Draft Environmental Impact Report

VEGA SES 6 Solar and Battery Storage Project

SCH No. 2022070146

Imperial County, California

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Prepared for

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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 6 Solar and Battery Storage Project and Ramon Substation expansion and to propose mitigation measures, where required, to reduce significant impacts.

Project Overview

VEGA 6

The solar energy facility site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel Number (APN) 034-160-002) in the unincorporated Imperial County, California. The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal.

The solar energy facility site is bound by undeveloped Open Space/Bureau of Land Management (BLM) land immediately to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

The proposed VEGA 6 project involves the construction and operation of an 80 megawatt (MW) photovoltaic (PV) solar facility with an integrated 160 MW battery storage system (BESS) on approximately 320 acres of privately-owned land. The proposed VEGA 6 project would be comprised of solar PV arrays panels, an on-site substation, BESS, gen-tie line, inverters, transformers, underground electrical cables, and access roads. The proposed gen-tie line would be approximately 4-miles long and would connect to the Imperial Irrigation District's (IID) existing 161 kV "L" transmission line. The entire gen-tie route would be on federal lands managed by BLM within the California Desert Conservation Area planning area.

Ramon Substation Expansion

Energy generated by the VEGA 6 project will be transmitted to IID's existing 161 kV "L" Line, with ultimate delivery to IID's Ramon Substation in Riverside County. IID has identified that upgrades to the Ramon Substation will be required in order to accommodate several planned utility-scale projects, including the VEGA 6 project. Upgrades to the Ramon Substation would involve expansion of an approximately 4-acre area immediately adjacent to the existing substation. The proposed upgrades to the Ramon Substation are necessary infrastructure improvements to accommodate several planned utility-scale projects, including the VEGA 6 project, to connect to the IID grid. Because it is a necessary infrastructure improvement to allow the VEGA 6 project to connect to the IID grid, the Ramon Substation expansion is considered a connected project for the purposes of CEQA review.

The existing Ramon Substation is located on a single parcel (APN 651-230-015) in unincorporated Riverside County, generally northeast of Cathedral City, north of the Interstate-10 Freeway. The existing substation currently occupies approximately 6.7 acres of the 11.26-acre parcel. The proposed upgrades would involve expansion of an approximately 4-acre area immediately adjacent to the existing substation. Immediately west of the existing Ramon Substation and proposed expansion area is the existing Southern California Edison Mirage Substation. Access to the existing substation is provided by Ramon Road, which is immediately south of the existing substation.

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 VEGA 6 project (Appendix A of this EIR), Imperial County (County) determined that environmental effects to Forestry Resources, Energy, Mineral Resources, Population/Housing, Public Services, Utilities (Wastewater, Stormwater, and Solid Waste), and Wildfire would not be potentially significant. Therefore, these impacts are not addressed in this EIR; however, the rationale for eliminating these issues is discussed in Chapter 6.0, Effects Found Not Significant.

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

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

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

Table ES-1 summarizes existing environmental impacts that were determined to be potentially significant, mitigation measures, and level of significance after mitigation associated with the VEGA 6 project. Table ES-2 summarizes existing environmental impacts that were determined to be potentially significant, mitigation measures, and level of significance after mitigation associated with the proposed Ramon Substation expansion.

Areas of Controversy and Issues to be Resolved

Areas of Concern

Section 15123(b)(2) of the CEQA Guidelines requires that an EIR identify areas of controversy known to the Lead Agency, including issues raised by other agencies and the public as well as issues to be resolved. A primary issue associated with this solar farm project, and other solar facility projects that are proposed in the County, is the corresponding land use compatibility and fiscal/economic impacts to the County. Through the environmental review process for this project, other areas of concern and issues to be resolved include potential impacts related to impacts to IID facilities, traffic, special-status species, and air quality. Detailed analyses of these topics are included within each corresponding section contained within this document.

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Table ES-1. Summary of VEGA 6 Project Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Air Quality			
Impact 3.3-1: Conflict with or obstruct implementation of the applicable air quality plan.	Potentially Significant	**AQ-1** **Fugitive Dust Control.** Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. ICAPCD will verify implementation and compliance with these measures as part of the grading permit review/approval process. **ICAPCD Standard Measures for Fugitive Dust (PM_{10}) Control** • All disturbed areas, including bulk material storage, which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative ground cover. • All on-site and offsite unpaved roads will be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. • The transport of bulk materials shall be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be 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	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		a cumulative distance of 50 linear feet or more onto a paved road within an urban area. • Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line. • The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved road shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants, and/or watering. **Standard Mitigation Measures for Construction Combustion Equipment** • Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel-powered equipment. • Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum. • Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use. • When commercially available, replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). **AQ-2** During construction activities, the construction contractor shall employ the following PM_{10} reducing measures: • All unpaved roads associated with construction shall be effectively stabilized of dust emissions using stabilizers/suppressant before the commencement of all construction phases. This will be conducted monthly at a rate of 0.1 gallon/ square yard of chemical dust suppressant.	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		• All vehicles accessing the project site on unpaved roads shall be limited to a speed of 15 miles per hour. The Planning and Development Services Department and ICAPCD shall verify implementation of this measure. **AQ-3** **Construction Equipment.** Construction equipment shall be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). A list of the construction equipment, including all off-road equipment utilized at each of the projects by make, model, year, horsepower and expected/actual hours of use, and the associated EPA Tier shall be submitted to the County Planning and Development Services Department and ICAPCD prior to the issuance of a grading permit. The equipment list shall be submitted periodically to ICAPCD to perform a 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-4** **Speed Limit.** During construction and operation of the proposed project, the applicant shall limit the speed of all vehicles operating onsite on unpaved roads to 15 miles per hour or less. **AQ-5** **Dust Suppression.** The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. All unpaved roads associated with construction shall be effectively stabilized of dust emissions using stabilizers/suppressant before the commencement of all construction phases. This will be conducted monthly at a rate of 0.1 gallon/ square yard of chemical dust suppressant. 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-6** **Dust Suppression Management Plan.** Prior to any earthmoving activity, the applicant shall submit a construction dust control plan and obtain ICAPCD and Imperial County	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		Planning and Development Services Department (ICPDS) approval. **AQ-7** **Operational Dust Control Plan.** Prior to issuance of a Certificate of Occupancy, the applicant shall submit an operations dust control plan and obtain ICAPCD and ICPDS approval. ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed project, ICAPCD shall review the project to determine if Rule 310 fees are applicable to the project.	
Impact 3.3-2: 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-7	Less than Significant
Biological Resources			
Impact 3.4-1: Potential impacts on special-status species.	Potentially Significant	**BIO-1** **Preconstruction 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 preconstruction nesting-bird survey shall be conducted by a qualified avian biologist to ensure that active bird nests, including those for the northern harrier, loggerhead shrike, black-tailed gnatcatcher, and burrowing owl, will not be disturbed or destroyed. The survey shall be completed no more than 3 days prior to initial ground disturbance. The nesting bird survey shall include the project area 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.	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		BIO-2 **Riparian Habitat or Sensitive Habitat Avoidance:** To the greatest extent possible, plans shall avoid impacts to disturbed tamarisk thicket habitats to minimize potential impacts to special-status species. **BIO-3** **Minimization of Impacts to Sensitive Species on BLM Land:** All vehicles shall stay on designated roads within BLM land to minimize impacts to habitat. Coordination with a qualified biologist shall occur prior to the staging of equipment and placement of temporary or permanent structures within BLM land. Additionally, a biologist shall demarcate temporary and permanent work spaces in the field prior to the commencement of construction-related activities. Construction plans shall incorporate measures to minimize and avoid impacts to habitats within this area. To control for introduction of invasive plant species, tires shall be cleaned prior to entering BLM lands. **BIO-4** **Biological Monitoring:** A qualified biologist shall be present to monitor all ground-disturbing in vegetated areas and vegetation-clearing activities conducted for the project. During each monitoring day, the biological monitor shall perform clearance survey “sweeps” at the start of each workday that vegetation clearing takes place to minimize impacts on special-status species with potential to occur (including, but not limited to, special-status or nesting bird species, flat-tailed horned lizard, and American badger). The monitor will be responsible for ensuring that impacts to special-status species, nesting birds, and active nests will be avoided to the greatest extent possible. Biological monitoring shall take place until the project area has been completely cleared of any vegetation. If an active nest is identified, the biological monitor shall establish an appropriate 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 no longer active by the biologist. If special-status wildlife species are detected during biological monitoring activities, then consultation with the USFWS or CDFW shall be conducted, and a mitigation plan shall be developed to avoid and offset impacts to these species. Mitigation measures may consist of work restrictions or additional biological monitoring activities after ground-disturbing activities are complete.	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		BIO-5 **Preconstruction Surveys for Burrowing Owl:** Preconstruction surveys for burrowing owl shall be conducted within the areas assessed as having burrowing owl potential of the project area and adjacent areas prior to the start of ground-disturbing activities. Two surveys shall be conducted, with the first survey being conducted between 30 and 14 days before initial ground disturbance (grading, grubbing, and construction), and the second survey being conducted no more than 24 hours prior to initial ground disturbance. If burrowing owls or suitable burrowing owl burrows with sign (e.g., whitewash, pellets, feathers, prey remains) are identified in the project area during the survey and impacts to those features are unavoidable, consultation with the CDFW shall be conducted and the methods for avoidance or passive relocation should be followed. **BIO-6** **Minimization of Impacts to Palm Springs Pocket Mouse:** Habitats on the VEGA 6 solar facility site and parts of the gen-tie line are suitable for the Palm Springs pocket mouse; presence could be assumed based on proximity of records and recommendations from small mammal experts that were consulted. If presence is assumed, consultation to develop suitable mitigation measures or in-kind mitigation to offset impacts with the CDFW may need to occur. If presence is not assumed, protocol surveys to determine presence or absence of Palm Springs pocket mouse are recommended. A preconstruction small mammal trapping survey shall be conducted for Palm Springs pocket mouse within suitable habitat in all areas of potential permanent and temporary disturbance lead by qualified biologists that are permitted to trap and handle small mammals under Memorandums of Understanding and Scientific Collection Permits with CDFW. Should Palm Springs pocket mouse individuals be identified during the preconstruction survey, consultation to develop suitable mitigation measures with the CDFW will occur. If the project area is found to be absent of Palm Springs pocket mouse, no further mitigation is required. **BIO-7** **Minimization of Impacts to Wetland/Riparian Habitat:** New structures shall not be placed within 50 feet of wetland or riparian habitat boundaries. A construction buffer of 300 feet shall be established around the wetlands and riparian habitats during bird breeding season (February 1 to August 31). Prior to construction, fencing shall be installed	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		approximately 10 feet from the wetland and riparian habitat boundaries within 50 feet of the VEGA 6 project area. Fencing shall be easily visible to construction personnel.	
Impact 3.4-2: Impact on riparian habitat or other sensitive natural communities.	Potentially Significant	**BIO-8** **Aquatic Resources Permitting:** If project-related impacts will occur to areas under the jurisdiction of the USACE, CDFW, or RWQCB, a regulatory permit with those agencies will be required prior to the impact occurring. Permitting includes preparation and submittal of a Preconstruction 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. 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 project must also identify and approve mitigation through the respective agencies. Mitigation can include onsite or offsite options or could include 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.	Less than Significant
Impact 3.4-3: Impact on state or federally-protected wetlands.	Potentially Significant	Implement Mitigation Measures BIO-2, BIO-7, and BIO-8.	Less than Significant
Impact 3.4-6: Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plan.	Potentially Significant	Implement Mitigation Measure BIO-3.	Less than Significant
Cultural Resources			
Impact 3.5-1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.	Potentially Significant	**CUL-1** **Prepare Phase I Cultural Resources Survey Report.** Prior to issuance of a grading permit, the project applicant shall retain a qualified archaeologist defined as one meeting the Secretary of the Interior's Professional Qualification	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		Standards (U.S. Department of the Interior 2008) to oversee a Phase I cultural resources survey for the VEGA 6 project, to determine if previously unidentified cultural resources exist within the project site and to relocate and evaluate the previously identified resources that have not yet been evaluated. The methods and results of the survey, as well as the records search, shall be summarized in a Phase I cultural resources survey report that follows the guidelines in Archaeological Resource Management Reports: Recommended Contents and Format, Department of Parks and Recreation, Office of Historic Preservation, State of California, 1990. The report shall address the requirements of CEQA. **CUL-2** **Evaluate Significance of Find.** If previously documented but unevaluated and/or newly documented archaeological resources are identified within the project site, they should be evaluated for inclusion in the CRHR and/or as unique archaeological resources. Should newly documented archaeological resources be found eligible for listing in the CRHR and/or constitute unique archaeological resources, avoidance and preservation in place is the preferred manner of mitigation. If avoidance is not feasible, a treatment plan should be developed by the qualified archaeologist in coordination with the project applicant and the lead agency that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resources.	
Impact 3.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.	Potentially Significant	**CUL-3** **Evaluate Significance of Find (Unknown Archaeological Resources).** 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.	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
			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 3.5-3: Disturb human remains.	Potentially Significant	**CUL-4**	**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).	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		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/Soils			
Impact 3.6-2: Possible risks to people and structures caused by seismic ground shaking.	Potentially Significant	**GEO-1** **Prepare Geotechnical Report(s) as Part of Final Engineering for the Project and Implement Required Measures.** Facility design for all project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by the project applicant. The final geotechnical and/or civil engineering report shall address and make recommendations on the following: • Site preparation • Soil bearing capacity • Appropriate sources and types of fill • Potential need for soil amendments • Structural foundations • Grading practices • Soil corrosion of concrete and steel • Erosion/winterization • Seismic ground shaking • Liquefaction • Expansive/unstable soils In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include subsurface testing of soil and groundwater conditions, and	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		shall determine appropriate foundation designs that are consistent with the version of the CBC that is applicable at the time building and grading permits are applied for. All recommendations contained in the final geotechnical engineering report shall be implemented by the project applicant. The final geotechnical and/or civil engineering report shall be submitted to Imperial County Public Works Department, Engineering Division for review and approval prior to issuance of building permits.	
Impact 3.6-5: Substantial soil erosion or the loss of topsoil.	Potentially Significant	Implement Mitigation Measures GEO-1 and 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 site, the consulting paleontologist shall prepare a paleontological Treatment and Monitoring Plan to include the methods that will be used to protect paleontological resources that may	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
			exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation of specimens into an accredited repository, and preparation of a report at the conclusion of the monitoring program.	
Hydrology/Water Quality				
Impact 3.9-1: 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 project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the project. The SWPPP shall incorporate control measures in the following categories: • Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching) • Sediment control practices (e.g., temporary sediment basins, fiber rolls) • Temporary and post-construction on- and off-site runoff controls • Special considerations and BMPs for water crossings and drainages • Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity • Waste management, handling, and disposal control practices	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		• Corrective action and spill contingency measures • Agency and responsible party contact information • Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure. **HYD-2** **Incorporate Post-Construction Runoff BMPs into Project Drainage Plan.** The project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both 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 3.9-3: Result in erosion or siltation on- or off-site.	Potentially Significant	Implement Mitigation Measure HYD-1.	Less than Significant
Impact 3.9-4: Increase the rate or amount of surface runoff in a	Potentially Significant	Implement Mitigation Measure HYD-2.	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
manner which would result in flooding on- or off-site.			
Impact 3.9-5: 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 3.9-8: 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

Table ES-2. Summary of Proposed Ramon Substation Expansion Impacts and Proposed Mitigation Measures

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
Biological Resources			
Impact 3.4-1: Potential impacts on special-status species.	Potentially Significant	**RS-BIO-1** **Coachella Valley Multiple Species Habitat Conservation Plan Fee Payment:** As a signatory to the Coachella Valley Multiple Species Habitat Conservation Plan, the IID shall require a local development mitigation fee prior to the issuance of building permits for the proposed use on the project site at the rates applicable at the time of payment of the fee as set forth in the most recent fee schedule. The Project applicant shall be required to provide documentation to the IID confirming the payment of the local development mitigation fee. The Coachella Valley milk-vetch and Coachella Valley fringe-toed lizard are federally listed species and CVMSHCP covered species with potential to occur within the project footprint. Direct impacts to these species' as a result of the covered Project activity would be in compliance with the CVMSHCP as long as the IID, a permittee of the CVMSHCP, submits a payment of the mitigation fee, complies with the requirements of CVMSHCP Section 4.2, Conservation Areas; Section 4.4, Avoidance, Minimization, and Mitigation Measures; and Section 4.5 Land Use Adjacency Guidelines, and is in full compliance with CEQA, CESA, and FESA requirements. **RS-BIO-2** **Biological Resource Protection Measures Prior to Construction:** a. Prior to the commencement of construction, a project biologist (a person with, at minimum, a bachelor's degree in biology, ecology, or environmental studies with familiarity with special status plant and wildlife species with the potential to be affected by the proposed Ramon Substation expansion) 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, and shall maintain communications with the contractor to ensure that issues relating to biological resources are appropriately and lawfully managed. The project biologist may designate	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		qualified biologists or biological monitors to help oversee project compliance or conduct preconstruction surveys for special status species. These biologists shall have familiarity with the species for which they would be conducting preconstruction surveys or monitoring construction activities. b. The project biologist or designated qualified biologist shall review final plans, designate areas that need temporary fencing (e.g., environmentally sensitive area [ESA] fencing), and monitor construction activities within and adjacent to areas with native vegetation communities or special status plant and wildlife species. The qualified biologist shall monitor activities within designated areas during critical times such as vegetation removal, initial ground disturbing activities, and the installation of BMPs and fencing to protect jurisdictional resources, and shall ensure that all regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed. The qualified biologist shall check construction barriers or exclusion fencing and shall provide corrective measures to the contractor to ensure that the barriers or fencing are maintained throughout construction. The qualified biologist shall have the authority to stop work if a special status wildlife species is encountered within the Project area during construction. Construction activities shall cease until the Project Biologist or qualified biologist determine(s) that the animal will not be harmed or that it has left the construction area on its own. The appropriate regulatory agency(ies) shall be notified within 24 hours of sighting of a special status wildlife species. c. Prior to the start of construction, all project personnel and contractors who will be on site during construction shall complete mandatory training conducted by the project biologist or a designated qualified biologist. Any new project personnel or contractors that come on board after the initiation of construction shall also be required to complete the mandatory Worker Environmental Awareness Program training before they commence with work. The training shall advise workers of potential impacts on jurisdictional resources. At a minimum, the	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		training shall include the following topics: (1) occurrences of special status species and special status vegetation communities in the project area (including vegetation communities subject to USACE, CDFW, and RWQCB jurisdiction), (2) the purpose for resource protection; (3) protective measures to be implemented in the field, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced to avoid jurisdictional resource areas in the field (i.e., avoid areas delineated on maps or on the Project site by fencing); (5) environmentally responsible construction practices; and (6) the protocol to resolve conflicts that may arise at any time during the construction process. d. Prior to any ground disturbance the project boundary will be fenced as a means to protect the adjacent lands. The fencing/signage shall be clearly marked in the field by construction personnel under the guidance of the biologist or designated employee. The fencing/signage will remain in place for the duration of the project activities and no work or other project activities will occur outside of the fenced area to incidental impacts to nearby species. Upon completion of project activities, the fencing/signage will be removed. e. Construction activities shall be limited to daylight hours to the extent feasible. If nighttime activities are unavoidable, then workers shall direct all lights for nighttime lighting into the work area and shall minimize the lighting of natural habitat areas adjacent to the work area. The contractor shall use light glare shields to reduce the extent of illumination into special status vegetation communities. If the work area is located near surface waters, the lighting shall be shielded such that it does not shine directly into the water. f. Clearing shall be confined to the minimum area necessary to facilitate construction activities. Cleared vegetation and spoils shall be disposed of daily at a permanent off site spoils location or at a temporary on site location that will not create habitat for special status wildlife species. Spoils and dredged material shall be disposed of at an approved site or facility in accordance with all applicable federal, state, and local regulations.	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		g. The Contractor shall avoid wildlife entrapment by completely covering or providing escape ramps for all excavated steep walled holes or trenches more than 1 foot deep at the end of each construction workday. The qualified biologist shall inspect open trenches and holes and shall remove or release any trapped wildlife found in the trenches or holes prior to filling by the construction contractor. h. Wildlife can be attracted to den like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar features; construction equipment; or construction debris left overnight in areas that may be occupied by special status species that could occupy such structures shall be inspected by a qualified biologist prior to being used for construction. Such inspections shall occur at the beginning of each day's activities for those materials to be used or moved that day. If necessary, and under the direct supervision of the biologist, the structure may be moved up to one time to isolate it from construction activities, until the special status species has moved from the structure of its own volition, has been captured and relocated, or has otherwise been removed from the structure. i. The spread of dust from work sites to special-status vegetation communities or habitats for special-status species on adjacent lands shall be minimized by use of a water truck. Dirt access roads, haul roads, and spoils areas shall be watered at least twice each day when being used during construction dry periods. **RS-BIO-3 Minimize and Avoid Impacts on Special-Status Species:**	

