compliance with State or Local Plans for Renewable Energy or Energy Efficiency

The purpose of the proposed projects is the construction of a renewable energy and storage facilities in Imperial County. Once in operation, it will decrease the need for energy from fossil fuel–based power plants in the state. The result would be a net increase in electricity resources available to the regional grid, generated from a renewable source. Therefore, the projects would directly support the RPS goal of increasing the percentage of electricity procured from renewable sources. Additionally, the projects would also be consistent with the County's General Plan Conservation and Open Space Element, Objective 9.2 which encourages renewable energy developments. Therefore, the projects would directly support state and local plans for renewable energy development. The proposed projects would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, no impact would occur.

6.3 Mineral Resources

The project sites are not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to Figure 8: Imperial County Existing Mineral Resources of the Conservation and Open Space Element of the General Plan (County of Imperial 2016), no known mineral resources occur within the project sites nor do the project sites contain mapped mineral resources. Therefore, the proposed projects would not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of California nor would the proposed projects result in the loss of availability of a locally important mineral resource.

Based on a review of the California Department Division of Oil, Gas, and Geothermal Resources Well Finder, there are no wells located on the project sites (California Department of Oil, Gas, and Geothermal Resources 2021). Therefore, implementation of the proposed projects would not impact any wells.

6.4 Population and Housing

Development of housing is not proposed as part of the projects. No full-time employees are required to operate the projects. The project facilities will be monitored remotely. It is anticipated that maintenance of the facilities will require minimal site presence to perform periodic visual inspections and minor repairs. On intermittent occasions, the presence of additional workers may be required for repairs or replacement of equipment and panel cleaning; however, due to the nature of the facilities, such actions will likely occur infrequently. Therefore, the proposed projects would not result in a substantial growth in the area, as the number of employees required to operate and maintain the facilities is minimal.

No housing exists within the project sites and no people reside within the project sites. Therefore, the proposed projects would not displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. The proposed projects would result in no impact to population and housing.

6.5 Public Services

Fire Protection. Fire protection and emergency medical services in the area are provided by the Imperial County Fire Department. The project sites are located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low. 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 access road). Although the proposed projects would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements (e.g., CPUC safety standards), the project applicant will be required to consult and coordinate with the Fire Department to address any fire safety and service concerns (i.e, battery storage system fire prevention and control components), and emergency response site access, so that adequate service is maintained. While the proposed projects may result in an increase in demand for fire protection service, with installation of internal fire prevention systems and ICFD consultation, including adherence to any special conditions regarding fire control and access, the projects would not result in an increase in demand that would, in turn, result in a substantial adverse physical impact associated with the provision of new or physically altered fire protection facilities; the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services. Based on these considerations, the project would not result in a need for fire facility expansion and a less than significant impact would occur.

Imperial County requires payment of impact fees for new development projects. Fire Impact Fees are imposed pursuant to Ordinance 1418 §2 (2006), which was drafted in accordance with the County's TischlerBise Impact Fee Study. The ordinance has provisions for non-residential industrial projects based on square footage. The project applicant will be required to pay the fire protection services'

impact fees. These fees would be included in the Conditions of Approval for the CUP and would therefore be less than significant.

Police Protection. Police protection services in the project area is provided by the Imperial County Sheriff's Department. Although the potential is low, the proposed project may attract vandals or other security risks. The increase in construction related traffic could increase demand on law enforcement services. However, the project sites would be fenced with 6-foot high chain link security fence and points of ingress/egress would be accessed via locked gates. In addition, periodic on-site personnel visitations for security would occur during operations and maintenance of the proposed projects, thereby minimizing the need for police surveillance. While the proposed projects may result in a temporary increase in demand for law enforcement service, the projects would not result in an increase in demand that would, in turn, result in a substantial adverse physical impact associated with the provision of new or physically altered sheriff facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services. Further, as conditions of approval of the projects, the project applicant will be required to participate in the Imperial County Public Benefit Program for the life of the CUPs and shall at all times be a party to a public benefit agreement in a form acceptable to County Counsel in order to pay for all costs, benefits, and fees associated with the approved projects, and the applicant will be required to reimburse the Sheriff's Department for any investigations regarding theft on the project sites and related law enforcement. Approval of this public benefit agreement will be by the Board of Supervisors prior to the issuance of the first building permit. These potential impacts are less than significant.