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		a. The project biologist shall conduct focused pre-construction surveys for federal- and State-listed and other special-status plants. All special-status plant species (including listed threatened or endangered species, and all CRPR 1A, 1B, 2, 3, and 4 ranked species) impacted by project activities shall be documented in pre-construction survey reports. Surveys shall be conducted during the appropriate season in all suitable habitat located within the project footprint. The field surveys and reporting must conform to current CDFW botanical field survey protocol (CDFG 2009) or more recent updates, if available. b. The project biologist shall conduct focused pre-construction surveys for any special-status wildlife species, including Coachella Valley fringe-toed lizard, flat-tailed horned lizard, burrowing owl, loggerhead shrike, vermilion flycatcher, Palm Springs pocket mouse, American badger, and Coachella Valley round-tailed ground squirrel. Surveys shall be conducted at least 14 days prior to the start of construction within suitable habitat located within the project footprint. At the discretion of the project Biologist, work will be halted if the species are highly disturbed.	
Impact 3.4-6: Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plan.	Potentially Significant	Implement Mitigation Measures RS-BIO-3.	Less than Significant
Cultural Resources			
Impact 3.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.	Potentially Significant	**RS-CUL-1 Evaluate Significance of Find (Unknown Archaeological Resources).** 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 County of Riverside	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures		Significance After Mitigation
			Planning Department. 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.	
Impact 3.5-3: Disturb human remains.	Potentially Significant	**RS-CUL-2**	**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 Riverside 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	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		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 County of Riverside Planning Department, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.	
Hydrology/Water Quality			
Impact 3.9-1: Violation of water quality standards.	Potentially Significant	**RS-HYD-1** **Prepare SWPPP and Implement BMPs Prior to Construction.** IID or its contractor shall prepare a SWPPP specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build the project. The SWPPP shall incorporate control measures in the following categories: • Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching) • Sediment control practices (e.g., temporary sediment basins, fiber rolls) • Temporary and post-construction on- and off-site runoff controls	Less than Significant

Environmental Impact	Significance Before Mitigation	Proposed Mitigation Measures	Significance After Mitigation
		• 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.	
Impact 3.9-3: Result in erosion or siltation on- or off-site.	Potentially Significant	Implement Mitigation Measures RS-HYD-1.	Less than Significant

Statement of Overriding Considerations

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

Project Alternatives

Alternatives Considered but Rejected

Alternative Site

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

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

Alternative 1: No Project/No Development Alternative

The CEQA Guidelines require analysis of the No Project Alternative (PRC Section 15126). According to Section 15126.6(e)(1), “the specific alternative of ‘no project’ shall also be evaluated along with its impact.” Also, pursuant to Section 15126.6(e)(2); “The ‘no project’ analysis shall discuss the existing conditions at the time the notice of preparation is published, … at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.”

The No Project/No Development Alternative assumes that the project, as proposed, would not be implemented and the project site would not be further developed with a solar energy project. The No Project/No Development Alternative would fail to meet any of the project objectives. 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 solar facility site to minimize impacts on riparian habitat and jurisdictional resources. There is riparian habitat associated with the detention basins within the solar facility site. Additional riparian habitat is associated with the agricultural drains and roadside ditches. Ephemeral drainages are located throughout the northern portion of the solar facility site.

This alternative would avoid development on portions of the solar facility site where riparian habitat and jurisdictional resources occur. The solar facility site would be reduced by approximately 109 acres from a total of 320 acres to 211 acres. Under this alternative, the gen-tie line alignment would be extended approximately 0.54 miles to the south.

Implementation of the Reduced Project Site Alternative would generally result in reduced impacts to air quality, biological resources, cultural resources, hydrology/water quality, and utilities/service systems. Alternative 2 would meet most of the basic objectives of the proposed project and should remain under consideration. However, this alternative would make it more difficult to achieve the overall objective of providing a total of 80 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 project. The No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the project. However, CEQA Guidelines Section 15126.6(e)(2) states that “if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” As shown in 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 project: air quality, biological resources, cultural resources, hydrology/water quality, and utilities/service systems.

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 and Visual Resources	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *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
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

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
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	No Impact	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Similar Impact	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Similar Impact
Noise and Vibration	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Public Services	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
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:* Less 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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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 6 Solar and Battery Storage Project and Ramon Substation Expansion. This EIR describes the existing environment that would be affected by, and the environmental impacts which could potentially result from the construction and operation of the proposed project as described in detail in Chapter 2.0 of this EIR.

1.1 Overview of the Proposed Project

1.1.1 VEGA 6

The solar energy facility site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel Number (APN) 034-160-002) in the unincorporated Imperial County, California. The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal.

The solar energy facility site is bound by undeveloped Open Space/Bureau of Land Management (BLM) land immediately to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

The proposed VEGA 6 project involves the construction and operation of an 80 megawatt (MW) photovoltaic (PV) solar facility with an integrated 160 MW battery storage system (BESS) on approximately 320 acres of privately-owned land. The proposed VEGA 6 project would be comprised of solar PV arrays panels, an on-site substation, BESS, gen-tie line, inverters, transformers, underground electrical cables, and access roads. The proposed gen-tie line would be approximately 4-miles long and would connect to the Imperial Irrigation District's (IID) existing 161 kV "L" transmission line. The entire gen-tie route would be on federal lands managed by BLM within the California Desert Conservation Area planning area.

1.1.2 Ramon Substation Expansion

Energy generated by the VEGA 6 project will be transmitted to IID's existing 161 kV "L" Line, with ultimate delivery to IID's Ramon Substation in Riverside County. IID has identified that upgrades to the Ramon Substation will be required in order to accommodate several planned utility-scale projects, including the VEGA 6 project. Upgrades to the Ramon Substation would involve expansion of an approximately 4-acre area immediately adjacent to the existing substation. The proposed upgrades to the Ramon Substation are necessary infrastructure improvements to accommodate several planned utility-scale projects, including the VEGA 6 project, to connect to the IID grid. Because it is a necessary infrastructure improvement to allow the VEGA 6 project to connect to the IID grid, the Ramon Substation expansion is considered a connected project for the purposes of CEQA review.

The existing Ramon Substation is located on a single parcel (APN 651-230-015) in unincorporated Riverside County, generally northeast of Cathedral City, north of the Interstate-10 Freeway. The

existing substation currently occupies approximately 6.7 acres of the 11.26-acre parcel. The proposed upgrades would involve expansion of an approximately 4-acre area immediately adjacent to the existing substation. Immediately west of the existing Ramon Substation and proposed expansion area is the existing Southern California Edison Mirage Substation. Access to the existing substation is provided by Ramon Road, which is immediately south of the existing substation.

1.1.3 Agency Roles and Responsibilities

County of Imperial

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

1. **General Plan Amendment #22-001.** An amendment to the County's General Plan, Renewable Energy and Transmission Element is required to implement the proposed project. CUP applications proposed for specific renewable energy projects not located in the Renewable Energy (RE) Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. The project site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify the project site (APN No. 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.
2. **Zone Change #22-0001.** The project site is currently zoned Open Space/Preservation (S-2). The applicant is requesting a Zone Change to include/classify the project site (APN No. 034-160-002) into the RE Overlay Zone to allow for solar and battery storage development.
3. **Approval of CUP #22-0005.** Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility with an integrated BESS. The project site is located on one privately-owned legal parcel zoned Open Space/Preservation (S-2). 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)*

4. **Approval of CUP (CUP 22-0027) – Groundwater Well.** Pursuant to Title 9 Division 21: Water Well Regulations, §92102.00, the Applicant will be required to obtain a CUP for the 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.

5. **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)

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.

- **Imperial Irrigation District (IID) (CEQA Responsible Agency).** The IID is a Responsible Agency as defined by CEQA Guideline Section 15381 as it relates to the proposed Ramon Substation improvements. In this capacity, the IID has the discretionary authority to approve improvements to the existing Ramon Substation, and would utilize the information contained in this EIR, as prepared by the County of Imperial as the CEQA Lead Agency, as the CEQA clearance for the substation improvements.
- **Bureau of Land Management (BLM) (National Environmental Policy Act – Federal Lead Agency)**. Right-of-way grant for the off-site gen-tie line to be located on federal lands under the jurisdiction of the BLM. The proposed ROW would be 60-feet-wide.
- **County of Riverside.** The Ramon Substation expansion area is zoned General Residential Zone (R-3) in the Riverside County Zoning Ordinance. The Riverside County Zoning Ordinance does not identify public utilities as a permitted or conditional use in R-3. However, per Section 17.208.010, facilities for the storage or transmission of electrical energy is permitted with a Public Use Permit:

  > *Facilities for the storage or transmission of electrical energy where the County is not preempted by law from exercising jurisdiction. This subsection shall take precedence over and supersede any conflicting provision in any zone classification. Facilities for the storage or transmission of electrical energy shall not be subject to the development standards of the zone classification in which they are located.*

  The existing Ramon Substation is currently operating under an approved Public Use Permit. IID would apply for an amendment to its Public Use Permit for the proposed Ramon Substation expansion.

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.

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 County of Riverside General Plan

The County of Riverside General Plan is a policy document that reflects the County's vision for the future of Riverside County. The General Plan was comprehensively revised in 2003 and most recently updated in 2021. In addition, the General Plan divides the County into 19 Area Plans. The purpose of these Area Plans is to provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas. The Ramon Substation expansion area is located within the Western Coachella Valley Area Plan (WCVAP) of the General Plan.

1.2.3 Western Coachella Valley Area Plan

The Ramon Substation expansion area is located within the WCVAP of the General Plan. The WCVAP is not a standalone document, but rather an extension of the County of Riverside General Plan. It provides a customized direction specifically for this planning area. The WCVAP provides a description of the location, physical characteristic, and special features, in addition to a land use plan, policies, and exhibits to better understand the physical, environmental, and regulatory characteristics that comprise the area.

1.2.4 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.

1.2.5 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.

1.2.6 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.

1.2.7 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.

1.2.8 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.

1.2.9 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.

1.2.10 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.

1.2.11 Federal Land Policy and Management Act

The Federal Land Policy and Management Act (FLPMA) is a federal law that governs the way in which the public lands administered by the BLM are managed. The act set out a multiple use management policy for the BLM in which the agency would balance its management of the land to meet diverse needs, including recreation, grazing, timber and mineral production, fish and wildlife protection, and oil and gas production.

BLM is authorized to grant, issue or renew rights-of-way (ROW) over, upon, under, or through public lands. A ROW grant is an authorization to use a specific piece of public land for a certain project, such as roads, pipelines, transmission lines, and communication sites. A ROW grant authorizes rights and privileges for a specific use of the land for a specific period of time. The proposed right-of-way request associated with the project is subject to review and approval by the BLM.

1.2.12 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 project (the portion of the project [gen-tie line] not otherwise located on private lands).

1.2.13 Desert Renewable Energy Conservation Plan

The Desert Renewable Energy Conservation Plan (DRECP) created a Land Use Plan Amendment to the CDCA Plan. The DRECP has been developed as an interagency plan by the BLM, the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission (CEC), and the California Department of Fish and Wildlife (CDFW) to (1) advance federal and state natural resource conservation goals and other federal land management goals; (2) meet the requirements of the federal Endangered Species Act, California Endangered Species Act, Natural Community Conservation Planning Act, and FLPMA; and (3) facilitate the timely and streamlined permitting of renewable energy projects, all in the Mojave and Colorado/Sonoran desert regions of Southern California.

1.2.14 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.

1.2.15 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.

1.2.16 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.

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

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

1.3 Purpose of an EIR

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

1.4 EIR Process

1.4.1 Availability of Reports

This Draft EIR has been distributed to various federal, state, regional, local agencies and interested parties for a 45-day public review period, from Date through Date, 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 certify 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 6 Solar and Battery Storage Project on July 11, 2022. The NOP was distributed to city, county, state, and federal agencies, other public agencies, and various interested private organizations and individuals in order to define the scope of the EIR. The NOP was also published in the Imperial Valley Press on July 10, 2022. The purpose of the NOP was to identify public agency and

public concerns regarding the potential impacts of the project, and the scope and content of environmental issues to be addressed in the EIR. Correspondence in response to the NOP was received from the following entities and persons:

- Imperial Irrigation District
- California Department of Transportation, District 11
- Defenders of Wildlife
- Imperial County Air Pollution Control District

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 6 Solar and Battery Storage Project was discussed as an informational item at the County's Environmental Evaluation Committee meeting on July 28, 2022.

Additionally, a virtual scoping meeting for the general public as well public agencies was held on July 28, 2022, at 6:00 p.m., to further obtain input as to the scope of environmental issues to be examined in the EIR. The NOP, which included the scoping meeting date and location, was published in the Imperial Valley Press on July 10, 2022. A virtual meeting was held by the Imperial County Planning & Development Services Department. At the scoping meeting, members of the public were invited to ask questions regarding the proposed project and the environmental review process, and to comment both verbally and in writing on the scope and content of the EIR.

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
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- GHG Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Noise and Vibration
- Public Services (Fire Protection and Police Protection)
- Transportation

- Tribal Cultural Resources
- Utilities/Service Systems (Water Supply)

Eliminated from Further Review in Notice of Preparation

The initial study (IS)/NOP completed by the County (Appendix A of this EIR) determined that environmental effects to Agriculture and 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 potential impacts related to the conversion of farmland to non-agricultural uses, damage to crops, wildlife, water supply, fire hazards associated with the battery energy storage system, health effects from air pollution, noise and hazardous materials, and change of visual character.

1.4.5 Document Organization

The structure of the Draft EIR is identified below. The Draft EIR is organized into 10 chapters.

- The **Executive Summary** provides a summary of the proposed project, including a summary of project impacts, mitigation measures, and project alternatives.
- **Chapter 1 Introduction** provides a brief introduction of the proposed project; relationship to statutes, regulations and other plans; the purpose of an EIR; public participation opportunities; availability of reports; and comments received on the NOP.
- **Chapter 2 Project Description** provides a description of the VEGA SES 6 Solar and Battery Storage Project and Ramon Substation Expansion. This chapter also defines the goals and objectives of the proposed project, provides details regarding the individual components that together comprise the project, and identifies the discretionary approvals required for implementation of the project.
- **Chapter 3 Environmental Analysis** provides a description of the existing environmental setting and conditions, an analysis of the environmental impacts of the project for the following environmental issues: aesthetics; agricultural resources; air quality; biological resources; cultural resources (includes tribal cultural resources); geology and soils; GHG emissions; hazards and hazardous materials; hydrology/water quality; land use and planning; noise and vibration; public services; recreation; transportation/traffic; and utilities/service systems. This chapter also identifies mitigation measures to address potential impacts to the environmental issues identified above.

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

2 Project Description

Chapter 2 provides a description of the VEGA SES 6 Solar and Battery Storage Project (VEGA 6). This chapter also defines the goals and objectives of the proposed VEGA 6 project, provides details regarding the individual components that together comprise the project, and identifies the discretionary approvals required for project implementation.

Apex Energy Solutions, LLC (Applicant) is requesting approval of a General Plan amendment, zone change, and conditional use permit (CUP) to allow for the construction and operation of a solar energy facility with an integrated battery energy storage system. The proposed VEGA 6 project consists of three primary components: 1) an 80 megawatt (MW) solar energy generation equipment and associated facilities including a substation and access roads (herein referred to as "solar energy facility"); 2) a 160 MW battery energy storage system (BESS); and, 3) electrical generator intertie (gen-tie) transmission line to connect to the Imperial Irrigation District's (IID) 161 kilovolt (kV) "L" Line.

Energy generated by the VEGA 6 project will be transmitted to IID's existing 161 kV "L" Line, with ultimate delivery to IID's Ramon Substation in Riverside County. IID has identified that upgrades to the Ramon Substation will be required in order to accommodate several planned utility-scale projects, including the VEGA 6 project. Upgrades to the Ramon Substation would involve expansion of an approximately 4-acre area immediately adjacent to the existing substation. The proposed upgrades to the Ramon Substation are necessary infrastructure improvements to accommodate several planned utility-scale projects, including the VEGA 6 project, to connect to the IID grid. Because it is a necessary infrastructure improvement to allow the VEGA 6 project to connect to the IID grid, the Ramon Substation expansion is considered a connected project for the purposes of CEQA review. Therefore, this EIR evaluates the potential environmental impacts of the proposed expansion of the Ramon Substation.

2.1 Project Location

2.1.1 Solar Energy Facility

The solar energy facility site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel Number (APN) 034-160-002) in the unincorporated Imperial County, California (Figure 2-1). The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal (Figure 2-2).

The topography of the solar energy facility site is relatively flat, with elevations ranging between -39 meters (-129 feet) and -6 meters (-21 feet). The solar energy facility site is bound by undeveloped Open Space/Bureau of Land Management (BLM) land immediately to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

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Figure 2-1. Regional Location

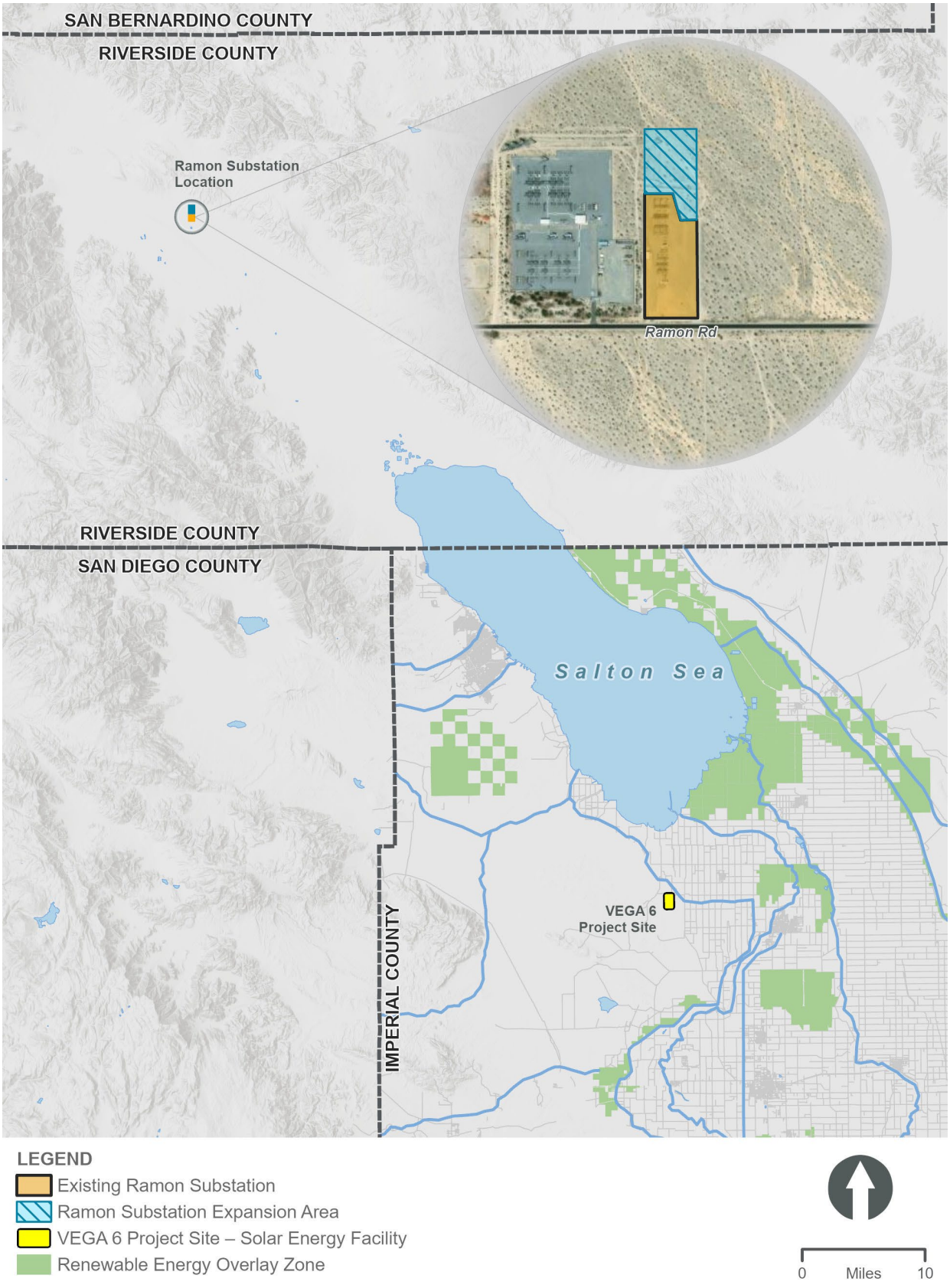

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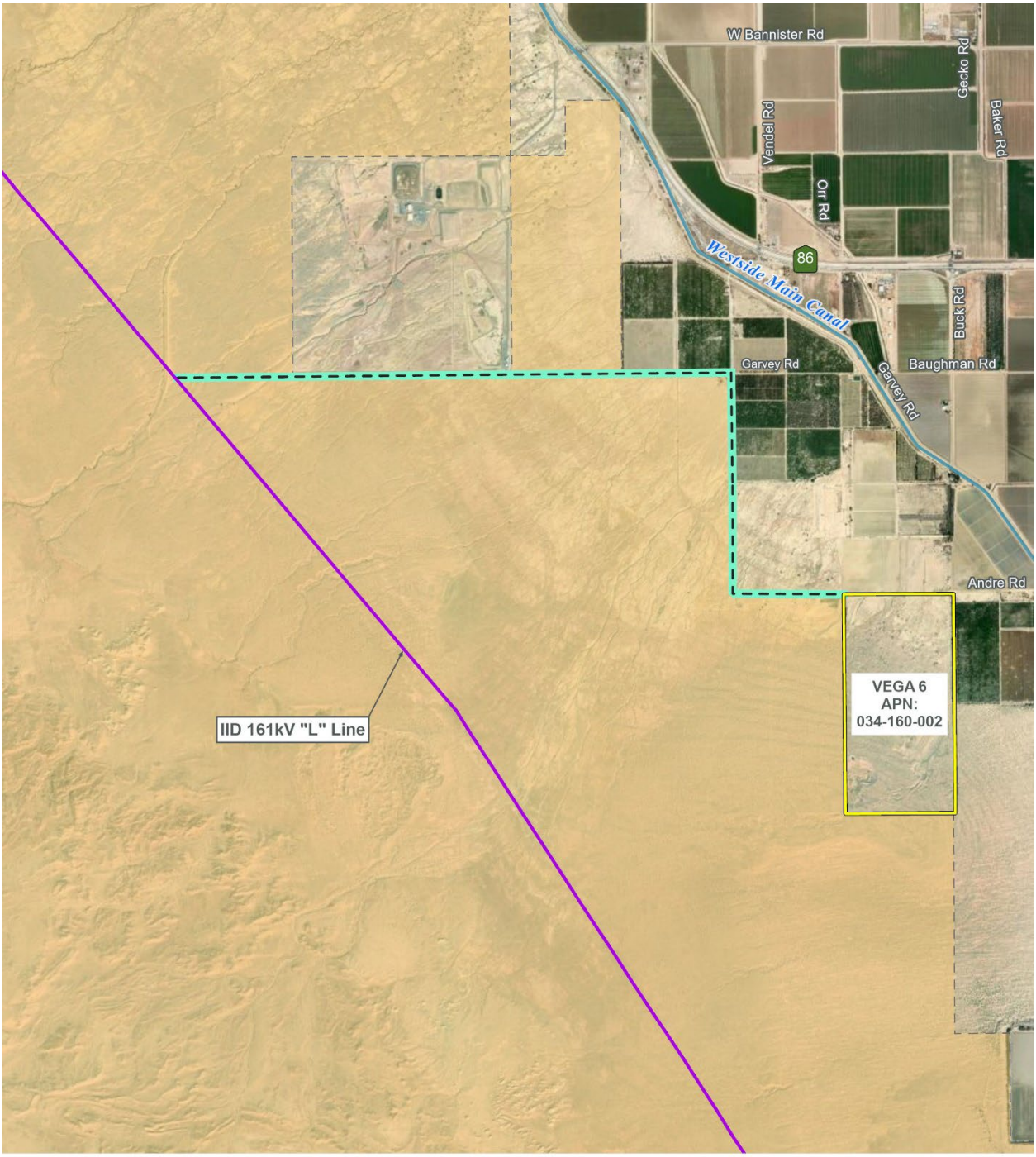
Figure 2-2. VEGA 6 Project Site



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2.1.2 Battery Energy Storage System

As depicted in Figure 2-3, the project includes a BESS, which is proposed to be located in the northwest portion of the solar energy facility site.

2.1.3 Gen-Tie Line

The proposed project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the Bureau of Land Management (BLM) within the California Desert Conservation Area (CDCA) planning area. As shown in Figure 2-4, the gen-tie route begins at the northwest corner of the solar facility site, heads west approximately 0.5 miles on BLM land, then north for approximately 1 mile, and then west for 2.5 miles along Garvey Road where it would connect to the IID 161 kV "L" Line.

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 entire project site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify the project site (APN No. 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.

2.1.5 Ramon Substation Expansion

The existing Ramon Substation is located on a single parcel (APN 651-230-015) in unincorporated Riverside County, generally northeast of Cathedral City, north of the Interstate-10 Freeway. The existing substation currently occupies approximately 6.7 acres of the 11.26-acre parcel. As shown in Figure 2-5, the proposed upgrades would involve expansion of an approximately 4-acre area immediately adjacent to the existing substation within APN 651-230-015. Immediately west of the existing Ramon Substation and proposed expansion area is the existing SCE Mirage Substation. Access to the existing substation is provided by Ramon Road, which is immediately south of the existing substation.

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Figure 2-3. VEGA 6 Site Plan

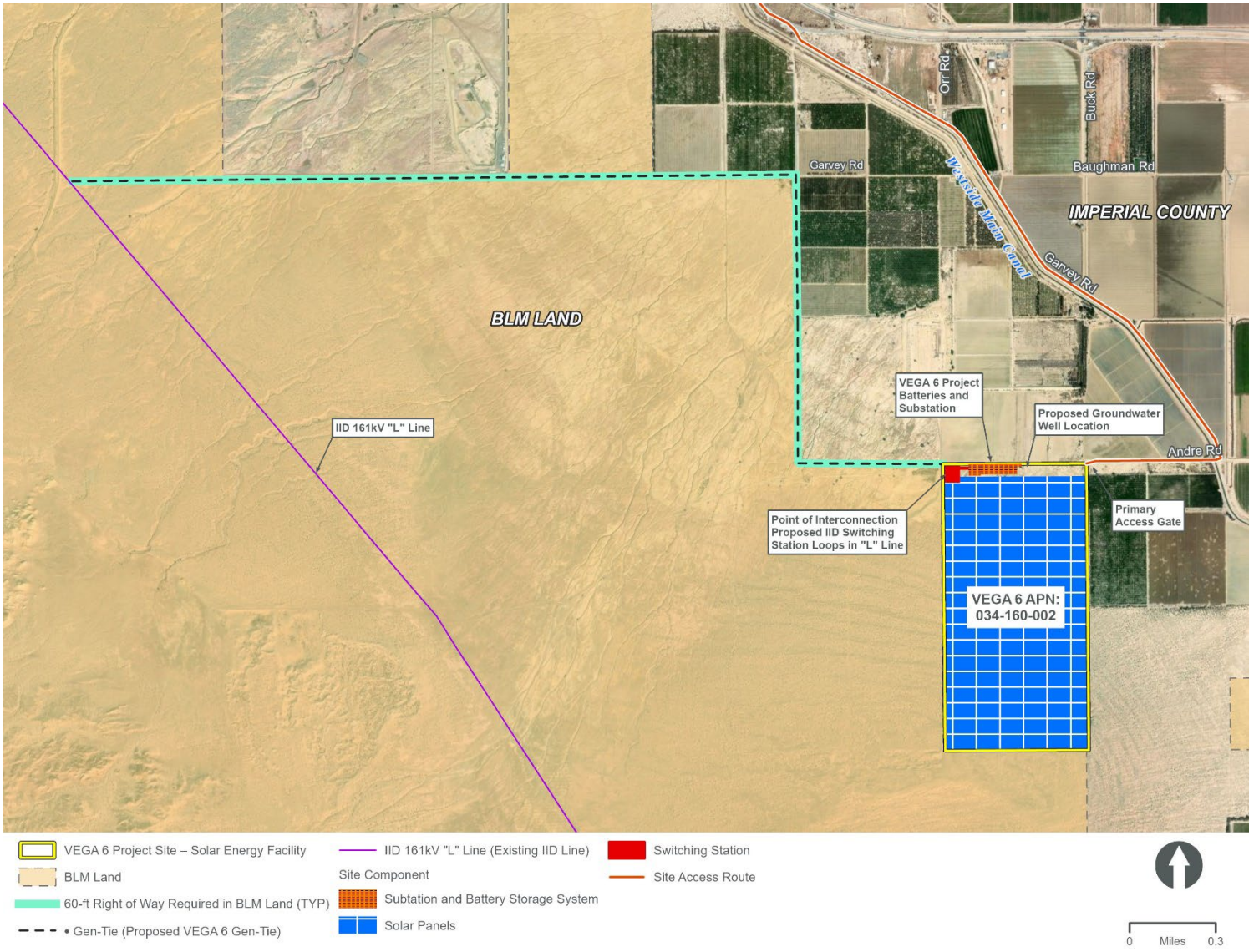

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Figure 2-4. VEGA 6 Gen-Tie Route

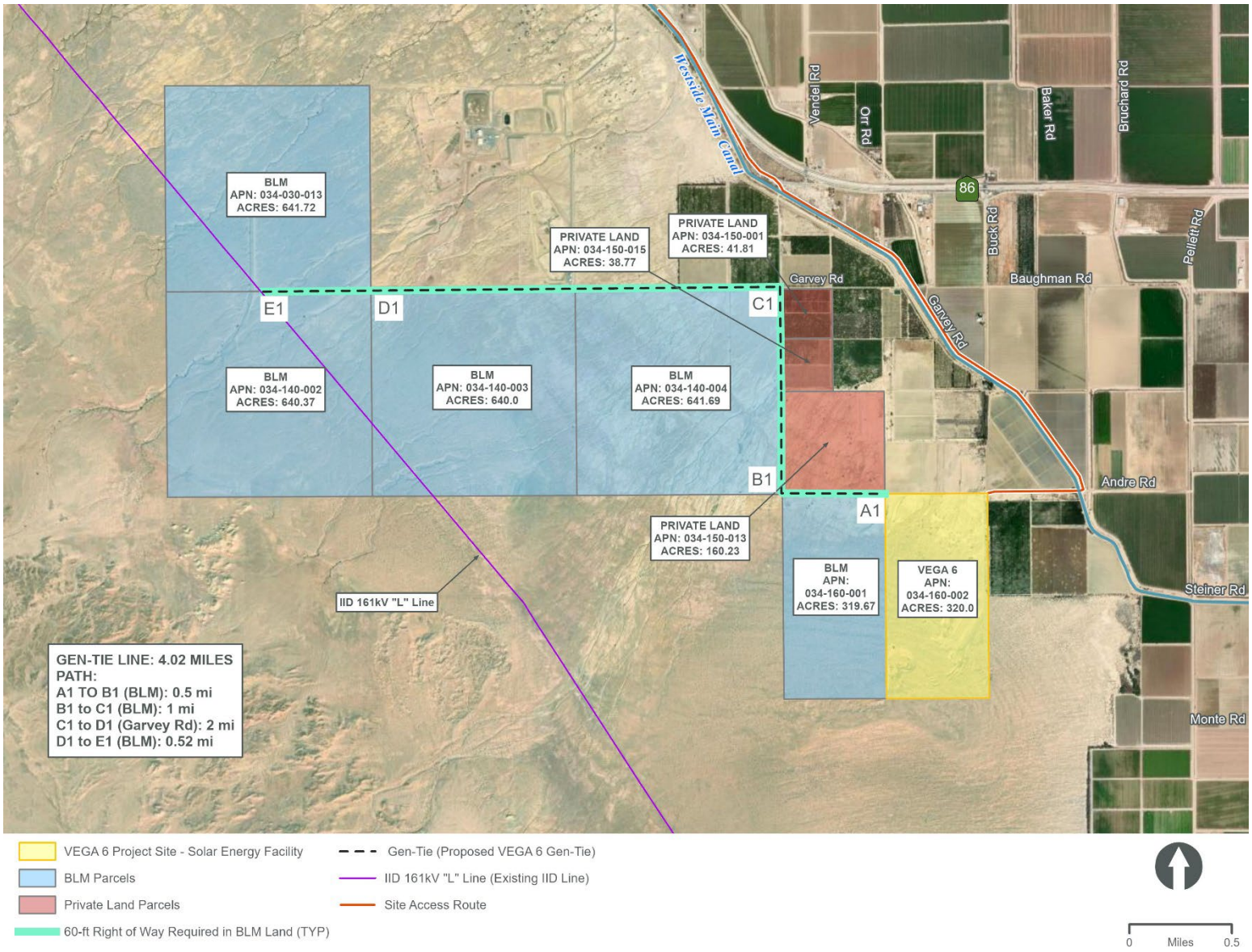

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Figure 2-5. CDCA and DRECP Planning Areas

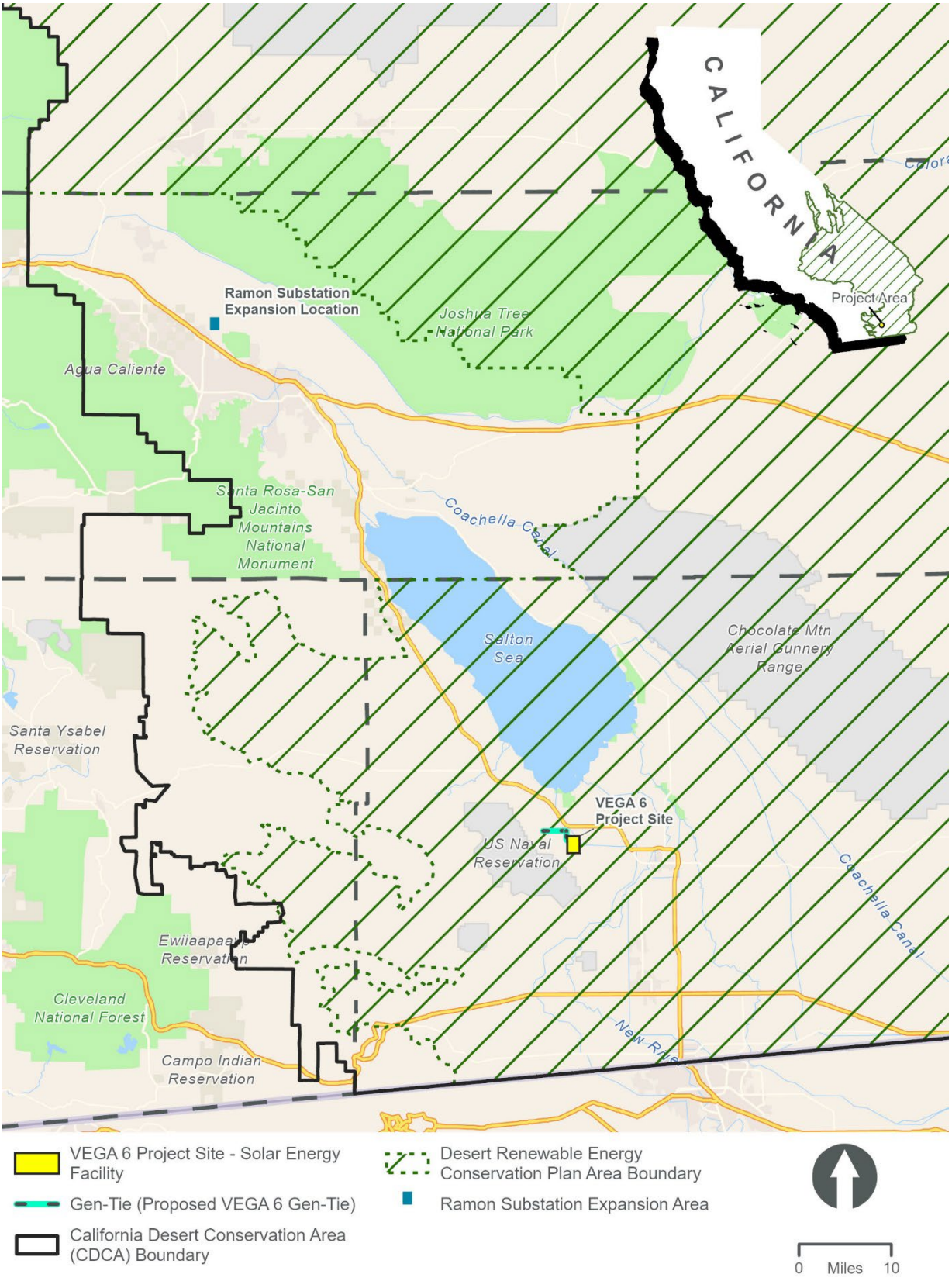

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Figure 2-6. DRECP Renewable Energy Development Focus Areas

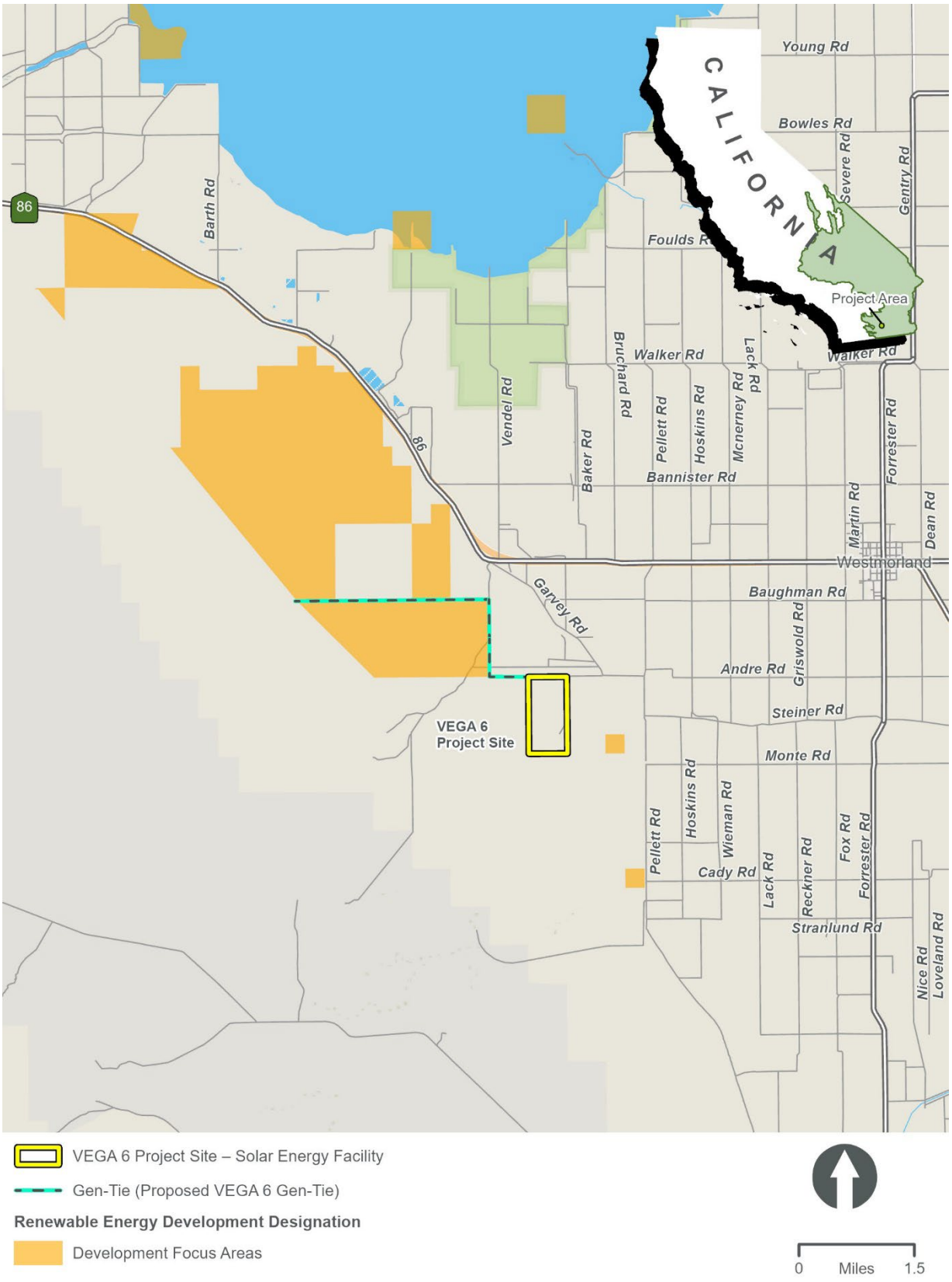

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Figure 2-7. Ramon Substation Expansion Area Location

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2.2 Project Objectives

- Construct and operate a solar energy facility capable of producing up to 80 MW alternating current (AC) of electricity to assist the State of California in achieving its 60 percent renewable portfolio standard by 2030.
- Provide a 160 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.
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Senate Bill 32.
- Interconnect directly to IID's existing electrical transmission system.
    - Minimize and mitigate any potential impact to sensitive environmental resources within the project area.