Schools. The proposed projects do not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed projects would not result in an increase in student population within the Imperial County's School District since it is anticipated that construction workers would commute in during construction operations. The proposed projects would have no impact on Imperial County schools.

Parks and Other Public Facilities. No full-time employees are required to operate the projects. The project facilities will be monitored remotely. It is anticipated that maintenance of the facilities will require minimal site presence to perform periodic visual inspections and minor repairs. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities are not expected. The projects are not expected to have an impact on parks, libraries, and other public facilities.

6.6 Recreation

The project sites are not used for formal recreational purposes. Also, the proposed projects would not generate new employment on a long-term basis. As such, the projects 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 projects do not include or require the expansion of recreational facilities. Therefore, no impact is identified for recreation.

6.7 Utilities and Service Systems

Wastewater Facilities. The projects would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet

facilities and disposed of at an approved site. No habitable structures are proposed on the project sites, such as O&M buildings; therefore, there would be no wastewater generation from the proposed projects. The proposed projects would not require or result in the relocation or construction of new or expanded wastewater facilities.

Storm Water Facilities. The proposed projects will involve the construction of drainage control facilities within the project sites, and included in the project impact footprint, of which environmental impacts have been evaluated. Otherwise, the projects do not require expanded or new storm drainage facilities off-site (i.e., outside of the project footprint) because the proposed solar facilities would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events, and therefore, would not require the construction of off-site storm water management facilities. Water from solar panel washing would continue to percolate through the ground, as a majority of the surfaces within the project sites would remain pervious. The proposed projects would not require or result in the relocation or construction of new or expanded storm water facilities beyond those proposed as part of the projects and evaluated in the EIR.

Water Facilities. The proposed projects are not anticipated to result in a significant increase in water demand/use during operation; however, water will be needed for solar panel washing and dust suppression. During operation, water would be trucked to the project sites from a local water source. Therefore, the proposed projects would not require or result in the relocation or construction of new or expanded water facilities.

Power, Natural Gas, and Telecommunication Facilities. The proposed projects would involve construction of power facilities. However, these are components of the projects as evaluated in the EIR. The proposed projects would not otherwise generate the demand for or require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities that would in turn, result in a significant impact to the environment.

Solid Waste Facilities. Solid waste generation would be minor for the construction and operation of the projects. Solid waste would be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. Trash would likely be hauled to the Calexico Solid Waste Site (13-AA-0004) located approximately 13 miles west of the proposed projects in Calexico. As of August 1, 2019, the Calexico Solid Waste Site has approximately 1,561,235 cubic yards of remaining capacity and is estimated to remain in operation through 2179 (CalRecycle 2021). Therefore, there is ample landfill capacity in the County to receive the minor amount of solid waste generated by construction and operation of the proposed projects.

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

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

6.8 Wildfire

According to the Draft Fire Hazard Severity Zone Map for Imperial County prepared by the California Department of Forestry and Fire Protection, the project sites are not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). Therefore, the proposed projects would not substantially impair an adopted emergency response plan or emergency evacuation plan; expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; exacerbate fire risk; or, expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact is identified for wildfire.

7 Alternatives

7.1 Introduction

The identification and analysis of alternatives is a fundamental concept under CEQA. This is evident in that the role of alternatives in an EIR is set forth clearly and forthrightly within the CEQA statutes. Specifically, CEQA §21002.1(a) states:

> *"The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."*

The CEQA Guidelines require an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines §15126.6(a)). The CEQA Guidelines direct that selection of alternatives focus on those alternatives capable of eliminating any significant environmental effects of the project or of reducing them to a less-than significant level, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly. In cases where a project is not expected to result in significant impacts after implementation of recommended mitigation, review of project alternatives is still appropriate.

The range of alternatives required within an EIR is governed by the "rule of reason" which requires an EIR to include only those alternatives necessary to permit a reasoned choice. The discussion of alternatives need not be exhaustive. Furthermore, an EIR need not consider an alternative whose implementation is remote and speculative or whose effects cannot be reasonably ascertained.