2.3 VEGA 6 Characteristics

The proposed VEGA 6 project involves the construction and operation of a 80 MW photovoltaic (PV) solar facility with an integrated 160 MW BESS on approximately 320 acres of privately-owned land. The proposed VEGA 6 project would be comprised of solar PV arrays panels, an on-site substation, BESS, gen-tie line, inverters, transformers, underground electrical cables, and access roads. These project components are described in detail below and depicted in Figure 2-3.

2.3.1 Photovoltaic Panels/Solar Arrays

The VEGA 6 project proposes to use either thin film or crystalline solar 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 fixed-frame racks would be secured at a fixed tilt of 20 to 30 degrees from horizontal facing a southerly direction. As proposed, individual PV modules would be mounted two high on a fixed frame, providing 12 to 24 inches of 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. Individual HSAT PV modules, each approximately 2 feet wide by 4 feet long (depending on the specific PV technology selected), would be mounted on a frame which is attached to an HSAT system. These HSAT arrays would be separated from each other and the perimeter security fence by up to 30-foot-wide roads, consistent with County emergency access requirements.

2.3.2 Battery Energy Storage System

The proposed BESS would be constructed adjacent to the project's substation and would consist of either lithium ion or flow batteries. The batteries will either be housed in storage containers or buildings fitted with heating, ventilation, and air conditioning and fire suppression systems. 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 direct current (DC) power to alternating current (AC) power. The BESS would be capable of storing up to 160 MW. Figure 2-6 depicts representative examples of a typical BESS.

2.3.3 Interconnection Facilities

As shown in Figure 2-3, a new substation would be constructed in the northwest portion of the solar energy facility site. The inverters would be connected to pad-mounted transformers to raise the voltage from 385V to the 34.5 kV voltage level of the collector system inside the project substation. This system collects the energy from all the inverters and then transmits it through a generator step-up transformer, which steps up the voltage level to the 161 kV of the existing IID "L" line.

A new interconnection switching station would be constructed in the northwest corner of the solar energy facility site, immediately adjacent to the substation. 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 equipped with two circuit breakers, allowing for looping in of the IID 161 kV "L" transmission line as well as connection to the project's gen-tie line. The substation and switching station would be connected via a single overhead 161 kV line. The switching station would be enclosed within its own fence.

The medium voltage power produced by the VEGA 6 project would be conveyed underground, or aboveground where necessary to cross over any sensitive site features, to connect to the project's interconnection facilities. The project's interconnection facilities design would meet all necessary utility standards and requirements. As required, surge arrestors would be used to protect facilities and auxiliary equipment from lightning strikes or other disturbances. Distribution from the site would be via an overhead connection.

Figure 2-8. Representative Example of Battery Energy Storage Systems

2.3.4 Gen-Tie Line

The proposed VEGA 6 project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the BLM within the California Desert Conservation Area (CDCA) planning area. As shown in Figure 2-4, the gen-tie route begins at the northwest corner of the solar facility site, heads west approximately 0.5 miles on BLM land, then north for approximately 1 mile, and then west for 2.5 miles along Garvey Road where it would connect to IID's 161 kV "L" Line.

The 4-mile gen-tie line would include a total of 77 pole structures, with a combination of tangent double circuit wood pole structures (Figure 2-7), deadend double circuit wood pole structures (Figure 2-8), and double circuit steel poles (Figure 2-9). At the interconnection point, three-wood pole structures and deadend wood structures would be used. The height of the proposed gen-tie transmission structures would be 75 feet.

The electrical energy produced by the VEGA 6 project would be conducted through the project substation to the proposed 161 kV gen-tie line and delivered to the existing IID-approved point of interconnection at the IID 161 kV "L" line.

Bureau of Land Management Right-of-Way Request

Because the proposed gen-tie line would be located entirely on BLM land, the project applicant has filed a right-of-way (ROW) grant application with the BLM for a permit to construct, operate, and maintain the gen-tie line. As shown in Figure 2-4, the proposed ROW would be 60-feet-wide. A total of 77 pole structures would be set within this ROW. Construction of the gen-tie line would result in approximately 24.5 acres of disturbed area.

2.3.5 Security

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

2.3.6 Site Access

The solar energy facility site would include one primary access driveway, proposed via State Route (SR) 78 from the north and west, and across the Westside Main Canal, via county roadways (Garvey Road and Andre Road). This driveway would be provided with a minimum of 30-foot double swing gates with “Knox Box” for keyed entry. Internal to the solar energy facility site, up to 30-foot-wide roads would be provided between the PV arrays, as well as around the perimeter of the solar energy facility site yet inside the perimeter security fence to provide access to all areas of the site for maintenance and emergency vehicles.

Figure 2-9. Representative Example of Tangent Double Circuit Wood Pole Structure

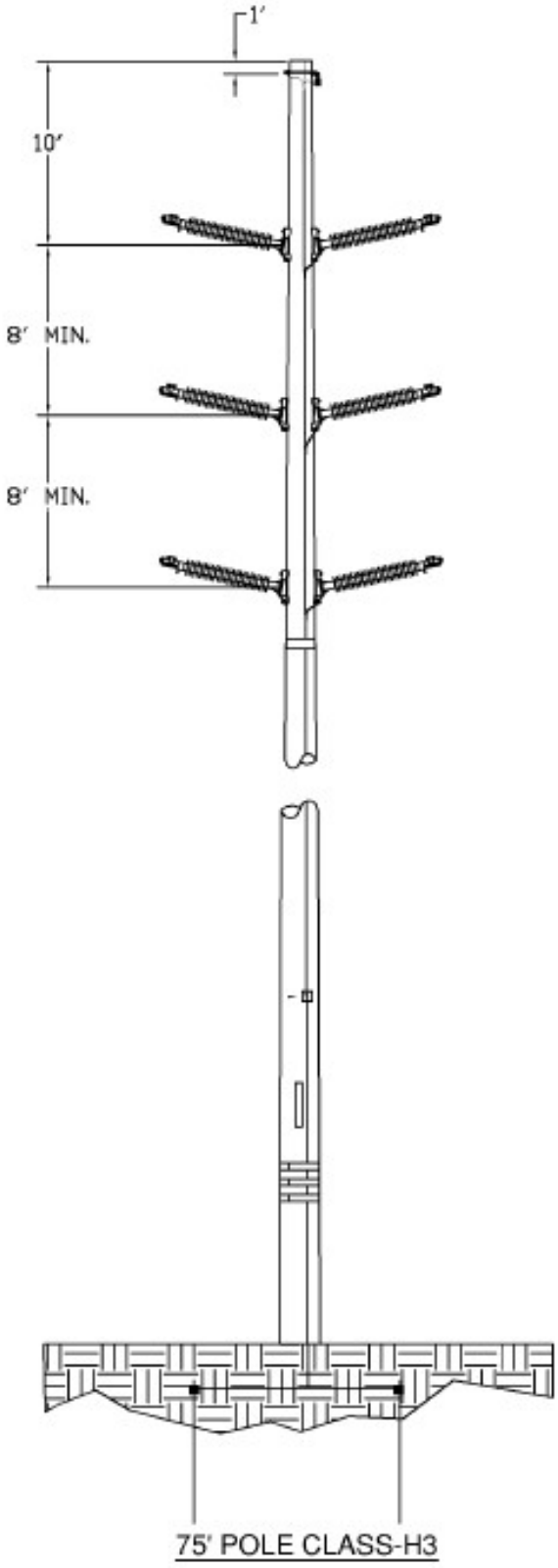

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Figure 2-10. Representative Example of Deadend 3-Pole Structure

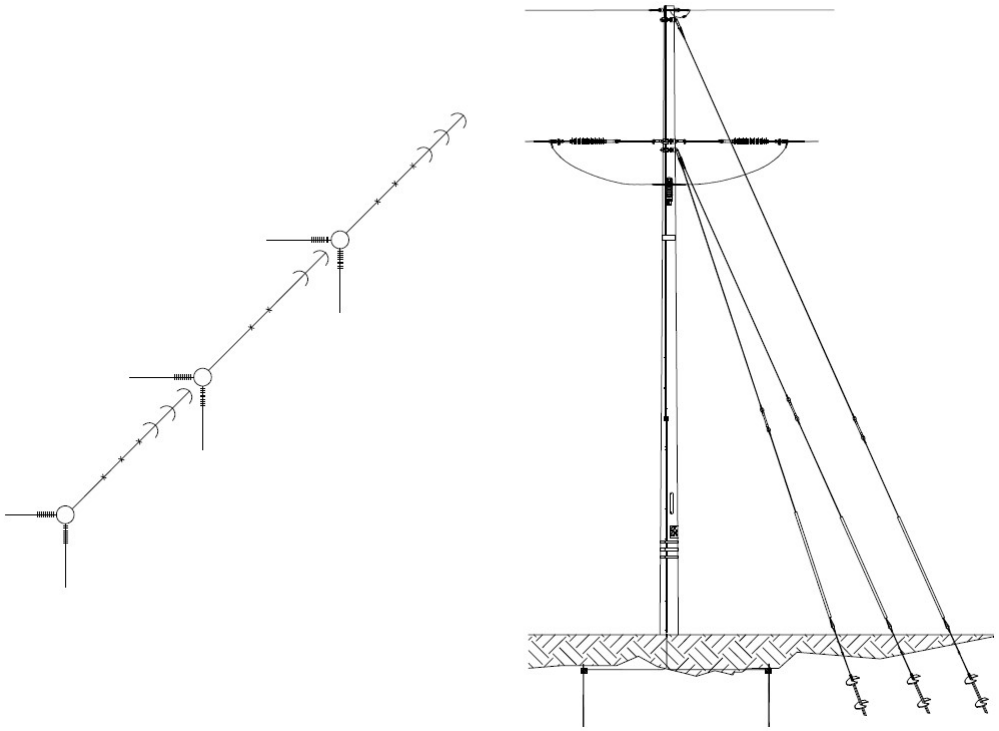
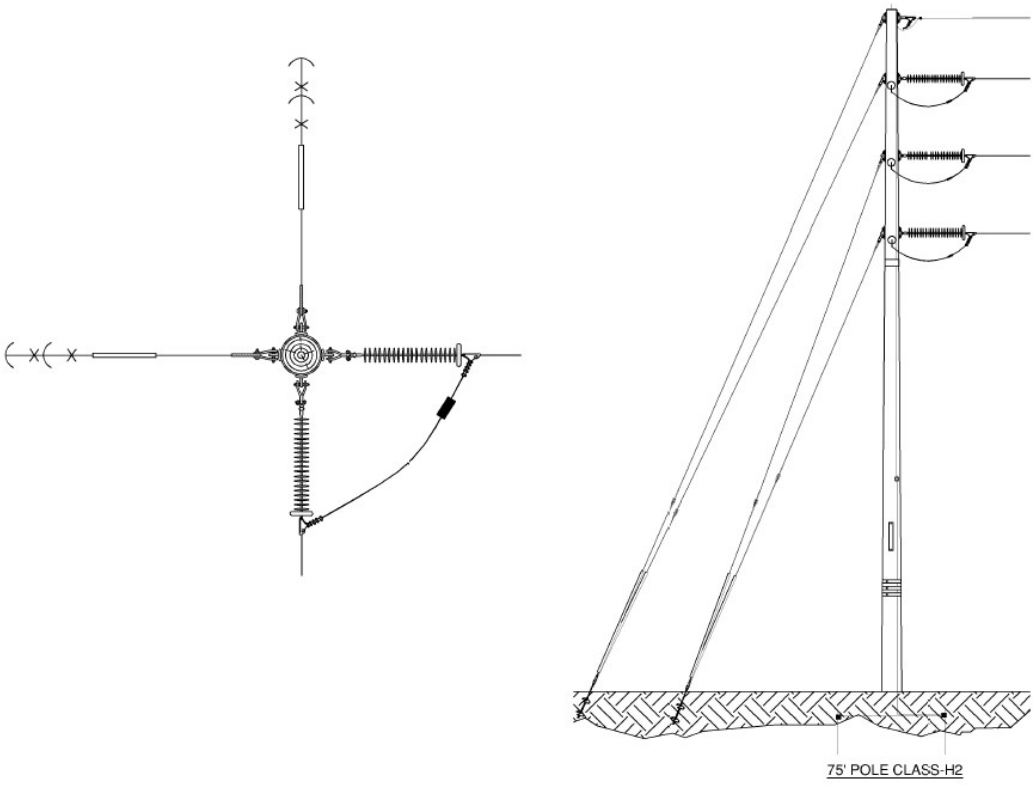


Figure 2-11. Representative Example of Deadend Double Circuit Pole Structure



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 project would include lithium-ion batteries. For lithium-ion batteries storage, a system would be used that would contain the fire event and encourage suppression through cooling, isolation, and containment. Suppressing a lithium-ion (secondary) battery is best accomplished by cooling the burning material. A gaseous fire suppressant agent (e.g., 3M™ Novec™ 1230 Fire Protection Fluid or similar) and an automatic fire extinguishing system with sound and light alarms would be used for lithium-ion batteries.

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

2.3.8 Construction

Construction activities would primarily involve demolition and grubbing; grading of the project area to establish access roads and pads for electrical equipment (inverters and step–up transformers); trenching for underground electrical collection lines; the installation of solar equipment and security fencing; and the offsite infrastructure work required for the IID gen-tie transmission line route. Stormwater management facilities would be constructed internally within the solar energy facility site and would consist of basins and infiltration areas. Construction is estimated to take 12 to 18 months and would begin in 2024. A temporary, portable construction supply container would be located at the solar energy facility site at the beginning of construction and removed at the end of construction.

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).

The number of on-site construction workers for the solar energy facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the BESS and the substation is not expected to exceed 100 workers at any one time.

2.3.9 Operations and Maintenance

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

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 solar energy facility site would periodically (approximately every 3 months) be removed manually and/or treated with herbicides.

2.3.10 Water Use

The VEGA 6 project site is approximately 5 to 10 miles away from the nearest municipal water systems (i.e., the community of Westmorland and the City of Brawley, respectively). The VEGA 6 project site is also located outside of IID's Imperial Unit, and therefore, does not have water service from IID. Water for construction (primarily dust control) would be obtained from a new onsite groundwater supply well or wells to be drilled and installed as part of the VEGA 6 project (see Figure 2-3). Potable water would be brought to the VEGA 6 project site for drinking and domestic needs.

Construction

The proposed VEGA 6 project would require approximately 170-acre feet (AF) of water for dust suppression and site grading during construction of the arrays, BESS area, and onsite substation.

Operation and Maintenance

Periodic washing of the PV modules is not expected to be necessary but could be needed to remove dust to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at 8 AF per year.

2.3.11 Restoration of the VEGA 6 Project Site

Electricity generated by the facility could be sold under the terms of a PPA with a power purchaser (i.e., utility service provider). At the end of the PPA term, the owner of the facility may choose to enter into a subsequent PPA, update technology and re-commission, or decommission and remove the generating facility and its components. The anticipated operational life of the project is 25 to 30 years. Upon decommissioning, the site could be converted to other uses in accordance with applicable land use regulations in effect at that time. A collection and recycling program will be executed to promote recycling of project components and minimize disposal in landfills. All permits related to decommissioning would be obtained, where required.

Project decommissioning may include the following activities:

- The facility would be disconnected from the utility power grid.
- Project components would be dismantled and removed using conventional construction equipment and recycled or disposed of safely.

- PV panel support steel and support posts would be removed and recycled off-site by an approved metals recycler.
- All compacted surfaces within the project site and temporary on-site haul roads would be 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.

2.4 Ramon Substation Expansion

Upgrades to the existing Ramon Substation are proposed which would add additional capacity to the substation in order to accommodate electricity generated by planned utility-scale solar projects, which would tie into the substation, and then energy converted would be added to the electrical grid. This includes, but is not limited to, the proposed VEGA 6 project.

The upgrades would involve an expansion of the existing developed area of the substation, generally expanding to include 4 additional acres of a currently undisturbed area at the substation site. During construction, access to the proposed improvement area would be through the existing substation site, via existing dirt roads located on the west and east of the existing substation, or a combination thereof.

2.4.1 Construction

The construction of the Ramon Substation expansion is estimated to take 180 working days and would begin in 2024. The number of on–site construction workers is not expected to exceed 20 workers at any one time.

Dust generated during construction would be controlled by watering and, as necessary, the use of other dust suppression methods and materials accepted by the South Coast Air Quality Management District (SCAQMD).

2.4.2 Operation and Maintenance

Once constructed, the proposed Ramon Substation expansion will not require personnel to be present on-site and will not result in daily trip generation.

2.5 Required Project Approvals

2.5.1 Imperial County

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

1. **General Plan Amendment #22-001.** An amendment to the County's General Plan, Renewable Energy and Transmission Element is required to implement the proposed project. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. As shown in Figure 2-1, the project site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify the project site (APN No. 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.
2. **Zone Change #22-0001.** The project site is currently zoned Open Space/Preservation (S-2). The applicant is requesting a Zone Change to include/classify the project site (APN No. 034-160-002) into the RE Overlay Zone to allow for solar and battery storage development.
3. **Approval of CUP #22-0005.** Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility with an integrated BESS. The project site is located on one privately-owned legal parcel zoned Open Space/Preservation (S-2). 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)*
4. **Approval of CUP (CUP 22-0027) – Groundwater Well.** Pursuant to Title 9 Division 21: Water Well Regulations, §92102.00, the Applicant will be required to obtain a CUP for the 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.

5. **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)

2.5.2 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.

- **Imperial Irrigation District (IID) (CEQA Responsible Agency).** The IID is a Responsible Agency as defined by CEQA Guideline Section 15381 as it relates to the proposed Ramon Substation improvements. In this capacity, the IID has the discretionary authority to approve improvements to the existing Ramon Substation, and would utilize the information contained in this EIR, as prepared by the County of Imperial as the CEQA Lead Agency, as the CEQA clearance for the substation improvements.
- **Bureau of Land Management (BLM) (National Environmental Policy Act – Federal Lead Agency)**. Right-of-way grant for the off-site gen-tie line to be located on federal lands under the jurisdiction of the BLM. As shown in Figure 2-4, the proposed ROW would be 60-feet-wide.
- **County of Riverside.** The Ramon Substation expansion area is zoned General Residential Zone (R-3) in the Riverside County Zoning Ordinance. The Riverside County Zoning Ordinance does not identify public utilities as a permitted or conditional use in R-3. However, per Section 17.208.010, facilities for the storage or transmission of electrical energy is permitted with a Public Use Permit:

  > *Facilities for the storage or transmission of electrical energy where the County is not preempted by law from exercising jurisdiction. This subsection shall take precedence over and supersede any conflicting provision in any zone classification. Facilities for the storage or transmission of electrical energy shall not be subject to the development standards of the zone classification in which they are located.*

  The existing Ramon Substation is currently operating under an approved Public Use Permit. IID would apply for an amendment to its Public Use Permit for the proposed Ramon Substation expansion.

Additional Responsible and/or Trustee Agencies may include, but are not limited to the following:

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

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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 could result in significant impacts. Sections 3.2 through 3.15 discuss the environmental impacts that may result with approval and implementation of the project, and where impacts are identified, recommends mitigation measures that, when implemented, would reduce significant impacts to a less than significant level. Each environmental issue area in Chapter 3 contains a description of the following:

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

3.1.2 Format of the Impact Analysis

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

Changes that would result from the project were evaluated relative to existing environmental conditions within the project site as defined in Chapter 2, Project Description. Existing environmental conditions are based on the time at which the NOP was published on July 11, 2022. In evaluating the significance of these changes, this EIR applies thresholds of significance that have been developed using: (1) criteria discussed in the CEQA Guidelines; (2) criteria based on factual or scientific information; and (3) criteria based on regulatory standards of local, state, and/or federal agencies. Mechanisms that could cause impacts are discussed for each issue area.