Alternatives that were considered but were rejected as infeasible during the scoping process should be identified along with a reasonably detailed discussion of the reasons and facts supporting the conclusion that such alternatives were infeasible.

Based on the alternatives analysis, an environmentally superior alternative is designated among the alternatives. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives (CEQA Guidelines §15126.6(e)(2)).

7.2 Criteria for Alternatives Analysis

As stated above, pursuant to CEQA, one of the criteria for defining project alternatives is the potential to attain the project objectives. Established objectives of the project applicant for the proposed project include:

- Construct and operate a solar energy facility capable of producing up to 350 megawatt (MW) alternating current (AC) of electricity to assist the State of California in achieving its 60 percent renewable portfolio standard by 2030.
- Provide a 350 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.

- Interconnect directly to IID's existing electrical transmission system.
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Senate Bill 32.
- Minimize and mitigate any potential impact to sensitive environmental resources within the project area.

7.3 Alternatives Considered but Rejected

7.3.1 Alternative Site

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

The proponent does not have control of an alternate site; if control were viable, the proponent would have to re-initiate the application process as a new project. Similar to the proposed project site, an alternate site would require environmental review once the proponent has prepared sufficient project description information. At present, the proponent does not have control of an alternate site. This alternative would be the most complex, costly, and time-consuming alternative to implement. It is unknown if the environmental impacts associated with this Alternative would be less than the proposed project because it would be speculative to evaluate an unsecured alternate site. This is primarily due to the fact that the proponent does not have control of an alternate site. Therefore, an alternative site was eliminated from further consideration in this EIR.

7.4 Alternative 1: No Project/No Development Alternative

The CEQA Guidelines require analysis of the No Project Alternative (PRC Section 15126). According to Section 15126.6(e)(1), "the specific alternative of 'no project' shall also be evaluated along with its impact." Also, pursuant to Section 15126.6(e)(2); "The 'no project' analysis shall discuss the existing conditions at the time the notice of preparation is published, … at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services."

The No Project/No Development Alternative assumes that the projects, as proposed, would not be implemented and the project sites would not be further developed with solar energy facilities. The No Project/No Development Alternative would not meet the project objectives.

7.4.1 Environmental Impact of Alternative 1: No Project/No Development Alternative

Aesthetics

Under the No Project/No Development Alternative, the project sites would not be developed and would continue to be undeveloped and fallow agricultural land. The No Project/No Development Alternative would not modify the existing project sites or add construction to the project sites; therefore, there would be no change to the existing condition of the sites. Under this alternative, there would be no potential to create a new source of light or glare associated with the PV arrays. As discussed in greater detail in Section 3.2, Aesthetics, the proposed projects would result in a less than significant impact associated with introduction of new sources of light and glare. Under the No Project Alternative, no new sources of light, glare, or other aesthetic impacts would occur. Under this alternative, light, glare, and aesthetic impacts would be less compared to the projects as the existing visual conditions would not change.

Agricultural Resources

As discussed in Section 3.3, Agricultural Resources, the majority of the project sites are designated as Other Land (DOC 2021). A portion of the VEGA SES 5 project site (APN 025-260-022) is designated as Farmland of Local Importance. Compared to the proposed projects, implementation of this alternative would avoid the conversion of land designated as Other Land and Farmland of Local Importance per the FMMP. However, as previously indicated, these designations are not considered an “agricultural land” per CEQA Statute Section 21060.1(a). Therefore, this alternative would not contribute to the conversion of agricultural lands or otherwise adversely affect agricultural operations. Compared to the proposed projects, this alternative would avoid the need for future restoration of the project sites to pre-project conditions.

Air Quality

Under the No Project/No Development Alternative, there would be no air emissions associated with project construction or operation, and no project- or cumulative-level air quality impact would occur. Therefore, no significant impacts to air quality or violation of air quality standards would occur under this alternative. Moreover, this alternative would be consistent with existing air quality attainment plans and would not result in the creation of objectionable odors.