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

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

3.2 Aesthetics

This section provides a description of the existing visual and aesthetic resources within the VEGA 6 project area and Ramon Substation expansion area, and relevant state and local plans and policies regarding the protection of scenic resources. Effects to the existing visual character of the VEGA 6 project area and Ramon Substation expansion 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 for the VEGA 6 project is summarized from the *Visual Impact Assessment Letter Report – VEGA SES 6 Project* prepared by ECORP Consulting, Inc. This report is included in Appendix B of this EIR. The information provided in this section for the Ramon Substation expansion area is summarized from review of publicly available data including Caltrans' State Scenic Highway System Map, Riverside County General Plan, and Riverside County Municipal Code.

3.2.1 Existing Conditions

Visual Character

VEGA 6

Imperial County encompasses 4,597 square miles in the southeastern portion of California. The County is bordered by Riverside County on the north, the international border of Mexico on the south, San Diego County on the west and Arizona on the east. The length and breadth of the County provide for a variety of visual resources ranging from desert, sand hills, mountain ranges, and the Salton Sea. According to the Imperial County General Plan, the closest scenic resource is the Salton Sea approximately 11 miles northwest of the project site (County of Imperial 2016).

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.

The solar energy facility site is located on approximately 320 acres of privately-owned vacant and undeveloped land. The solar energy facility site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. Brawley and Westmorland are relatively central within the agricultural portion of the Imperial Valley, which extends from the southeastern portion of the Salton Sea to the United States and Mexico border. The proposed VEGA 6 project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the Bureau of Land Management (BLM) within the California Desert Conservation Area (CDCA) planning area.

Topography is relatively flat, with elevations ranging -39 meters (-129 feet) and -6 meters (-21 feet). The majority of the project site consists of creosote bush scrub, disturbed creosote bush scrub,

agriculture, and disturbed areas. Small portions of the solar energy facility site along the northwestern perimeter and centrally within the site contain areas of disturbed tamarisk thickets.

Views in this area are expansive and are generally characterized by sparse development. The VEGA 6 project site is located in a sparsely populated portion of unincorporated Imperial County. The nearest single-family residence is located 2,725 feet from the northeastern corner of the solar and battery storage project site. Adjacent land uses include Open Space/Bureau of Land Management (BLM) land to the west and south, and active agriculture to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the site. Viewers would be limited to property owners and drivers using the nearby local roadways and SR 78/76.

KEY VIEWS

Aerial imagery was reviewed to identify where the proposed VEGA 6 project would potentially be visible from visually sensitive areas and selected preliminary viewpoints for site photography. A field survey was conducted in July 2021 to photo-document existing visual conditions in the project vicinity and surrounding area. Assessment of existing visual conditions were made based on professional judgment that took into consideration sensitive receptors and sensitive viewing areas in the project area.

Figure 3.2-1 illustrates the photo documented key views (KV) and the direction to which the photographs were taken. The photographs depicting the existing condition at the VEGA 6 project site are presented below. Descriptions of the existing KVs are as follows:

KV 1 – View from Andre Road. The view from KV 1 is from Andre Road, at the northeast corner of the solar energy facility site facing southwest (Figure 3.2-2). The dominant feature within this key view is the existing unpaved roadway in the foreground and sparse vegetation visible throughout the middle-ground. There are no striking topographic features visible within this key view. This view does not exhibit any striking or distinctive visual patterns and there are no scenic resources. Additionally, while existing unpaved roadways are present and distinguishable within this key view, it is free from encroaching man-made elements (Appendix B of this EIR).

KV 2 – View from Garvey Road. The view of KV 2 is from Garvey Road, west of the Westside Main Canal and the agricultural areas facing east (Figure 3.2-3). Similar to KV 1, the dominant feature within this key view is the existing paved roadway in the center throughout the view and sparse vegetation visible throughout the middleground. Also visible within this view is the existing electrical utility lines and poles on the left side of the roadway. This does not exhibit any striking or distinctive visual patterns; however, the presence of existing agricultural uses on the left and at the horizon soften the view and provide some aesthetic resources mostly unobstructed in the view. The existing electrical utility line and poles constitute encroaching man-made elements within this KV (Appendix B of this EIR).

Figure 3.2-1. Key View Map

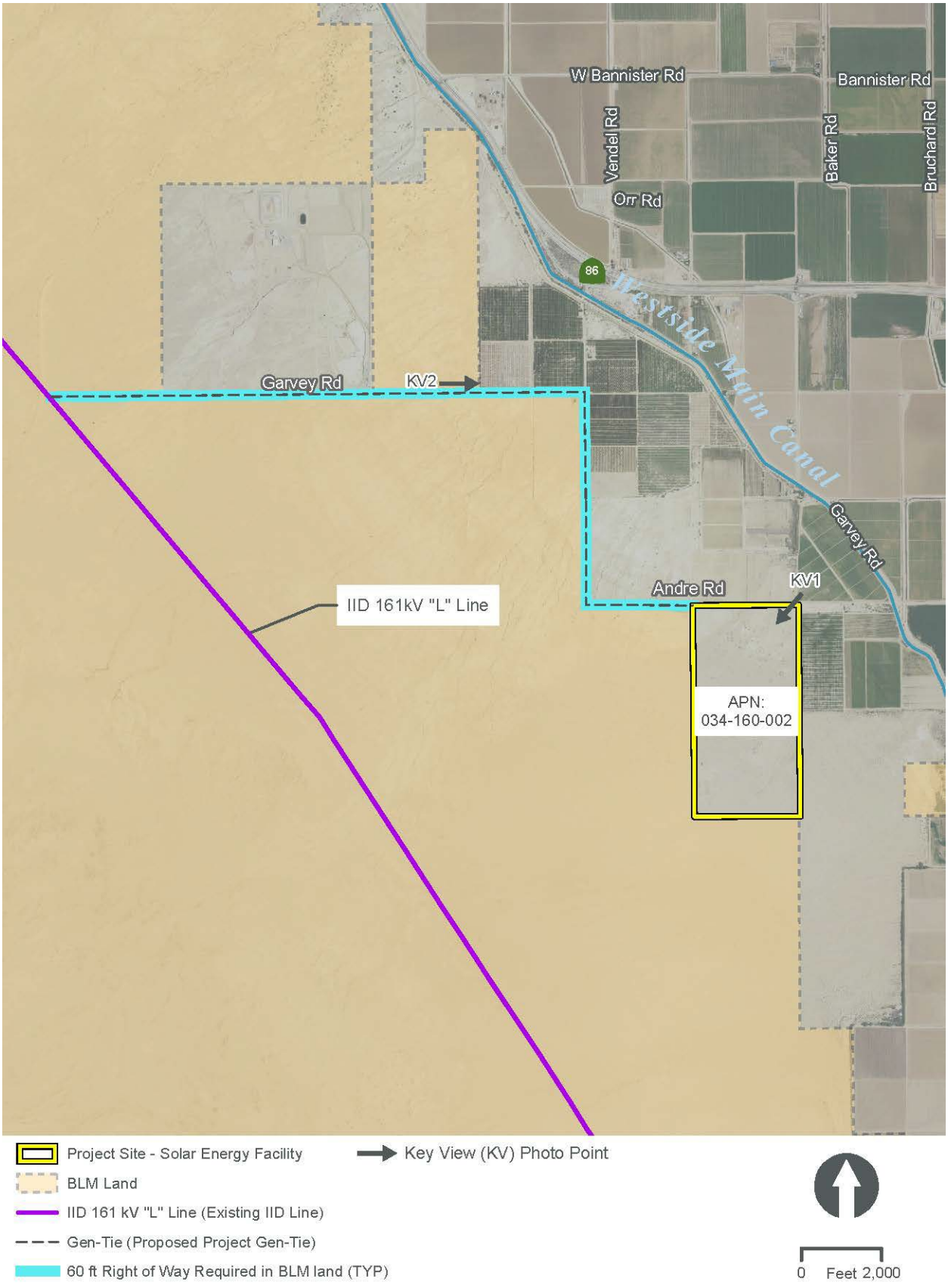

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Figure 3.2-2. Key View 1: View from Andre Road, Looking Southwest from Northeast Corner of VEGA 6 Project Site

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Figure 3.2-3. Key View 2: View from Garvey Road, Looking East

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Ramon Substation Expansion

The Ramon Substation expansion area is on approximately 4 acres of vacant and undeveloped land, immediately north of the existing Ramon Substation. The expansion area is located approximately 1.5 miles north of the Interstate-10 Freeway (I-10) and east of the unincorporated community of Thousand Palms in Riverside County. The existing Ramon Substation occupies approximately 6.7 acres on the single parcel (APN 651-230-015). The community of Thousand Palms is characterized by mobile home subdivisions, single-family residential neighborhoods, and rural residential development (County of Riverside 2021).

Views in the immediate vicinity are characterized by utility infrastructure and overhead lines from the existing Ramon Substation and residential development. Looking to the north and east, there is vacant and undisturbed land, with residences located further east. The existing Ramon Substation is located immediately south of the Ramon Substation expansion area. To the west, there is existing utility infrastructure (SCE Mirage Substation) and residential development with the nearest single-family residence located approximately 0.2 miles from the proposed expansion area. Viewers would be limited to drivers on Ramon Road and residences in the immediate vicinity such as along Via Las Palmas and in the Tri Palm Estates development along Ramon Road to the southwest.

Scenic Vista

VEGA 6

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 solar energy facility site is located in a rural portion of Imperial County and is not located within an area containing a scenic vista designated by the State or the County's General Plan.

The proposed gen-tie transmission line would be located entirely on federal lands managed by the BLM. According to the Conservation and Open Space Element of the Imperial County General Plan (County of Imperial 2016):

> Many of the natural scenic resources are located on land under BLM jurisdiction. County areas for BLM-managed lands are shown on Figure 9 and depict the values of the County's visual resources based on their Visual Resource Inventory (VRI) process. Areas with a moderate to high value for maintenance of visual quality could represent opportunities for conservation and open space areas.

According to Figure 9 of the Conservation and Open Space Element, the gen-tie line is located within an area with a high value for maintenance of visual quality (County of Imperial 2016).

Ramon Substation Expansion

The Ramon Substation expansion area is not located near or adjacent to any scenic vistas designated by the Western Coachella Valley Area Plan (WCVAP) (County of Riverside 2021).

Scenic Highways

VEGA 6

According to the Conservation and Open Space Element, no State scenic highways have been designated in Imperial County (County of Imperial 2016). Additionally, there are no designated

Caltrans scenic highways in the vicinity of the VEGA 6 project. The nearest scenic highway to the project site is the junction of SR-78 and SR-86, located over 10 miles northwest of the site. This section of the scenic highway would not be visible from the location of the proposed project.

Ramon Substation Expansion

There are no state designated Caltrans scenic highways in the vicinity of the Ramon Substation expansion area. The nearest scenic highway to the project site is located over 9 miles south of the site at the junction of SR111 and SR-74. There are also no County designated scenic highways along the Ramon Substation expansion area according to the WCVAP (County of Riverside 2021). The County of Riverside's General Plan's Circulation Element identifies the I-10 as a County eligible scenic highway (County of Riverside 2020). The I-10 is located approximately 1.5 miles south of the Ramon Substation expansion area.

Light, Glare, and Glint

VEGA 6

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.

As the project is located in an area consisting of mostly vacant land and the nature of the existing agricultural land and very few residences in the area, limited light is generated within the project area. The majority of the light and glare in the project area is a result of motor vehicles traveling on surrounding roadways, airplanes, and farm equipment. Local roadways generate glare both during the night hours when cars travel with lights on, and during daytime hours because of the sun's reflection from cars and pavement surfaces. When light is not sufficiently screened and spills over into areas outside of a particular development area the effect is called "light trespassing."

Ramon Substation Expansion

The Ramon Substation expansion area is located in an area with limited lighting because it is surrounded by undeveloped land to the north and east. The majority of the light and glare in the Ramon Substation area is from motor vehicles travelling along Ramon Road.

3.2.2 Regulatory Setting

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

State

California Department of Transportation

Caltrans manages 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 VEGA 6 project's consistency with the Conservation and Open Space Element Goal 5. Additionally, the Circulation and Scenic Highways Element of the General Plan provides policies for protecting and enhancing scenic resources within highway corridors in Imperial County, consistent with the Caltrans State Scenic Highway Program.

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

General Plan Policies	Consistency with General Plan	Analysis
Goal 5: The aesthetic character of the region shall be protected and enhanced to provide a pleasing environment for residential, commercial, recreational, and tourist activity.	Consistent	The project would result in changes to the visual character of the project area. As described in Section 3.2.1, the project site does not contain high levels of visual character or quality; therefore, the project would not result in a significant deterioration in the visual character of the project site or project area.
Objective 5.1: Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.	Consistent	The proposed project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the BLM within the CDCA planning area. Existing electrical utility lines and poles already exist along Garvey Road. The addition of new electrical lines and poles associated with the proposed gen-tie line would be absorbed into the broader landscape that already includes electricity transmission and utility lines.

Source: County of Imperial 2016

Office 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.

Riverside County General Plan

The Riverside County General Plan does not have any specific sections related to aesthetics and visual resources. However, the Land Use Element includes policies related to Land Use Compatibility, Community Design, and Scenic Corridors, which have applicability to the topic of aesthetics. The Land Use Element provides direction related to how future development is intended to build out, such as the intensity/density and character of new development. The Land Use Element also addresses the relationship between development, community enhancement, and natural resource management. The Multipurpose Open Space Element also addresses open space and scenic resources in Riverside County.

Western Coachella Valley Area Plan

The WCVAP is one of 19 area plans within the County of Riverside General Plan. The WCVAP contains focused policies that guide the physical development and land uses in the unincorporated western portion of the Coachella Valley.

Riverside County Municipal Code

Chapter 8.80 of the Riverside County Municipal Code provides regulations for light pollution. This ordinance is intended to restrict the use of certain light fixtures emitting undesirable light rays into the night sky, which is a waste of natural resources and light trespass. The ordinance requires that outdoor luminaries be adequately shielded and directed such that no direct light falls outside the parcel of origin or onto the public right-of-way.

Riverside County Ordinance No. 348, Land Use

Riverside County's Land Use Ordinance establishes allowable uses of land and sets standards for what and how land may be developed. The ordinance protects the people and property of Riverside County from development of unsuitable land uses and aims to ensure that built areas are developed safely and with minimal conflict with surrounding lands.

Riverside County Ordinance No. 655, Regulating Light Pollution

The intent of Ordinance No. 655 is to restrict the permitted use of certain light fixtures emitting into the night sky undesirable light rays, which have a detrimental effect on astronomical observation and research. Ordinance No. 655 defines lighting sources, establishes the type and manner of installation and operation of lighting and details lighting prohibitions. Ordinance No. 655 sets forth requirements for lamp source and shielding of light emissions for outdoor fixtures to reduce "skyglow" or light pollution that affects day or nighttime views from the Mount Palomar Observatory.

As shown on Figure 6: Mount Palomar Nighttime Lighting Policy Area of the WCVAP, the Ramon Substation expansion area is located within the limits of "Zone B" of the Mount Palomar Observatory Lighting Policy Area (County of Riverside 2021). As such, the expansion area is subject to the outdoor lighting policies and requirements specified by Riverside County Ordinance No. 655, which includes specific standards for lighting fixtures installed along public roadways and in other common areas and applies to all new development. Ordinance No. 655 encourages the use of low-pressure sodium lamps where possible, requires the shielding of all nonexempt outdoor lighting fixtures, specifies the hours of operation for nonexempt outdoor lighting fixtures, and regulates lighting fixtures used to illuminate outdoor advertising displays.

Riverside County Ordinance No. 915, Regulating Outdoor Lighting

The intent of this ordinance is to establish a countywide standard for outdoor lighting that would generally prohibit light trespass and protect the health, property, and well-being of residents within the unincorporated Riverside County.

3.2.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

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

Methodology

VEGA 6

The visual impact analysis is based on field observations conducted in July 2021, as well as review of maps and aerial photographs for the VEGA 6 project area. A representative subset of photographed viewpoints was selected as KVs, which collectively serve as the basis for this assessment. Assessments of existing visual conditions were made based on professional judgment that took into consideration sensitive receptors and sensitive viewing areas in the VEGA 6 project area. The locations of the two KVs in relation to the project site are presented in Figure 3.2-1.

The following steps were taken in analyzing visual impacts of the VEGA 6 project:

1. Describe the existing visual setting, including any sensitive viewer groups (i.e., baseline conditions);
2. Identify key viewpoints for visual assessment;
3. Describe or depict the visual appearance of the project at the key viewpoints. Key viewpoints are selected to represent the typical views from the public right-of-way;
4. Assess the visual changes that would be introduced by the project and the viewer response based on defined attributes which are neither good nor bad. Change in visual character cannot be described as having good or bad attributes until compared with viewer responses to the change;

5. Determine the degree of visual impact;
6. Proposed methods to minimize adverse impacts

Ramon Substation Expansion

The visual impact analysis is based on a review of maps and aerial photographs for the Ramon Substation expansion area. The analysis includes a description of baseline conditions and analyzes the changes in visual quality that would occur with implementation of the proposed Ramon Substation expansion.

Impact Analysis

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

VEGA 6

Scenic vistas are typically expansive views from elevated areas that may or may not be part of a designated scenic overlook or other area providing a static view of a landscape. During construction, the use of standard construction equipment including, but not limited to, trucks, cranes, and tractors would be required. The presence of this equipment within the VEGA 6 project site during construction would alter views of the area from undeveloped land to a construction site. However, the views of construction activity from the surrounding vicinity would be temporary and would not involve any designated scenic vistas as there are no designated scenic vistas in the project vicinity. According to the Imperial County General Plan, the closest scenic resource is the Salton Sea approximately 11 miles northwest of the project site (County of Imperial 2016). Therefore, impacts to a scenic vista are considered less than significant during construction.

Upon project operation, and with implementation of the solar infrastructure, the overall visual character of the VEGA 6 project site would change. However, given that there are no scenic resources or vistas within proximity to the VEGA 6 project site, project operation would not have a substantial adverse effect on a scenic vista. Impacts are considered less than significant.

Ramon Substation Expansion

The Ramon Substation expansion area is not located near or adjacent to any scenic vistas designated by the WCVAP (County of Riverside 2021). 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 Ramon Substation expansion area during construction would alter views of the area from undeveloped land to a construction site. However, the views of construction activity from the surrounding vicinity would be temporary and would not involve any designated scenic vistas as there are no designated scenic vistas in the project vicinity. Therefore, the proposed Ramon Substation expansion would have no impact on scenic vistas.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

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 6

There are no designated or eligible state scenic highways in the VEGA 6 project vicinity. The nearest road segment among those identified by Imperial County is the junction of SR-78 and SR-86 which is located over 10 miles northwest of the VEGA 6 project site. Therefore, no impacts to scenic resources within any state scenic highways would occur.

Ramon Substation Expansion

As previously noted, there are no state designated Caltrans scenic highways in the vicinity of the Ramon Substation expansion area. The nearest scenic highway to the project site is located over 9 miles south of the site at the junction of SR-111 and SR-74. I-10, located approximately 1.5 miles south of the Ramon Substation expansion area, is considered a County eligible scenic highway. Due to these distances, no impacts to scenic resources within a state or county scenic highway would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

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 6

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 VEGA 6 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 degradation of the existing visual character or quality of the VEGA 6 project site during construction are considered less than significant.

A discussion of the potential impacts of the project at KV1 and KV2 are discussed below:

KV 1 – View from Andre Road. From KV 1, the overall character and experience for viewers would change substantially with project implementation. The main physical change that would occur within this view is the complete removal of vegetation and grading of the solar energy facility site to accommodate the construction of solar apparatus and security fencing. Other facilities proposed such as roads, pads, underground utilities, and stormwater facilities would not be visible from the public right-of-way. There are no County-designated scenic resources visible from KV 1. Additionally, there

are no scenic vista points identified in the County General Plan and none of the roadways in the project vicinity are designated as scenic highways or roadways.

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 solar energy facility site consists of low-lying shrubs and there are no visual obstructions. The installation of the new PV module frames would not result in the obstruction of any scenic resources as none exist within this view (Appendix B of this EIR).

Well construction would necessitate the installation of a small pump structure to house well equipment and associated piping. The proposed pump structure would be small in comparison to the site as a whole and not readily visible from the public right-of-way. The pump structure would not result in the obstruction of any scenic resources as none exist within this view.