As discussed in Section 3.4, Air Quality, the proposed projects would not exceed the ICAPCD’s significance thresholds for emissions of ROG, CO, SO_2, and $PM_{2.5}$ during both the construction and operational phases of the project. However, the VEGA SES 2 and 3 projects would exceed the ICAPCD threshold for PM_{10}, prior to implementation of mitigation. Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. The projects must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust (Mitigation Measure AQ-1). With the implementation of the ICAPCD Regulation VIII requirements (Mitigation Measure AQ-1), the projects would not exceed the ICAPCD’s thresholds of significance for PM_{10} emissions. This alternative would result in less air quality emissions compared to the proposed projects, the majority of which would occur during construction. The No Project/No Development Alternative would not reduce the long-term need for renewable electricity generation. As a consequence, while the No Project/No Development Alternative would not result in new impacts to air quality as a result of construction, it would likely not realize the overall benefits to regional air quality when compared to the operation of the proposed projects.

Biological Resources

Under the No Project/No Development Alternative, existing biological resource conditions within the project sites would largely remain unchanged and no impact would be identified. Unlike the proposed projects which requires mitigation for biological resources including rare plants, burrowing owl and other migratory birds, nesting birds, sensitive natural communities, and aquatic resources, this alternative would not result in construction of a solar facility that could otherwise result in significant impacts to these biological resources. Compared to the proposed projects, this alternative would avoid impacts to biological resources.

Cultural Resources

The proposed projects would involve ground-disturbing activities that have the potential to disturb previously undocumented cultural resources that could qualify as historical resources or unique archaeological resources pursuant to CEQA. Under the No Project/No Development Alternative, the project sites would not be developed and no construction-related ground disturbance would occur. Therefore, compared to the proposed projects, this alternative would avoid impacts to cultural resources.

Geology and Soils

Because there would be no development at the project sites under the No Project/No Development Alternative, no grading or construction of new facilities would occur. Therefore, there would be no impact to project-related facilities as a result of local seismic hazards (strong ground shaking), soil erosion, and paleontological resources. In contrast, the proposed projects would require the incorporation of mitigation measures related to potential seismic hazards, soil erosion, and paleontological resources to minimize impacts to a less than significant level. Compared to the proposed projects, this alternative would avoid significant impacts related to local geology and soil conditions and paleontological resources.

Greenhouse Gas Emissions

Under the No Project/No Development Alternative, there would be no GHG emissions resulting from project construction or operation or corresponding impact to global climate change. The No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of SB 32. While this alternative would not further implement policies (e.g., SB X1-2) for GHG reductions, this alternative would also not directly conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This alternative would not create any new GHG emissions during construction but would not lead to a long-term beneficial impact to global climate change by providing renewable clean energy. For the proposed projects, a less than significant impact was identified for construction-related GHG emissions, and in the long-term, the projects would result in an overall beneficial impact to global climate change as the result of creation of clean renewable energy, that does not generate GHG emissions. Compared to the proposed projects, 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 projects. Further, the construction emissions associated with the projects would be off-set by the beneficial renewable energy provided by the projects, negating any potential that the No Project/No Development alternative would reduce construction-related GHG emissions.

Hazards and Hazardous Materials

The No Project/No Development Alternative would not include any new construction. Therefore, no potential exposure to hazardous materials would occur. Therefore, no impact is identified for this alternative for hazards and hazardous materials. As with the proposed projects, this alternative would not result in safety hazards associated with airport operations. Compared to the proposed projects, 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 projects, as the existing site conditions and on-site pervious surfaces would remain unchanged. In addition, no changes with regard to water quality would occur under this alternative. Compared to the proposed projects, from a drainage perspective, this alternative would avoid changes to existing hydrology. Unlike the proposed projects, this alternative would not result in the placement of structures within flood zone A. This alternative would have less of an impact associated with hydrology/water quality as compared to the proposed projects.

Land Use/Planning

As discussed in Section 3.11, Land Use/Planning, the proposed projects would not physically divide an established community or conflict with applicable plans, policies, or regulations.

Under the No Project/No Development Alternative, the project sites would not be developed and continue to be undeveloped and fallow agricultural land. Current land uses would remain the same. No CUPs would be required under this alternative. No existing community would be divided, and no inconsistencies with planning policies would occur. Because no significant Land Use and Planning impact has been identified associated with the proposed projects, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed projects.