Project implementation would change the natural conditions of the site with development of a solar energy and battery storage facility. Onsite vegetation would be completely removed, and the site would be graded to accommodate the installation of PV module frames in arrays. Although project implementation would result in the conversion of a naturally vegetated area with energy-related facilities, open space vegetated areas are not considered to be scenic resources by the County of Imperial.

KV 2 – View from Garvey Road. From KV 2, the overall character and experience for the viewer would not change substantially with implementation of the project. The main physical change that would occur within this view would be the addition of new electrical lines and poles associated with the proposed gen-tie line. As shown in Figure 3.2-3, existing electrical utility lines and poles already exist along Garvey Road. The addition of new electrical lines and poles associated with the proposed gen-tie line would be absorbed into the broader landscape that already includes electricity transmission and utility lines. No substantial visual impacts with the installation of proposed electrical facilities associated with the gen-tie line would occur at KV 2. These effects would be less than significant.

Ramon Substation Expansion

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 expansion area. While construction equipment and activity may present a visual nuisance, it would be temporary (approximately 6 months) and would not represent a permanent change in views. Therefore, impacts associated with degradation of the existing visual character or quality of the Ramon Substation expansion area during construction are considered less than significant.

The Ramon Substation expansion would contribute to an increase in industrial character with the addition of utility infrastructure. This would also increase visual contrast to a predominantly natural-appearing landscape that surrounds the area. However, because the Ramon Substation and SCE Mirage Substation already exist, the overall character and experience of viewers would not substantially change or cause visual degradation of the site as a result of the proposed expansion. The Ramon Substation expansion would not result in the obstruction of any scenic resources as none exist within the vicinity of the area. Therefore, impacts related to the degradation of the existing visual character or quality of the Ramon Substation expansion area would be considered less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

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 6

Minimal lighting would be required for operations and would be limited to safety and security functions. All lighting will be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements. If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used. The VEGA 6 project is not anticipated to create a new source of substantial light which would adversely affect nighttime views in the project area, and this is considered a less than significant impact.

The VEGA 6 project 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 is similar to reflections from water (Appendix B of this EIR). Therefore, the PV panels would not create a significant source of glare during sunlight hours. The VEGA 6 project 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. The proposed VEGA 6 project would result in a less than significant impact related to glare.

Shade and shadow effects would be introduced within the VEGA 6 project site due to the placement of PV modules in arrays. However, due to the height of the proposed apparatus at 7.5 feet and the perimeter fencing at 6 feet, the effects of shade and shadow would not encroach into areas offsite for extended periods of time that would result in significant shade and/or shadow impacts.

Ramon Substation Expansion

Minimal lighting would be required for operations and would be limited to safety and security functions. The Ramon Substation expansion area is located within the limits of “Zone B” of the Mount Palomar Observatory Lighting Policy Area (County of Riverside 2021). All projects within Zone B of the Mt. Palomar Nighttime Lighting Policy Area are required to adhere to the requirements of Riverside County Ordinance No. 655, which controls artificial lighting sources to protect the Observatory. Ordinance No. 655 states that low-pressure sodium lamps are the preferred illuminating source, and that outdoor lighting fixtures are required to be shielded. Pursuant to Section 7 of Ordinance No. 655, future building permits would be required to include specific information with regard to lighting, as follows: 1) the location of the site where outdoor light fixtures would be installed; 2) plans indicating the location and type of fixtures of the premises; and 3) a description of the outdoor light fixtures, including, but not limited to, manufacturer’s catalog cuts and drawings. The required plans and descriptions enable the County of Riverside to determine whether compliance with the requirements of the ordinance are met. No building permits would be issued by the County of Riverside unless the building permit applications demonstrate consistency with the provisions of Ordinance No. 655.

Based on the foregoing analysis, and with mandatory compliance with Ordinance No. 655, a less than significant impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

3.2.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

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

Residual

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

3.3 Air Quality

This section includes an overview of the existing air quality within the VEGA 6 project area and Ramon Substation expansion area and identifies applicable local, state, and federal policies related to air quality. The impact assessment for the VEGA 6 project 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. Information contained in this section for the VEGA 6 project is summarized from the *Air Quality and Greenhouse Gas Assessment for the VEGA SES 6 Solar and Battery Storage Project* prepared by ECORP Consulting, Inc. This report is included in Appendix C1 of this EIR.

The impact assessment for the proposed Ramon Substation expansion provides an evaluation of potential adverse effects on air quality based on criteria derived from the CEQA Guidelines and South Coast Air Quality Management District's CEQA Air Quality Significance Thresholds in conjunction with actions proposed in Chapter 2, Project Description, of this EIR. Air quality emissions for the proposed Ramon Substation expansion were estimated using CalEEMod, version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to model emissions for land use development projects, based on typical construction requirements. The CalEEMod worksheets generated for the proposed Ramon Substation expansion are contained in Appendix C2 of this EIR.

3.3.1 Existing Conditions

Regional Setting

VEGA 6

The VEGA 6 project is located in Imperial County within the Salton Sea Air Basin (SSAB). The SSAB consists of all of Imperial County and a portion of Riverside County. Both the ICAPCD and South Coast Air Quality Management District (SCAQMD) have jurisdiction within the SSAB. The ICAPCD has full jurisdiction within all Imperial County and SCAQMD only has jurisdiction within Riverside County.

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

The lack of clouds and atmospheric moisture creates strong diurnal and seasonal temperature variations ranging from an average summer maximum of 108 degrees Fahrenheit (° F) down to a winter morning minimum of 38° F. 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 rainfall on an average of only four times per year (>0.10 inches in 24 hours). 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 C1 of this EIR).

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

The wind in Imperial County follows two general patterns. Wind statistics indicate prevailing winds are from the west-northwest through southwest; a secondary flow maximum from the southeast is also evident. The prevailing winds from the west and northwest occur seasonally from fall through spring and are known to be from the Los Angeles area. Occasionally, Imperial County experiences periods of extremely high wind speeds. Wind speeds can exceed 31 miles per hour (mph), and this occurs most frequently during the months of April and May. However, speeds of less than 6.8 mph account for more than one-half of the observed wind measurements.

Ramon Substation Expansion

The Ramon Substation expansion area is located in the Riverside County portion of the SSAB. Air quality conditions in this portion of Riverside County are administered by SCAQMD. During the summer, the SSAB is generally influenced by a Pacific Subtropical High Cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The SSAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The SSAB averages between three and seven inches of precipitation per year (County of San Bernardino 2018).

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 3.3-1.

Table 3.3-1. 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.

Pollutant	Major Manmade Sources	Human Health and Welfare Effects
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} and $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, woodburning 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 C1 of this EIR

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death (Appendix C1 of this EIR).

Attainment Status

The U.S. Environmental Protection Agency (EPA) and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than ozone [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.

Imperial County Portion of the Salton Sea Air Basin

The attainment status for the portion of the SSAB encompassing the project site is shown in Table 3.3-2. As shown, 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 3.3-2. 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 C1 of this EIR

Riverside County Portion of the Salton Sea Air Basin

The attainment status for the portion of the SSAB encompassing the Ramon Substation expansion area is shown in Table 3.3-3. As shown, the Riverside County portion of the SSAB is currently designated as nonattainment for O_3 and PM_{10} under State standards. Under federal standards, the Riverside County portion of the SSAB is in nonattainment for O_3 and PM_{10}. The area is currently in attainment or unclassified status for CO, NO_2, SO_2, and $PM_{2.5}$.

Table 3.3-3. Attainment Status of Criteria Pollutants in the Riverside 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	Unclassified/attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment

Source: County of Riverside 2018

Local Ambient Air Quality

VEGA 6

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

Since not all air monitoring stations measure all of the tracked pollutants, the data from the following monitoring stations, listed in the order of proximity to the VEGA 6 project site, have been used: Westmorland Monitoring Station (Westmorland Station), Brawley-220 Main Street Monitoring Station (Brawley Station).

The Westmorland Station is located approximately 4.5 miles northeast of the VEGA 6 project site at 570 Cook Street and the Brawley Station is located approximately 9.4 miles east of the VEGA 6 project site at 220 Main Street. PM_{10} and O_3 was measured at the Westmorland Station and $PM_{2.5}$ was measured at the Brawley Station. It should be noted that due to the air monitoring stations' distances from the VEGA 6 project site, recorded air pollution levels at the air monitoring stations reflect with varying degrees of accuracy local air quality conditions at the VEGA 6 project site. Table 3.3-4 shows the most recent three years of monitoring data from CARB.

Table 3.3-4. Summary of Local Ambient Air Quality Data

Pollutant (Standard)	Year		
	2020	2021	2022
O_3 – Westmorland Station			
Maximum 1-Hour Concentration (ppm)	0.067	0.081	0.085
Days > CAAQS (0.09 ppm)	0	0	0
Maximum 8-Hour Concentration (ppm) (state/federal)	0.059 / 0.059	0.073 / 0.072	0.068 / 0.067
Days > CAAQS (0.070 ppm)	0	1	0
PM_{10} – Westmorland Station			
Maximum 24-Hour concentration (µg/m^3) (state/federal)	297.2 / 286.8	543.1 / 547.1	896.2 / 867.2
Days > CAAQS (150 ug/m^3)	89	104	123
$PM_{2.5}$ – Brawley Station			
Maximum 24-Hour Concentration (µg/m^3) (state/federal)	23.7 / 23.7	24.4 / 24.4	43.2 / 43.2
Days > CAAQS (35 ug/m^3) (federal)	0	0	5

Source: CARB 2023

µg/m^3 – micrograms per cubic meter; ppm = parts per million

* = insufficient data available

Ramon Substation Expansion

The SCAQMD operates a network of monitoring stations throughout Riverside County that continuously monitor ambient levels of criteria pollutants in compliance with federal monitoring regulations.

The nearest air quality monitoring station is the Palm Springs-Fire Station located at 590 E Racquet Club Ave in Palm Springs, CA.

Table 3.3-5. Summary of Local Ambient Air Quality Data

Pollutant (Standard)	Year		
	2020	2021	2022
O_3 – Palm Springs-Fire Station			
Maximum 1-Hour Concentration (ppm)	0.119	0.110	0.106
Days > CAAQS (0.09 ppm)	9	10	7
Maximum 8-Hour Concentration (ppm) (state/federal)	0.094 / 0.094	0.093 / 0.092	0.090 / 0.089
Days > CAAQS (0.070 ppm)	53	38	43
PM_{10} – Palm Springs-Fire Station			
Maximum 24-Hour concentration ($\mu g/m^3$) (state/federal)	40.8 / 129.8	34.5 / 35.2	156.3 / 159.5
Days > CAAQS (150 ug/m^3)	0	0	3

Source: CARB 2023
$\mu g/m^3$ – 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.

VEGA 6

The nearest sensitive receptor is a single-family residence located 2,725 feet from the northeastern corner of the solar energy facility site. For construction occurring during the gen-tie transmission line route to the IID electrical grid transmission line, the nearest sensitive receptor would be 970 feet away.

Ramon Substation Expansion

The nearest sensitive receptor to the Ramon Substation expansion area are single-family residences located approximately 0.2 miles west along Via Las Palmas.

3.3.2 Regulatory Setting

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

Federal

Clean Air Act

The 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 (VOC) are of particular interest as they are precursors to ozone formation. In addition, national standards exist for Pb. The NAAQS standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision.

The Federal CAA requires U.S EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table 3.3-6.

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 3.3-6, the CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

California State Implementation Plan

The CAA mandates that the state submit and implement a SIP for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items which are included in the California SIP.

Table 3.3-6. 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 µg/m^3
CO	1-hour 8-hour	20 ppm 9 ppm	35 ppm 9 ppm
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 kilometer, visibility of 10 miles or more because of particles when relative humidity is less than 70 percent	

Source: CARB 2016

Notes:

CO – carbon monoxide; mean – annual arithmetic mean; NO_2 – nitrogen dioxide; O_3 – ozone; Pb – lead; $PM_{2.5}$ – particulate matter less than 2.5 microns in diameter; PM_{10} – particulate matter less than 10 microns in diameter; ppb – parts per billion; ppm – parts per million; SO_2 – sulfur dioxide; 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 project include DPM and airborne asbestos.

In August 1998, CARB identified DPM emissions from diesel-fueled engines as a TAC. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel fueled engines and vehicles. The goal of the plan is to reduce diesel 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 AB 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control

measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

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

Regional

Imperial County Air Pollution Control District

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

- **2009 Imperial County Plan for PM_{10}.** Imperial Valley is classified as nonattainment for federal and state PM_{10} standards. As a result, ICAPCD was required to develop a PM_{10} Attainment Plan. The final plan was adopted by ICAPCD on August 11, 2009 (ICAPCD 2009).
- **2013 Imperial County Plan for 2006 24-hour $PM_{2.5}$ for Moderate Nonattainment Area.** U.S. EPA designated Imperial County as nonattainment for the 2006 24-hr $PM_{2.5}$ standard, effective December 14, 2009. The 2013 $PM_{2.5}$ SIP demonstrates attainment of the 2006 $PM_{2.5}$ NAAQS "but-for" transport of international emissions from Mexicali, Mexico. The City of Calexico, California shares a border with the City of Mexicali. Effective July 1, 2014, the City of Calexico was designated nonattainment, while the rest of the SSAB was designated attainment (ICAPCD 2014).
- **2017 Imperial County Plan for 2008 8-hour Ozone Standard.** Because of Imperial County's "moderate" nonattainment status for 2008 federal 8-hour O_3 standards, ICAPCD was required to develop an 8-hour Attainment Plan for Ozone (ICAPCD 2017a). The plan includes control measures which are an integral part of how the ICAPCD currently controls the ROG and NO_X emissions within the O_3 nonattainment areas. The overall strategy includes programs and control measures which represent the implementation of Reasonable Available Control Technology (40 CFR 51.912) and the assurance that stationary sources maintain a net decrease in emissions.

- **2018 Imperial County Plan for PM_{10}.** Imperial Valley is classified as nonattainment for federal and state PM_{10} standards. The 2018 SIP maintained previously adopted fugitive dust control measures (Regulation VIII) that were approved in the Imperial County portion of the California SIP in 2013 (see above) (ICAPCD 2018a).
- **2018 Imperial County Plan for $PM_{2.5}$.** U.S. EPA designated Imperial County as nonattainment for the 2018 24-hr $PM_{2.5}$ standard. The 2018 $PM_{2.5}$ SIP concluded that the majority of the $PM_{2.5}$ emissions resulted from transport in nearby Mexico. Specifically, the SIP demonstrates attainment of the 2006 $PM_{2.5}$ NAAQS "but for" transport of international emissions from Mexicali, Mexico. In accordance with the CCAA, the $PM_{2.5}$ SIP satisfies the attainment demonstration requirement satisfying the provisions of the CCAA (ICAPCD 2018b).

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

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.

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

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

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

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

- Reduce greenhouse gas emissions and improve air quality.

Imperial County General Plan

The Imperial County General Plan serves as the overall guiding policy for the County. The Conservation and Open Space Element includes objectives for helping the County achieve the goal of improving and maintaining the quality of air in the region. Table 3.3-7 summarizes the VEGA 6 project's consistency with the applicable air quality goal and objectives from the Conservation and Open Space Element. While this EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

Table 3.3-7. Project Consistency with Applicable General 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 VEGA 6 project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed VEGA 6 project would improve air quality and reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from fossil fuel burning facilities. Therefore, the proposed VEGA 6 project is consistent with this goal.

Applicable Policies	Consistency Determination	Analysis
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 VEGA 6 project would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the VEGA 6 project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard Measures (Mitigation Measure AQ-1). Therefore, the proposed VEGA 6 project is consistent with this objective.
Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Consistent	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard Measures (Mitigation Measure AQ-1). Therefore, the proposed VEGA 6 project is consistent with this objective.

Source: County of Imperial 2016

South Coast Air Quality Management District Rules

SCAQMD is the regional agency responsible for regulating and enforcing air pollution control regulations within the Riverside portion of the SSAB. The most recent Air Quality Management Plan was developed in 2022 and it focuses on identifying control strategies to attain the 2015 8-hour ozone standards of 70 parts per billion. Rules with applicability to the Ramon Substation expansion are described below.

RULE 402

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Odor Emissions. All uses shall be operated in a manner such that no offensive odor is perceptible at or beyond the property line of that use.

RULE 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earthmoving and grading activities. More specifically, Rule 403 would require watering disturbed surfaces three times per day during grading activities.

Dust Control, Operations. Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or other forms of property, or can cause excessive soiling on any other parcel, shall conform to the requirements of the SCAQMD.

County of Riverside General Plan Air Quality Element

The County of Riverside General Plan Air Quality Element identifies goals, policies, and programs that are meant to balance Riverside County's actions regarding land use, circulation, and other issues with their potential effects on air quality. The Air Quality Element addresses ambient air quality standards set forth by the EPA and CARB. The Air Quality Element contains policies designed to establish a regional basis for improving air quality. The following policies from the Air Quality Element are applicable to the Ramon Substation expansion:

- **AQ 1.1:** Promote and participate with regional and local agencies, both public and private, to protect and improve air quality.
- **AQ 1.4:** Coordinate with the SCAQMD and Mojave Desert Air Quality Management District (MDAQMD) to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced.
- **AQ 2.1:** The County land use planning efforts shall ensure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible.
- **AQ 2.2:** Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.
- **AQ 4.1:** Require the use of all feasible building materials/methods which reduce emissions.
- **AQ 4.6:** Require stationary air pollution sources to comply with applicable air district rules and control measures.
- **AQ 4.7:** To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, Basin, the Environmental Protection Agency, and the California Air Resources Board.
- **AQ 4.9:** Require compliance with SCAQMD Rules 403 and 403.1 and support appropriate future measures to reduce fugitive dust emanating from construction sites.

3.3.3 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 VEGA 6 project.

OPERATIONS

Air quality analyses should compare all operational emissions of a project, including motor vehicle, area source, and stationary or point sources to the thresholds in Table 3.3-8. Projects can be classified as either Tier 1 or Tier 2 projects, depending on the project's operational emissions. As shown in Table 3.3-8, Tier 1 projects are projects that emit less than 137 pounds per day of nitrogen oxide (NO_x) or reactive organic gases (ROGs); less than 150 pounds per day of PM_{10} or SO_x; or less than 550 pounds per day of CO or $PM_{2.5}$.

Tier 1 projects are not required to develop a Comprehensive Air Quality Analysis Report or an EIR and require the implementation of all feasible mitigation measures listed in Section 7.2 of the ICAPCD's Air Quality Handbook (ICAPCD 2017b). Alternatively, Tier 2 projects are projects that emit 137 pounds per day of NO_x or ROG or greater; 150 pounds per day of PM_{10} or SO_x or greater; or 550 pounds per day of CO or $PM_{2.5}$ or greater. Tier 2 projects are required to develop a Comprehensive Air Quality Analysis Report at a minimum and are required to implement all standard mitigation measures as well as all feasible discretionary mitigation measures listed in Sections 7.2 and 7.3 of the ICAPCD's Air Quality Handbook (ICAPCD 2017b).

Table 3.3-8. Imperial County Air Pollution Control District Significance Thresholds for Operation

Criteria Pollutant	Tier 1 Thresholds	Tier 2 Thresholds
NO_x and ROG	Less than 137 pounds per day	137 pounds per day and greater
PM_{10} and SO_2	Less than 150 pounds per day	150 pounds per day and greater
CO and $PM_{2.5}$	Less than 550 pounds per day	550 pounds per day and greater
Level of Significance	**Less than Significant**	**Significant Impact**

Source: ICAPCD 2017b

CO – carbon monoxide; NO_x – nitrogen oxide; O3 – 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; SOx – sulfur oxide.

CONSTRUCTION

For construction projects, the Air Quality Handbook indicates that the significance threshold for NO_x is 100 pounds per day and for ROG is 75 pounds per day. As discussed in the ICAPCD's Air Quality Handbook, the approach to evaluating construction emissions should be qualitative rather than quantitative. In any case, regardless of the size of the project, the standard mitigation measures for

construction equipment and fugitive PM_{10} must be implemented at all construction sites. The implementation of discretionary mitigation measures, as listed in Section 7.1 of the ICAPCD's Air Quality Handbook, apply to those construction sites that are 5 acres or more for non-residential developments or 10 acres or more in size for residential developments. The mitigation measures found in Section 7.1 of the ICAPCD's handbook are intended as a guide of feasible mitigation measures and are not intended to be an all-inclusive comprehensive list of all mitigation measures. Table 3.3-9 presents the construction emission thresholds that are identified by ICAPCD.