Noise

This alternative would not require construction or operation of the project facilities; therefore, this alternative would not increase ambient noise levels within the vicinity of the project sites. For this reason, no significant noise impacts would occur. As discussed in Section 3.12, Noise and Vibration, the proposed projects would not result in significant noise impacts to sensitive receptors during construction and operation. Compared to the proposed projects, this alternative would not generate noise and would have less of an impact associated with noise.

Transportation

There would be no new development under the No Project/No Development Alternative. Therefore, this alternative would not generate vehicular trips during construction or operation. For these reasons, no impact would occur and this alternative would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. Although the proposed projects would result in less than significant transportation impacts, this alternative would avoid an increase in vehicle trips on local roadways, and any safety

related hazards that could occur in conjunction with the increase vehicle trips and truck traffic, primarily associated with the construction phase of the projects.

Tribal Cultural Resources

As discussed in Section 3.14, Tribal Cultural Resources, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites on the project sites. Therefore, the projects are not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource. Impacts to tribal cultural resources under the No Project/No Development Alternative are similar to the proposed projects.

Utilities and Service Systems

The No Project/No Development Alternative would not require the expansion or extension of existing utilities, since there would be no new project facilities that would require utility service. No solid waste would be generated under this alternative. The proposed projects would not result in any significant impacts to existing utilities or solid waste facilities. Compared to the proposed projects, this alternative would have less of an impact related to utilities and solid waste facilities.

Conclusion

Implementation of the No Project/No Development Alternative would generally result in reduced impacts for a majority of the environmental issues areas considered in Chapter 3, Environmental Analysis when compared to the proposed projects. 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 projects.

Comparison of the No Project/No Development Alternative to Project Objectives

The No Project/No Development Alternative would not meet the objectives of the projects. Additionally, the No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of SB 32.

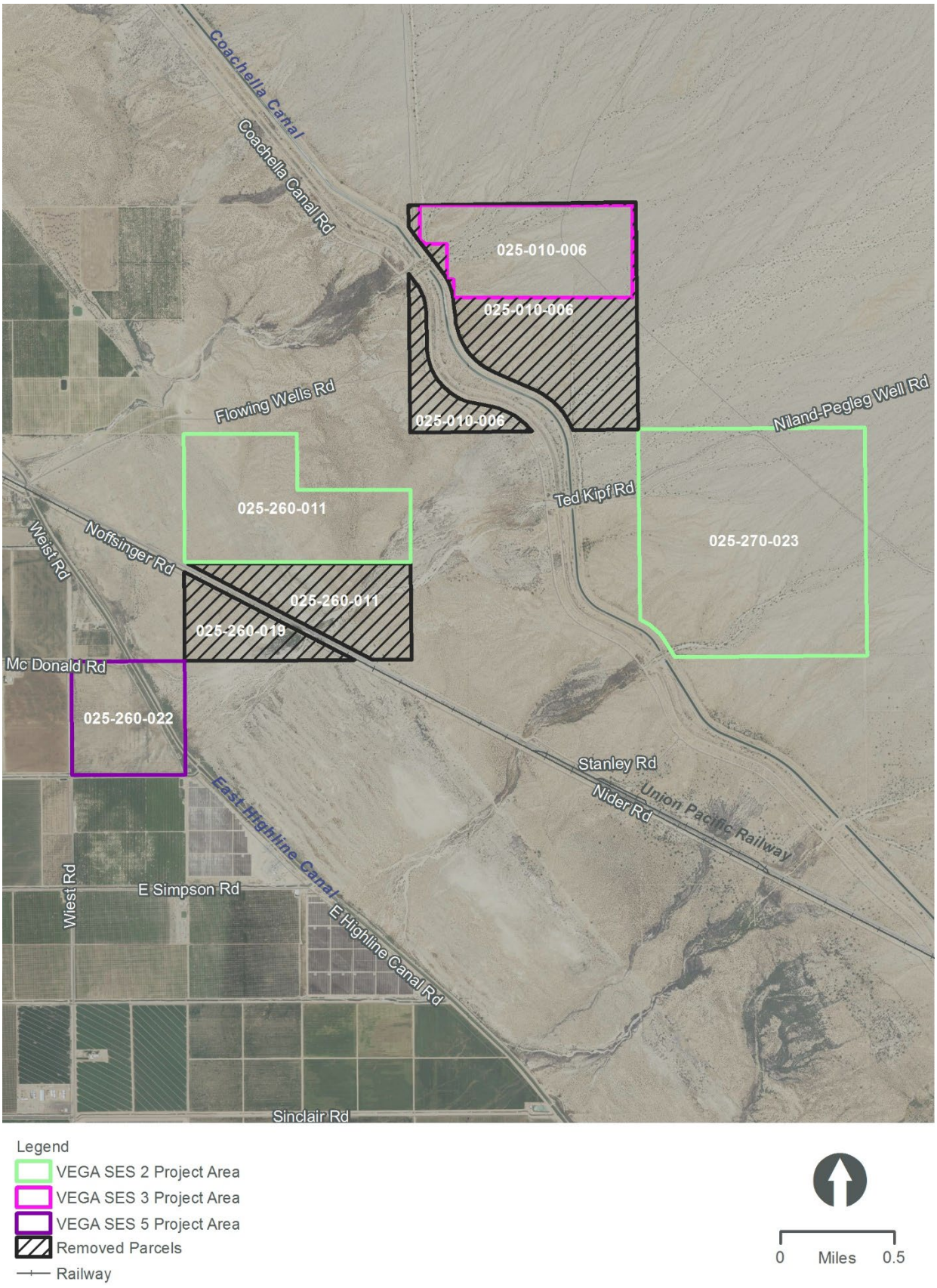
7.5 Alternative 2: Reduced Project Site

The purpose of this alternative is to reduce the size of the project sites to minimize impacts on sensitive vegetation communities and riparian habitat. Iodine bush scrub, bush seepweed scrub, tamarisk thickets, and blue palo verde-ironwood woodland occur within the project sites and are considered sensitive natural communities by CDFW.

In addition, riparian habitat associated with the drainage systems throughout the VEGA SES 2 and 3 project sites consists of blue palo verde-ironwood woodland and tamarisk thickets. Riparian habitat associated with the drainage systems throughout the VEGA SES 5 project site consists of tamarisk thickets.

This alternative would remove the portion of VEGA SES 2 that is located on APN 025-010-006 and remove APN 025-260-019 and a portion of APN 025-260-011 from VEGA SES 5. Therefore, the project site would be reduced by 660 acres from a total of 1,963 acres to 1,303 acres. Figure 7-1 depicts this alternative.

Figure 7-1. Alternative 2: Reduced Project Site



7.5.1 Environmental Impact of Alternative 2: Reduced Project Site

Aesthetics

Under Alternative 2, the overall size of the solar energy facility would be reduced. No significant visual aesthetic impact has been identified as the proposed projects' facilities would not impact scenic resources, result in the substantial degradation of the existing visual character of the project sites, or add a substantial amount of light and glare. As such, this alternative would not avoid or reduce any significant impacts identified for the projects and the aesthetic impact would be similar to the proposed projects.

Agricultural Resources

Under Alternative 2, the overall size of the solar energy facility would be reduced. As discussed in Section 3.3, Agricultural Resources, the proposed projects would not result in the conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland and Williamson Act contracts. However, a portion of the VEGA SES 5 project site (APN 025-260-022) is designated as Farmland of Local Importance, and it was noted that project implementation may change the physical and chemical makeup of soil materials within the upper soil horizon on site and impact future agricultural productivity. Under this alternative, the project applicant would still be required to adhere to the terms of the comprehensive reclamation plan that would restore the VEGA SES 5 project site to preexisting (pre-project) conditions following decommissioning of the project (after its use for solar generation activities). In addition, the VEGA SES 5 project would still be required to implement a weed and pest management control plan per Mitigation Measure AG-1. Compared to the proposed projects, this alternative would have similar impacts as the proposed projects.