Table 3.3-9. Imperial County Air Pollution Control District Significance Thresholds for Construction Activities

Pollutant	Thresholds
PM_{10}	150 pounds per day
ROG	75 pounds per day
NO_x	100 pounds per day
CO	550 pounds per day

Source: ICAPCD 2017b

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

South Coast Air Quality Management District

REGIONAL THRESHOLDS

The SCAQMD has regional significance thresholds for criteria pollutants, as summarized in Table 3.3-10. The SCAQMD's CEQA Air Quality Significance Thresholds (SCAQMD 2023) indicate that any projects in the Basin with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

Table 3.3-10. SCAQMD Maximum Daily Regional Emissions Thresholds

Criteria Pollutant	Regional Construction Threshold (lbs/day)	Regional Operation Thresholds (lbs/day)
NO_x	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_x	150	150
CO	550	550
Pb	3	3

Source: SCAQMD 2023

LOCALIZED SIGNIFICANCE THRESHOLDS

Localized Significance Thresholds (LSTs) were developed by the SCAQMD to analyze localized air quality impacts from a proposed project. Use of LSTs in air quality impact analyses is voluntary and at the discretion of the Lead Agency. LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. LST look up tables (SCAQMD 2009) can be used as a screening tool to identify

potentially significant impacts to nearby sensitive receptors. The LST look up tables consist of both construction and operational LSTs for one-, two-, and five-acre proposed projects emitting CO, NOx, PM2.5, and/or PM_{10} by source receptor area. If these LSTs are exceeded, project-specific modeling may be required. The analysis makes use of methodology included in the *Final LST Methodology* guidance document, published in June 2003 and revised in July 2008, from SCAQMD. For the Ramon substation, localized emissions were evaluated against the LSTs for Source Receptor Area 30 Coachella Valley for a 4-acre site at a 200m receptor distance (nearest receptor is 0.2 miles away but 200m is used to be conservative). The total acreage disturbed would be 4 acres per day rough grading and fine grading activities. It should be noted that since the look-up tables identify thresholds at only 1 acre, 2 acres, and 5 acres, the thresholds were scaled to 4 acres as shown in Table 3.3-11 for this analysis.

Table 3.3-11. LST Construction Thresholds

	NOx	CO	PM10	PM2.5
2 acre threshold	425	7174	89	28
5 acre threshold	547	10178	112	37
Calculated 4 acre threshold	**506**	**9177**	**104**	**34**

Diesel Toxic Air Contaminants Risk Thresholds

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

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

Methodology

VEGA 6

The analysis criteria for air quality impacts are based on the approach and methods discussed in the ICAPCD's Air Quality Handbook. The proposed VEGA 6 project would result in both short-term and long-term emissions of air pollutants associated with construction and operation of the proposed VEGA 6 project.

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

Once fully constructed, the proposed VEGA 6 project would be operated on an unstaffed basis and be monitored remotely, with periodic on-site personnel visitations for security, maintenance and system monitoring. Therefore, no full-time site personnel would be required on-site during operations and employees would only be on-site up to two times per year to wash the panels. As the project's PV

arrays produce electricity passively, maintenance requirements are anticipated to be very minimal. Any required planned maintenance activities would generally consist of equipment inspection and replacement and would be scheduled to avoid peak load periods. Any unplanned maintenance would be responded to as needed, depending on the event. Operational emissions would include vehicle trips from employees who commute to and from the VEGA 6 project site (i.e., to control site operation and perform equipment maintenance).

The ICAPCD's Air Quality Handbook establishes aggregate emission calculations for determining the potential significance of a project. In the event that the emissions exceed the established thresholds (Table 3.3-8 and Table 3.3-9), air dispersion modeling may be conducted to assess whether the project results in an exceedance of an air quality standard.

The *Air Quality and Greenhouse Gas Assessment for the VEGA SES 6 Solar and Battery Storage Project* was prepared by ECORP Consulting, Inc. (Appendix C1 of this EIR). This report was used in the evaluation of project-related construction and operational air quality impacts. The emissions of criteria air pollutants were estimated using methodologies recommended by the ICAPCD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2.[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. Operational air pollutant emissions were based on the project site plans. Associated emissions calculations and assumptions are included in Appendix C1 of this EIR.

The air quality impacts are mainly attributable to construction phases of the VEGA 6 project, including site preparation, facility installation, and gen-tie and site restoration. Operational impacts include inspection and maintenance operations, which includes washing of the solar panels.

Ramon Substation Expansion

Similar to VEGA 6, construction emissions would include exhaust from the operation of conventional construction equipment, on-road emissions from employee vehicle trips and truck trips, and fugitive dust as a result of grading and vehicle travel on paved surfaces. It is assumed that there would be no substantial earthmoving activities and that any cut/fill would be balanced on site. Workers would be able to access the project site via paved roads (Ramon Road) and through the existing Ramon Substation. Project work would begin in early 2024 for a total duration of 180 construction working days.

As discussed at the beginning of this Section 3.3, air pollutant emissions for construction for the proposed Ramon Substation expansion were estimated using CalEEMod, version 2020.4.0. Regional air pollutant emissions were compared to SCAQMD daily thresholds for ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ while the on-site localized emissions were compared to the LSTs for NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ consistent with SCAQMD guidance. The CalEEMod assumptions and outputs generated for the proposed Ramon Substation Expansion are contained in Appendix C2 of this EIR.

Once fully constructed, the proposed Ramon Substation Expansion would be operated and maintained together with the existing Ramon Substation and would not require any additional employees. Therefore, no air quality modeling was performed for the operations and maintenance portion of the Ramon Substation Expansion.

[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.

Impact Analysis

Impact 3.3-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

VEGA 6

The air quality attainment plan (AQAP) for the SSAB, through the implementation of the air quality management plan (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. A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the 2017 Clean Air Plan. The 2017 Clean Air Plan strategy is based on projections from local general plans. Projects that are consistent with the local general plan are considered consistent with the regional air quality plan. In addition, AQMP control measures and related emission reduction estimates are based upon emissions projections for future development scenarios 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 proposed project must demonstrate compliance with all ICAPCD applicable rules and regulations, as well as local land use plans and population projections. As the project does not contain a residential component, the project would not result in an increase in the regional population. While contributions to energy supply may induce population growth, the proposed solar energy project would not significantly increase employment or growth within the region. Moreover, development of the proposed project would increase the amount of renewable energy and help California meet its RPS.

As shown in Table 3.3-7, the project is consistent with the applicable air quality goal and objectives from the General Plan. The proposed project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed project would improve air quality by reducing the amount of emissions that would be generated in association with electricity production from fossil fuel burning facilities.

Furthermore, the thresholds of significance adopted by the air district (ICAPCD), determine compliance with the goals of the attainment plans in the region. As such, emissions below the ICAPCD regional mass daily emissions thresholds presented in Table 3.3-8 and Table 3.3-9 would not conflict with or obstruct implementation of the applicable air quality plans. The following analysis is broken out by a discussion of potential impacts during construction of the project followed by a discussion of potential impacts during operation of the project.

Construction Emissions. Air emissions are generated during construction through activities. Two basic sources of short-term emissions will be generated through project construction: operation of heavy-duty equipment (i.e., excavators, loaders, haul trucks) and the creation of fugitive dust during clearing and grading. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Construction emissions vary from day-to-day depending on the number of workers, number, and types of active heavy-duty vehicles and equipment, level of activity, the prevailing meteorological conditions, and the length over which these activities occur.

Project construction is anticipated to last approximately 12 to 18 months. Construction activities would primarily involve demolition and grubbing, grading of the project site to establish access roads and pads for electrical equipment, trenching for underground electrical collection lines, and the installation of solar equipment and security fencing, and the offsite infrastructure work required for the gen-tie transmission line.

Emissions associated with project off-road equipment, worker commute trips, and ground disturbance were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements.

Table 3.3-12 shows the predicted maximum daily emissions attributable to project construction with implementation of ICAPCD Regulation VIII measures (Mitigation Measure AQ-1), which is mandatory for all construction sites, regardless of size. 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. Construction emissions are short-term and of temporary duration lasting only as long as project construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds ICAPCD thresholds of significance. As shown in Table 3.3-12, the project's daily construction emissions would not exceed the ICAPCD thresholds for ROG, Nox, CO, SO_2 and $PM_{2.5}$. However, the project's daily construction emissions would exceed the ICAPCD threshold for PM_{10}, even with implementation of ICAPCD Regulation VIII (Mitigation Measure AQ-1). This potential impact is considered significant. A predominate source of the project's PM_{10} emissions is workers commuting to and from the project site on unpaved roads. Commuter vehicles traveling over the exposed soils of unpaved roads generates substantial amounts of fugitive PM_{10} emissions. The majority of roadways leading to the project site are paved; however, 1.8 miles of unpaved roadway would be used by commuting workers and vendors. Mitigation Measure AQ-2 is proposed to reduce PM_{10} emissions to levels below the significance threshold. Mitigation Measure AQ-2 would require the project contractor to use soil stabilizers on the 1.8 miles of unpaved roadway used for construction worker access to the project site.

Table 3.3-12. VEGA 6 Project Construction-Generated Emissions (Unmitigated)

Construction Year	Pollutant (pounds per day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Solar Facility and Battery Energy Storage System						
Construction 2022	9.53	97.14	68.64	0.16	310.81	45.44
Construction 2023	6.22	61.93	50.73	0.12	597.59	61.16
ICAPCD Significance Threshold	75	100	550	N/A	150	N/A
Exceed ICAPCD Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**
Gen-tie Transmission Line						
Construction 2022	8.97	67.76	70.65	0.19	559.07	58.36

Construction Year	Pollutant (pounds per day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
ICAPCD Significance Threshold	75	100	550	N/A	150	N/A
Exceed ICAPCD Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**

Source: Appendix C1 of this EIR
Note: Pounds per day taken from the season with the highest output.

As shown in Table 3.3-13, with implementation of Mitigation Measure AQ-2, the project's daily construction emissions of PM_{10} would not exceed the ICAPCD threshold.

In the event that onsite construction was to occur simultaneously as construction of the proposed offsite gen-tie transmission line, ICAPCD significance thresholds of Nox could potentially be exceeded. The project applicant would implement Mitigation Measure AQ-3, which requires the construction equipment list to be submitted periodically to ICAPCD to perform a NO_x analysis to verify that equipment use does not exceed significance thresholds. To further reduce dust emissions during project construction, the project applicant will implement Mitigation Measure AQ-4, which limits the speed of all vehicles operating onsite on dirt roads to 15 miles per hour or less. Implementation of Mitigation Measures AQ-3 and AQ-4 would provide reduction strategies to further improve air quality and ensure that this potential impact would remain less than significant.

Table 3.3-13. Project Construction – Generated Emissions (Mitigated)

Construction Year	Pollutant (pounds per day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Solar Facility and Battery Energy Storage System						
Construction 2022	2.28	11.09	83.73	0.16	57.10	11.02
Construction 2023	1.88	7.28	63.15	0.12	90.87	9.46
ICAPCD Significance Threshold	75	100	550	N/A	150	N/A
Exceed ICAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Gen-tie Transmission Line						
Construction 2022	8.97	67.76	99.88	0.19	85.19	58.36
ICAPCD Significance Threshold	75	100	550	N/A	150	N/A
Exceed ICAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix C1 of this EIR
Note: Pounds per day taken from the season with the highest output.

Operational Emissions. Although limited, project implementation would result in long-term operational emissions of criteria air pollutants such as ROG, NO_x, CO, SO_2, PM_{10}, O_3 and $PM_{2.5}$. Project-generated increases in emissions would be predominately associated with motor vehicle use for routine maintenance work and site security as well as panel upkeep and cleaning. Long-term operational emissions attributable to the project are summarized in Table 3.3-14 and compared to ICAPCD operational significance thresholds.

Table 3.3-14. Operational-Related Emissions – Solar and Battery Storage Facilities

Emission Source	Pollutant (pounds per day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer Emissions						
Area	6.53	0.00	0.03	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.02	0.06	0.00	0.24	0.02
Total:	**6.53**	**0.02**	**0.09**	**0.00**	**0.24**	**0.02**
ICAPCD Significance Threshold	137	137	150	550	550	150
Exceed ICAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	6.53	0.00	0.03	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.02	0.04	0.00	0.24	0.02
Total:	**6.53**	**0.02**	**0.07**	**0.00**	**0.24**	**0.02**
ICAPCD Significance Threshold	137	137	150	550	550	150
Exceed ICAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix C1 of this EIR

Notes: Operational emissions account for one vehicle trip per day. It is noted that this is a conservative estimate and many days will have no operational related vehicle trips.

As shown in Table 3.3-14, the project's emissions would not exceed any ICAPCD's thresholds for any criteria air pollutants during operation. The proposed project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the proposed project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. Although no significant air quality impact would occur during operation, the project applicant is required to submit a Dust Suppression Management Plan for both construction and operation in order to reduce fugitive dust emissions. Implementation of Mitigation Measures AQ-5 through AQ-7 would ensure that a Dust Suppression Management Plan is implemented, thereby ensuring that this potential impact would remain less than significant. To further reduce dust emissions during operation of the project, the project applicant will implement Mitigation

Measure AQ-4, which limits the speed of all vehicles operating onsite on dirt roads to 15 miles per hour or less.

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

Ramon Substation Expansion

Construction Emissions. Construction activities associated with the Ramon Substation expansion would result in emissions of ROGs, NOx, SOx, CO, PM_{10}, and $PM_{2.5}$. Construction-related emissions are expected from the following construction activities: site preparation, grading, structural facilities, and paving.

Emissions associated with project off-road equipment, worker commute trips, and ground disturbance were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Table 3.3-15 shows the predicted maximum daily emissions attributable to project construction by construction phase. (Note that none of the construction phases overlap.) As shown in Table 3.3-15, construction of the Ramon Substation expansion would not exceed SCAQMD's thresholds. This is considered a less than significant impact.

Table 3.3-15. Ramon Substation Expansion Construction-Generated Regional Emissions (Unmitigated)

	Pollutant (pounds per day)					
Construction Phase	**ROG**	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Site Preparation	1.3	11.9	10.7	< 0.1	3.6	2.0
Grading	1.8	18.4	12.4	< 0.1	4.3	2.3
Structural Facilities	1.3	11.0	12.9	< 0.1	1.1	0.6
Paving	1.4	6.9	10.6	< 0.1	0.5	0.4
Daily Maximum	**1.8**	**18.4**	**12.9**	**< 0.1**	**4.3**	**2.3**
SCAQMD Threshold	75	100	550	150	150	55
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix C2 of this EIR

Operational Emissions. The proposed Ramon Substation expansion would not require any long-term employees during operations. There are already existing employees staffed at the existing Ramon Substation. These existing employees are anticipated to perform routine maintenance work and site security for the proposed expansion area. The proposed Ramon Substation expansion would not generate operational emissions and no impact would occur.

Mitigation Measure(s)

VEGA 6

AQ-1 **Fugitive Dust Control.** Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII – Fugitive Dust Control Measures. ICAPCD will verify implementation and compliance with these measures as part of the grading permit review/approval process.

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

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

Standard Mitigation Measures for Construction Combustion Equipment

- Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel-powered equipment.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use.

- When commercially available, replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

AQ-2 During construction activities, the construction contractor shall employ the following PM_{10} reducing measures:

- All unpaved roads associated with construction shall be effectively stabilized of dust emissions using stabilizers/suppressant before the commencement of all construction phases. This will be conducted monthly at a rate of 0.1 gallon/ square yard of chemical dust suppressant.
- All vehicles accessing the project site on unpaved roads shall be limited to a speed of 15 miles per hour.

The Planning and Development Services Department and ICAPCD shall verify implementation of this measure.

AQ-3 **Construction Equipment.** Construction equipment shall be equipped with an engine designation of EPA Tier 2 or better (Tier 2+). A list of the construction equipment, including all off-road equipment utilized at each of the projects by make, model, year, horsepower and expected/actual hours of use, and the associated EPA Tier shall be submitted to the County Planning and Development Services Department and ICAPCD prior to the issuance of a grading permit. The equipment list shall be submitted periodically to ICAPCD to perform a 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-4 **Speed Limit.** During construction and operation of the proposed project, the applicant shall limit the speed of all vehicles operating onsite on unpaved roads to 15 miles per hour or less.

AQ-5 **Dust Suppression.** The project applicant shall employ a method of dust suppression (such as water or chemical stabilization) approved by ICAPCD. All unpaved roads associated with construction shall be effectively stabilized of dust emissions using stabilizers/suppressant before the commencement of all construction phases. This will be conducted monthly at a rate of 0.1 gallon/ square yard of chemical dust suppressant. 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-6 **Dust Suppression Management Plan.** Prior to any earthmoving activity, the applicant shall submit a construction dust control plan and obtain ICAPCD and Imperial County Planning and Development Services Department (ICPDS) approval.

AQ-7 **Operational Dust Control Plan.** Prior to issuance of a Certificate of Occupancy, the applicant shall submit an operations dust control plan and obtain ICAPCD and ICPDS approval. ICAPCD Rule 301 Operational Fees apply to any project applying for a building permit. At the time that building permits are submitted for the proposed project, ICAPCD shall review the project to determine if Rule 310 fees are applicable to the project.

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce the project's PM_{10} emissions during construction to a level below ICAPCD's significance threshold. Implementation of Mitigation Measures AQ-3 and AQ-7 would provide reduction strategies to further improve air quality and ensure that this potential impact would remain less than significant. Given the above, the proposed project would not conflict with implementation of applicable air quality plans, and impacts would be less than significant impact.

Impact 3.3-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)?

VEGA 6

As shown in Table 3.3-2, 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 3.3-1, the emissions of criteria pollutants from project construction and operation activities would be below the ICAPCD thresholds of significance with implementation of mitigation. Furthermore, the proposed project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the proposed project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. Therefore, the project's potential to result in a cumulatively considerable net increase of any criteria pollutant is considered less than significant.

Ramon Substation Expansion

As shown in Table 3.3-3, the criteria pollutants for which the Ramon Substation expansion area is in State non-attainment under applicable air quality standards are O_3 and PM_{10}. The SCAQMD'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 3.3-1, the emissions of criteria pollutants from construction and operation activities would be below SCAQMD's significance thresholds. Therefore, the proposed Ramon Substation expansion would not result in a cumulatively considerable net increase of any criteria pollutant, and this is considered a less than significant impact.

Mitigation Measure(s)

VEGA 6

No mitigation measures beyond AQ-1 through AQ-7 are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.3-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

VEGA 6

According to the *Air Quality and Greenhouse Gas Assessment for the VEGA SES 6 Solar and Battery Storage Project* (Appendix C1 of this EIR), the nearest existing noise-sensitive land use to the solar energy facility site is a single-family residence located 2,725 feet from the northeastern corner of the site. During construction occurring offsite along the gen-tie transmission line route to the IID electrical grid line, the nearest sensitive receptor would be 970 feet away.

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

As discussed above in Impact 3.3-1, the proposed VEGA 6 project would not exceed the ICAPCD criteria pollutant threshold from either construction or operation of the proposed VEGA 6 project with implementation of mitigation. However, construction and operation of the proposed VEGA 6 project would have the potential to emit TAC emissions, which have been analyzed separately below.

Construction-Generated Air Contaminants. Construction of the VEGA 6 project would result in temporary, short-term project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for project construction; soil hauling truck traffic; paving; and other miscellaneous activities. The portion of the SSAB which encompasses the VEGA 6 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 3.3-13, the VEGA 6 project would not exceed the ICAPCD significance thresholds for construction emissions with implementation of Mitigation Measures AQ-1 and AQ-2.

The health effects associated with O_3 are generally associated with reduced lung function. Because the VEGA 6 project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the ICAPCD thresholds, the VEGA 6 project is 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 VEGA 6 project would not involve activities that would result in CO emissions in excess of the ICAPCD thresholds. Thus, the VEGA 6 project's CO emissions would not contribute to the health effects associated with this pollutant.