Air Quality

Under Alternative 2, air emissions during construction would be less than the proposed projects because of the reduced site development. A less than significant impact with mitigation incorporated has been identified for the proposed projects during construction. Similar to the proposed projects, this alternative would be required to comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. Similar to the proposed projects, this alternative would be consistent with existing AQMPs and would not result in the creation of objectionable odors. This alternative would provide less MW generation compared to the proposed projects, thereby reducing its ability to provide a long-term source of renewable energy. Compared to the proposed projects, while this alternative would result in less air quality impacts, it would likely provide fewer desirable benefits to overall regional air quality as attributable to the proposed project.

Biological Resources

Under Alternative 2, the overall size of the solar energy facility would be reduced by 660 acres. Under Alternative 2, impacts on biological resources would be reduced by reducing the size of the project sites to minimize impacts on sensitive vegetation communities and riparian habitat. Although the overall size of the solar energy facilities would be reduced, there is still potential for impacts on special-status species, sensitive vegetation communities, and riparian habitat. Compared to the proposed projects, this alternative would result in a reduction in impacts on biological resources, but would still require mitigation.

Cultural Resources

Although the overall size of the solar energy facilities would be reduced by 660 acres, this alternative would still require ground-disturbing activities, which has the potential to disturb undocumented cultural resources that could qualify as historical resources or unique archaeological resources pursuant to CEQA, and human remains. This alternative would not avoid any direct impacts to any significant cultural resources sites, as none have been identified. Compared to the proposed projects, this alternative would result in a reduction in impacts on cultural resources because of the reduced site development, but would still require mitigation related to monitoring for inadvertent discovery.

Geology and Soils

Under Alternative 2, while the overall project footprint would be reduced, grading and construction of new facilities, such as the solar facility, battery energy storage, and gen-tie, would still occur. Similar to the proposed projects, this alternative would also be subject to potential impacts related to strong ground shaking, liquefaction, soil erosion, collapsible soils, expansive soils, and paleontological resources, and incorporation of mitigation measures would be required to minimize these impacts to a less than significant level. This alternative would result in similar geology and soil and paleontological resources impacts as the proposed projects.

Greenhouse Gas Emissions

Under Alternative 2, the overall project footprint would be reduced by approximately 660 acres, thereby contributing to reductions in GHG emissions during project construction. However, as a consequence of the reduced size of the projects, this alternative would result in a reduced power production capacity as compared to the proposed projects; hence, the overall benefits of the projects 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 projects, this alternative would not exceed MDAQMD's threshold of 100,000 $MTCO_2e$.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 projects, this alternative would not avoid or reduce a significant impact related to this issue and, therefore, it is considered similar to the proposed projects.

Hazards and Hazardous Materials

Similar to the proposed projects, construction of this alternative would involve the limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment. Also, as with the proposed projects, because the Phase I ESAs prepared for the proposed projects did not identify and on-site RECs, ASTs, or USTs, this alternative would not avoid or reduce impacts associated with hazardous materials. Further, no impact associated with potential safety hazards to the public residing or working within proximity to a public airport would occur. Implementation of this alternative would result in a similar hazards and hazardous materials impact as the proposed projects. This alternative would not avoid or lessen the impact to hazards and hazardous materials as no significant impact associated with the proposed projects has been identified.

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 area on-site, although to a lesser degree than the proposed projects. 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. Compared to the proposed projects, this alternative would result in less of an impact on hydrology/water quality.

Land Use Planning

Implementation of this alternative would not avoid or reduce a land use and planning impact, as no significant impact associated with the projects has been identified. As with the proposed projects, this alternative would be consistent with the County Land Use Ordinance, Division 17, RE Overlay Zone, which authorizes the development and operation of RE projects with an approved CUP. Implementation of this alternative would be similar to the proposed projects with respect to land use and planning.

Noise

As with the proposed projects, Alternative 2 would not result in significant noise impacts associated with construction activities. As with the proposed projects, 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 groundborne vibration, or expose persons to excessive aircraft noise. Because no significant noise impact has been identified associated with the proposed projects, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed projects.

Transportation

This alternative would result in a similar level of construction and operation-related vehicle and truck trips as compared to the proposed projects. However, the increase in vehicular traffic was identified as a less than significant impact for the proposed projects. In this context, Alternative 2 would not reduce or avoid an impact related to transportation and would result in less than significant impacts similar to the proposed projects. As with the proposed projects, Alternative 2 would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. This alternative would result in a similar impact related to transportation as the proposed projects.

Tribal Cultural Resources

Implementation of this alternative would not avoid or reduce a tribal cultural resources impact, as no significant impact associated with the projects has been identified. Impacts to tribal cultural resources under this alternative are similar to the proposed projects.

Utilities and Service Systems

Implementation of this alternative would result in an overall less demand for utilities, including water. However, this alternative would not avoid or reduce a significant impact associated with the projects as a less than significant impact to utilities has been identified associated with the projects.

Implementation of this alternative would not achieve to the same degree the beneficial impacts of providing renewable energy. As compared to the proposed projects, the overall demand for utilities would be less under this alternative.

Conclusion

As shown on Table 7-1, this alternative would reduce impacts to air quality, biological resources, cultural resources, hydrology/water quality, and utilities/service systems.

Comparison of Alternative 2: Reduced Project Site

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 350 MW of renewable solar energy, as there would be less area available for the placement of PV structures.

7.6 Environmentally Superior Alternative

Table 7-1 provides a qualitative comparison of the impacts for each alternative compared to the proposed projects. As noted on Table 7-1, the No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the projects. However, CEQA Guidelines Section 15126.6(e)(2) states that “if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” As shown on Table 7-1, Alternative 2 would be the environmental superior alternative because it would reduce impacts for the following environmental issue areas as compared to the proposed projects: air quality, biological resources, cultural resources, hydrology/water quality, and utilities/service systems.

Table 7-1. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
Aesthetics	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* *Less than Significant* *Comparison to Proposed Project:* Similar Impact
Agricultural Resources	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Similar Impact
Air Quality	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Less Impact
Biological Resources	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact (Avoid)	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Less Impact
Cultural Resources	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact (Avoid)	*CEQA Significance:* *Less than Significant with Mitigation* *Comparison to Proposed Project:* Less Impact

Table 7-1. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
Geology and Soils	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact (Avoid)	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Similar Impact
GHG Emissions	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Hazards and Hazardous Materials	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Hydrology/ Water Quality	Less than Significant with Mitigation	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact (Avoid)	*CEQA Significance:* Less than Significant with Mitigation *Comparison to Proposed Project:* Less Impact
Land Use/Planning	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Similar Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact

Table 7-1. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
Noise	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Transportation	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Tribal Cultural Resources	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Similar Impact	*CEQA Significance:* *Less than Significant* *Comparison to Proposed Project:* Similar Impact
Utilities/Service Systems	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Less Impact

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9 EIR Preparers and Persons and Organizations Contacted

9.1 EIR Preparers

This EIR was prepared for the County of Imperial by HDR at 591 Camino de la Reina, Suite 300, San Diego, CA 92108. The following professionals participated in its preparation:

County of Imperial

Jim Minnick, Planning & Development Services Director

Michael Abraham, AICP, Assistant Planning & Development Services Director

Diana Robinson, Planning Division Manager

David Black, Planner IV

HDR

Tim Gnibus, Principal

Sharyn Del Rosario, Project Manager

Andrew Belcourt, Senior Environmental Planner

Regan Del Rosario, Environmental Planner

Shelly Austin, Biological Resources Project Manager

Ronell Santos, Biologist 2

Manuel Guzman, Civil Engineer Geotechnical Section

Sharon Jacob, Geographic Information Systems Analyst

Katherine Turner, Document Production Administrator

HDR was assisted by the following consultants:

ECORP Consulting, Inc.

Visual Impact Assessment; Air Quality and Greenhouse Gas Assessment; Biological Technical Report; Aquatic Resources Delineation; Cultural Resources Inventory; Archeological and Built Resources Inventory Report; Noise Impact Assessment; Energy Impact Assessment; Water Supply Assessment

GS Lyon Consultants, Inc.

Phase I Environmental Site Assessment

KOA

Traffic Impact Study

9.2 Persons and Organizations Contacted

The following persons and organizations were contacted in preparation of this document:

- Imperial Irrigation District