PM_{10} and $PM_{2.5}$ contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. PM 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 activity, DPM is the primary TAC of concern. The potential cancer risk from the inhalation of DPM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust PM_{10}, considered a surrogate for DPM and includes emissions of exhaust $PM_{2.5}$, would be 2.89 and 2.03 pounds per day for the solar and battery storage facilities in construction years 2022 and 2023, respectively; and 2.82 pounds per day in 2022 for the gen-tie transmission line (see Appendix C1 of this EIR). 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 VEGA 6 project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the ICAPCD's thresholds. Additionally, the VEGA 6 project would be required to comply with ICAPCD's Regulation VIII for fugitive dust control, as described in Mitigation Measure AQ-1, which limit the amount of fugitive dust generated during construction. Accordingly, the VEGA 6 project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, project construction 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. As such, construction of the proposed VEGA 6 project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Operational Air Contaminants. Operation of the proposed VEGA 6 project 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 VEGA 6 project attract additional mobile sources that spend long periods queuing and idling at the site. Onsite project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors as the predominant operational emissions associated with the proposed VEGA 6 project would be routine maintenance work and site security as well as panel upkeep and cleaning. Therefore, the VEGA 6 project would not be a substantial source of TACs. The project will not result in a high carcinogenic or non-carcinogenic risk during operation. As such, a less than significant TAC impact would occur during the ongoing operations of the project.

CO Hot Spot. A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The Bay Area Air Quality Management District, the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

The proposed VEGA 6 project is anticipated to result in no more than one daily operational traffic trip. It is noted that this is a conservative estimate, and many days will have no operational-related vehicle trips. Thus, the VEGA 6 project 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, construction and operation of the proposed VEGA 6 project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Ramon Substation Expansion

Construction. During construction, the proposed Ramon Substation expansion has the potential to expose nearby sensitive receptors to substantial pollutant concentrations. The following provides an analysis of localized construction emissions compared to the applicable LSTs established by the SCAQMD (Table 3.3-16).

As shown in Table 3.3-16**,** localized construction emissions would not exceed the applicable SCAQMD LSTs for any criteria pollutant. Therefore, construction of the Ramon Substation Expansion would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

Table 3.3-16. Localized Construction Emissions

	lbs/day			
	NOx	CO	PM_{10}	$PM_{2.5}$
Maximum on-site emissions	**18.3**	**11.9**	**4.2**	**2.2**
SCAQMD Localized Threshold	506	9,177	104	34
Exceedance?	**No**	**No**	**No**	**No**

Source: Appendix C2 of this EIR

Operation. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The proposed Ramon Substation expansion does not include such uses and, thus, due to the lack of significant stationary source emissions, no long-term localized significance threshold analysis is needed. No impact would occur.

CO Hot Spot. The proposed Ramon Substation expansion would not require any long-term employees during operations. There are already existing employees staffed at the existing Ramon Substation. These existing employees are anticipated to perform routine maintenance work and site security for the proposed expansion area. Therefore, the proposed Ramon Substation expansion would not generate operational traffic trips and would not result in a CO Hot Spot impact.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.3-4 Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

VEGA 6

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 stimulated sensory nerves that can cause potentially harmful health effects
- The exposure to perceived unpleasant odors can stimulate negative cognitive and emotional responses based on previous experiences with such odors

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

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

The proposed VEGA 6 project would consist of the development of a solar energy facility, BESS, and gen-tie line which do not include any components that are a known source of odors. Therefore, a less than significant odor impact would occur, and no mitigation would be required.

Ramon Substation Expansion

A substation is not considered a land use that would be an odor producer. The proposed Ramon Substation expansion could produce odors during proposed construction activities resulting from construction equipment exhaust and application of asphalt. However, standard construction practices would minimize the odor emissions and their associated impacts. Furthermore, any odors emitted during construction are temporary, short-term, and intermittent in nature, and would cease upon the completion of construction. Additionally, construction activities would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance. The proposed Ramon Substation expansion would not create objectionable odors affecting

a substantial number of people during construction, and short-term impacts would be less than significant.

No objectionable odors affecting a substantial number of people are anticipated during long term operation. The operation of the project does not involve odor-generating uses. A less than significant impact is identified for this issue area.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

3.3.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Similar to construction activities, decommissioning and restoration of the project site would generate air emissions. A summary of the daily construction emissions for the VEGA 6 project is provided in Table 3.3-12 (unmitigated) and Table 3.3-13 (with mitigation). Solar equipment has a lifespan of approximately 20 to 25 years. The emissions from on- and off-road equipment during decommissioning are expected to be significantly lower than project construction 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 VEGA 6 project site. However, all construction projects within Imperial County must comply with the requirements of ICAPCD Regulation VIII for the control of fugitive dust. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. Therefore, a less than significant impact is identified during decommissioning and site restoration of the VEGA 6 project site.

Residual

The proposed VEGA 6 project would not result in short-term significant air quality impacts during construction. Operation of the VEGA 6 project, subject to the approval of a CUP, would be consistent with applicable federal, state, regional, and local plans and policies. The VEGA 6 project would not result in any residual operational significant and unavoidable impacts with regards to air quality.

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3.4 Biological Resources

This section identifies the biological resources that may be impacted by the proposed project. The following identifies the existing biological and jurisdictional resources in the VEGA 6 project area and Ramon Substation expansion area, analyzes potential impacts of the proposed project, and recommends mitigation measures to avoid or reduce potential impacts of the proposed project. The information for this section is summarized from the following reports:

- *Biological Technical Report – VEGA SES 6 Solar Project* (Appendix D1 of this EIR) prepared by ECORP Consulting, Inc.
- *Biological Resources Report – Ramon Substation Expansion* (Appendix D2 of this EIR) prepared by HDR
- *Aquatic Resources Delineation – VEGA SES 6 Solar Project* (Appendix E1 of this EIR) prepared by ECORP Consulting, Inc.
- *Aquatic Resources Survey Report – Ramon Substation Expansion* (Appendix E2 of this EIR) prepared by HDR

As part of the *Biological Technical Report – VEGA SES 6 Solar Project*, ECORP Consulting, Inc. conducted a literature review, desktop survey, and biological reconnaissance survey of the VEGA 6 project site to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wildlife species, and to determine the potential impacts of the VEGA 6 project on biological resources.

For the purposes of this EIR, the following terms are used and defined below:

- VEGA 6 project area refers to the areas proposed to be directly affected by implementation of the VEGA 6 project and corresponds to the VEGA 6 solar facility site and proposed gen-tie alignment.
- VEGA 6 biological survey area (BSA) refers to the VEGA 6 project area and a 500-foot buffer around the VEGA 6 project area, potentially subject to temporary or indirect impacts.
- VEGA 6 aquatic resources study area refers to the VEGA 6 project area plus a 50-foot buffer.
- Ramon Substation expansion area refers to the area proposed to be directly affected by implementation of the proposed Ramon Substation expansion.
- Ramon Substation BSA refers to Ramon Substation expansion area plus 500-foot buffer. Ramon Substation aquatic resources study area refers to the Ramon Substation expansion area plus 50-foot buffer.

3.4.1 Existing Conditions

Vegetation Communities and Land Cover Types

VEGA 6

The majority of vegetation and land cover types mapped within the VEGA 6 project area consists of creosote bush scrub, disturbed creosote bush scrub, and agriculture. The acreage of each vegetation

community and land cover types is summarized in and depicted in Figure 4 of the *Biological Technical Report – VEGA SES 6 Solar Project* (Appendix D1 of this EIR).

Table 3.4-1. Vegetation Communities and Land Cover Types in VEGA 6 Project Area

Vegetation Community and Land Cover Type[1]	Acres
Active Agriculture	2.088
Fallow Agriculture	0.122
Creosote Bush Scrub	183.163
Disturbed Creosote Bush Scrub	139.541
Disturbed Tamarisk Thickets	1.948
Disturbed	0.454
Urban/Developed – Dirt Roads	5.081
Total	**332.398**

Source: Appendix D1 of this EIR

Detailed descriptions of the applicable vegetation communities sand land cover types occurring within the VEGA 6 project area are described below.

CREOSOTE BUSH SCRUB

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 is dominant in the solar facility site and western portion of the gen-tie alignment. This community has sparser vegetation overall. Earthen mounds dominated by mesquite were also present within this vegetation community in the northeastern portion of the parcel.

DISTURBED CREOSOTE BUSH SCRUB

Disturbed creosote bush scrub is creosote bush scrub that has been previously altered. In the VEGA 6 project area, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few creosote bush shrubs. Other plant species observed included scattered individuals of tamarisk (*Tamarix* sp.) within ephemeral drainages.

DISTURBED TAMARISK THICKETS

Disturbed tamarisk thickets are tamarisk thickets that have been previously altered. In the VEGA 6 project area, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few tamarisk shrubs. Other plant species observed included scattered individuals of alkali goldenbush.

ACTIVE AGRICULTURE

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. This land cover was observed to the east of the solar energy facility site. Common crops observed were alfafa, lemon, date palm, and squash.

FALLOW AGRICULTURE

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 periodically along the gen-tie alignment and north of the solar energy facility site. These areas were adjacent to active agriculture and consisted primarily of tilled land with no vegetation. One area of fallow agriculture appeared to be vegetated with remnant sorghum (*Sorghum* sp.).

DISTURBED

Disturbed land includes areas where the native vegetation community has been heavily influenced by human actions, such as grading, trash dumping, equipment staging, and OHV use, but lack development. Disturbed land is not a vegetation classification, but rather a land cover type and is not restricted by elevation. Within the VEGA 6 project area, the disturbed lands consisted primarily of bare ground with quailbush, arrow weed, saltgrass, hairy crab grass (*Digitaria sanguinalis*), Mediterranean grass, mustard, and Saharan mustard (*Brassica tournefortii*) at low cover. Some area exhibited regrowth of native species such as creosote bush.

URBAN/DEVELOPED

Urban/Developed areas do not constitute a vegetation classification, but rather a land cover type. 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 6 project area, this land cover consisted of private residences and farming operations (not including the agricultural fields) and compacted dirt roads.

Ramon Substation Expansion

Based on a review of historic aerial photographs [Historic Aerials (1959-2020) and Google Earth (1996-2023)] the survey area was cleared of vegetation prior to May 2002 for the creation of the existing Ramon Substation and associated transmission line poles and portions been routinely disturbed since that time.

Vegetation onsite consisted of three land cover types with the predominant land cover type as Developed/Ornamental.

DEVELOPED/ORNAMENTAL

Within the Ramon Substation BSA, developed/ornamental land includes paved roads, electric substations, areas where non-native ornamental species and landscaping have been installed, and bare ground with compacted soils that no longer support vegetation. A total of 17.15 acres of developed/ornamental occurs within the Ramon Substation BSA. Approximately 1.56 acres of planted ornamental vegetation occurs as a strip of land just north of Ramon Road, in front of the existing substation.

CREOSOTE BUSH SCRUB

Within the Ramon Substation BSA, creosote bush scrub occurs primarily east and south of the existing Ramon Substation, and the northern portion of the BSA. This vegetation community covers approximately 35.02 acres of the BSA.

DISTURBED CREOSOTE BUSH SCRUB

Within the Ramon Substation BSA, disturbed-creosote bush scrub occurs to the north of the existing Ramon Substation and covers a total of 11.57 acres of the BSA.

Sensitive Natural Communities

VEGA 6

Special status natural communities are those that are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status plants or animals occurring in those habitats. Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents.

According to CDFW's Sensitive Natural Communities List, there are no sensitive vegetation communities within the VEGA 6 project area (CDFW 2023).

Ramon Substation Expansion

According to CDFW's Sensitive Natural Communities List, there are no sensitive vegetation communities within the Ramon Substation expansion area (CDFW 2023).

U.S. Fish and Wildlife Service Designated Critical Habitat

VEGA 6

The VEGA 6 project area is not located within any USFWS-designated critical habitat. The closest designated critical habitat is for Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*) located approximately 24 miles to the northeast of the VEGA 6 project area, and desert tortoise (*Gopherus agassizii*) critical habitat located approximately 34 miles to the northeast of the VEGA 6 project area.

Ramon Substation Expansion

The Ramon Substation BSA is located within the USFWS-designated critical habitat for the Coachella Valley fringe-toed lizard (*Uma inornate*).

Special-Status Species Assessment

VEGA 6

LITERATURE REVIEW

The literature review resulted in 11 special-status plant and 30 special-status wildlife species that have historically been recorded in the vicinity of the VEGA 6 project area.

BIOLOGICAL RECONNAISSANCE SURVEY

The biological reconnaissance survey was conducted on September 29 to 30, 2020 and August 3 to 5, 2021, by ECORP. The survey identified the potential for occurrence of sensitive species, vegetation communities, or habitats that could support sensitive wildlife and included an analysis of site characteristics, plants and plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors).

POTENTIAL FOR OCCURRENCE DETERMINATIONS

Special-status species reported for the region in the literature review or for which suitable habitat occurs in the VEGA 6 BSA were assessed for their potential to occur within the VEGA 6 BSA based on the following guidelines (Appendix D1 of this EIR):

Present: The species was observed onsite during a site visit or focused survey.

High: Habitat (including soils and elevation factors) for the species occurs within the BSA and a known occurrence has recently been recorded (within the last 20 years) within 5 miles of the area.

Moderate: Habitat (including soils and elevation factors) for the species occurs within the BSA and a documented observation occurs within the database search, but not within 5 miles of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the BSA; or a recently documented observation occurs within 5 miles of the area and marginal or limited amounts of habitat occurs in the project site.

Low: Limited or marginal habitat for the species occurs within the BSA and a recently documented observation occurs within the database search, but not within 5 miles of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the BSA; or suitable habitat strongly associated with the species occurs onsite, but no records or only historic records were found within the database search.

Presumed Absent: Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist onsite; or the known geographic range of the species does not include the BSA.

PLANT SPECIES

Twelve special-status plant species have been recorded within 5 miles of the VEGA 6 project area, according to the CNDDB, IPaC, and CNPSEI. Of all available records, 11 special-status plant species were identified as having the potential for occurrence within the vicinity of the VEGA 6 project area.

The following plant species were found to have a low potential to occur in the VEGA 6 project area:

- Salton milk-vetch (*Astragalus crotalariae*)
- Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*)
- gravel milk-vetch (*Astragalus sabulonum*)
- Emory's crucifixion-thorn (*Castela emoryi*)
- Abrams' spurge (*Euphorbia abramsiana*)
- flat-seeded spurge (*Euphorbia platysperma*)
- ribbed cryptantha (*Johnstonella costata*)
- Torrey's box-thorn (*Lycium torreyi*)
- sand food (*Pholisma sonorae*)
- Thurber's pilostyles (*Pilostyles thurberi*)
- Orcutt's woody-aster (*Xylorhiza orcuttii*)

WILDLIFE SPECIES

The literature search documented 30 special-status wildlife species in the vicinity of the VEGA 6 project area, four of which are federally or state listed. Of the 30 special-status wildlife species identified in the literature review, four were found to be present within the VEGA 6 survey area, four were found to have a high potential to occur, four were found to have a moderate potential to occur, and eight were found to have a low potential to occur; the remaining 10 species are presumed absent from the VEGA 6 BSA.

Present: The following species were observed in the VEGA 6 BSA during the reconnaissance survey (Figure 3.4-1):

- California horned lark (*Eremophila alpestris* ssp. *actia*). California horned lark is a CDFW Watch List (WL) species. The creosote bush scrub and disturbed creosote bush scrub throughout the VEGA 6 project area and within the buffer provides both foraging and nesting potential habitat. Approximately 12 individuals were observed foraging within the disturbed creosote bush scrub and disturbed areas of the southern portion of the solar facility site. No CNDDB records occur within 5 miles of the VEGA 6 project area.
- Loggerhead shrike (*Lanius ludovicianus*). Loggerhead shrike is a CDFW California Species of Special Concern (SSC). The VEGA 6 project area provides both foraging and nesting habitat. One individual was observed perching and vocalizing on tamarisk alongside a dirt irrigation canal adjacent to agricultural fields in the VEGA 6 survey area. No CNDDB records occur within 5 miles of the VEGA 6 project area.
- Northern harrier (*Circus hudsonius*). Northern harrier is a USFWS Bird of Conservation Concern (BCC) and CDFW SSC. The VEGA 6 project area provides foraging habitat but does not provide nesting habitat. One individual was observed during the habitat assessment near the proposed gen-tie line. No CNDDB records occur within 5 miles of the VEGA 6 project area.
- Peregrine falcon (*Falco peregrinus*). Peregrine falcon is a CDFW Fully Protected species. The VEGA 6 project area provides foraging habitat but does not provide nesting habitat. One individual was observed flying over the creosote bush scrub habitat of the southern end of the solar facility site. No CNDDB records occur within 5 miles of the VEGA 6 project area.

High Potential to Occur: Four species were found to have high potential to occur on the within the VEGA 6 project area due to the presence of suitable habitat for the species occurring on the site and a known occurrence that has been recorded within 5 miles of the VEGA 6 project area:

- Flat-tailed horned lizard (*Phrynosoma mcallii*). Flat-tailed horned lizard is a CDFW SSC, a BLM sensitive species, and an Imperial County Species of Conservation Focus. The creosote bush scrub habitat within the VEGA 6 project area provides suitable habitat for the flat-tailed horned lizard. Three recent CNDDB records of six total occur within five miles of the VEGA 6 project area with the closest being approximately 3.5 miles south from 2009. None were observed during the reconnaissance survey, but suitable habitat was confirmed. Harvester ants (*Pogonomyrmex* sp.) were present, which are a food source for flat-tailed horned lizard.
- Black-tailed gnatcatcher (*Polioptila melanura*). Black-tailed gnatcatcher is a CDFW WL species. The creosote bush scrub, disturbed bush scrub, and disturbed tamarisk thicket habitats within the VEGA 6 project area are suitable for this species. One historic record occurs within five miles of the VEGA 6 project area.

- Burrowing owl (*Athene cunicularia*). Burrowing owl is a USFWS BCC, a CDFW SSC, and Imperial County Species of Conservation Focus. The creosote bush scrub, disturbed creosote bush scrub, disturbed areas, berms of the irrigation canals, and agricultural areas provides potential habitat throughout the VEGA 6 survey area. Ground squirrel burrows that could be utilized by owls were detected within the solar facility site. No owl sign was detected at the burrow entrances. Twenty-five recent CNDDB records occur within five miles of the VEGA 6 project area with the closest being less than one mile away.
- Palm Springs pocket mouse (*Perognathus longimembris* ssp. *bangsi*). Palm Springs pocket mouse is a CDFW SSC and BLM sensitive species. One recent CNDDB record occurs approximately 2.75 miles southeast of the VEGA 6 project area. It was found in 2007 where the habitat consisted of creosote bush scrub with very sandy soils. Small rodent burrows were observed within creosote bush scrub habitat onsite during biological surveys. There is suitable habitat and soils within the creosote bush scrub of the solar facility site and buffer.

Moderate Potential to Occur: Four species were found to have moderate potential to occur within the VEGA 6 project area because habitat (including soils and elevation factors) for the species occurs on the VEGA 6 project area and a known occurrence exists within the database search, but not within 5 miles of the VEGA 6 project area; or a known occurrence exists within 5 miles of the VEGA 6 project area and marginal or limited amounts of habitat occurs on the VEGA 6 project area:

- Mountain plover (*Charadrius montanus*). Mountain plover is a USFWS BCC, a CDFW SSC, and a BLM sensitive species. Five recent CNDDB records occur within five miles of the VEGA 6 project area with one record from 2011 less than 2 miles from the VEGA 6 project area. Agricultural lands along the solar facility site and gen-tie line provide suitable habitat for this species.
- Crissal thrasher (*Toxostoma crissale*). Crissal thrasher is a CDFW SSC and a BLM sensitive species. The tamarisk thickets and creosote bush scrub within the VEGA 6 project area provides suitable habitat for this species. Two historic CNDDB records occur within five miles of the VEGA 6 project area, one of which overlaps with the proposed gen-tie line.
- Yuma hispid cotton rat (*Sigmodon hispidus eremicus*). Yuma hispid cotton rat is a CDFW SSC. There is potential for this species to occur within vegetated agricultural irrigation channels that run adjacent to the gen-tie line and agriculture fields within the buffer where they can utilize runways through dense herbaceous growth along the channels. Two recent CNDDB records occur within five miles of the VEGA 6 project area from 2008 with the closest being approximately 2 miles northeast of the VEGA 6 project area. This species was found in a lateral drain canal.
- American badger (*Taxidea taxus*). American badger is a CDFW SSC. One recent CNDDB record from 2017 occurs within five miles of the VEGA 6 project area on military land. It was noted to be within creosote bush habitat. Moderately suitable habitat exists within the creosote bush scrub habitats of the solar facility site and gen-tie line.

The following eight species were found to have a low potential to occur within the VEGA 6 project area because limited habitat for the species occurs on the site and a known occurrence has been reported in the database or suitable habitat strongly associated with the species occurs on the site, but no records were within 5 miles of site or were not found in the database search.

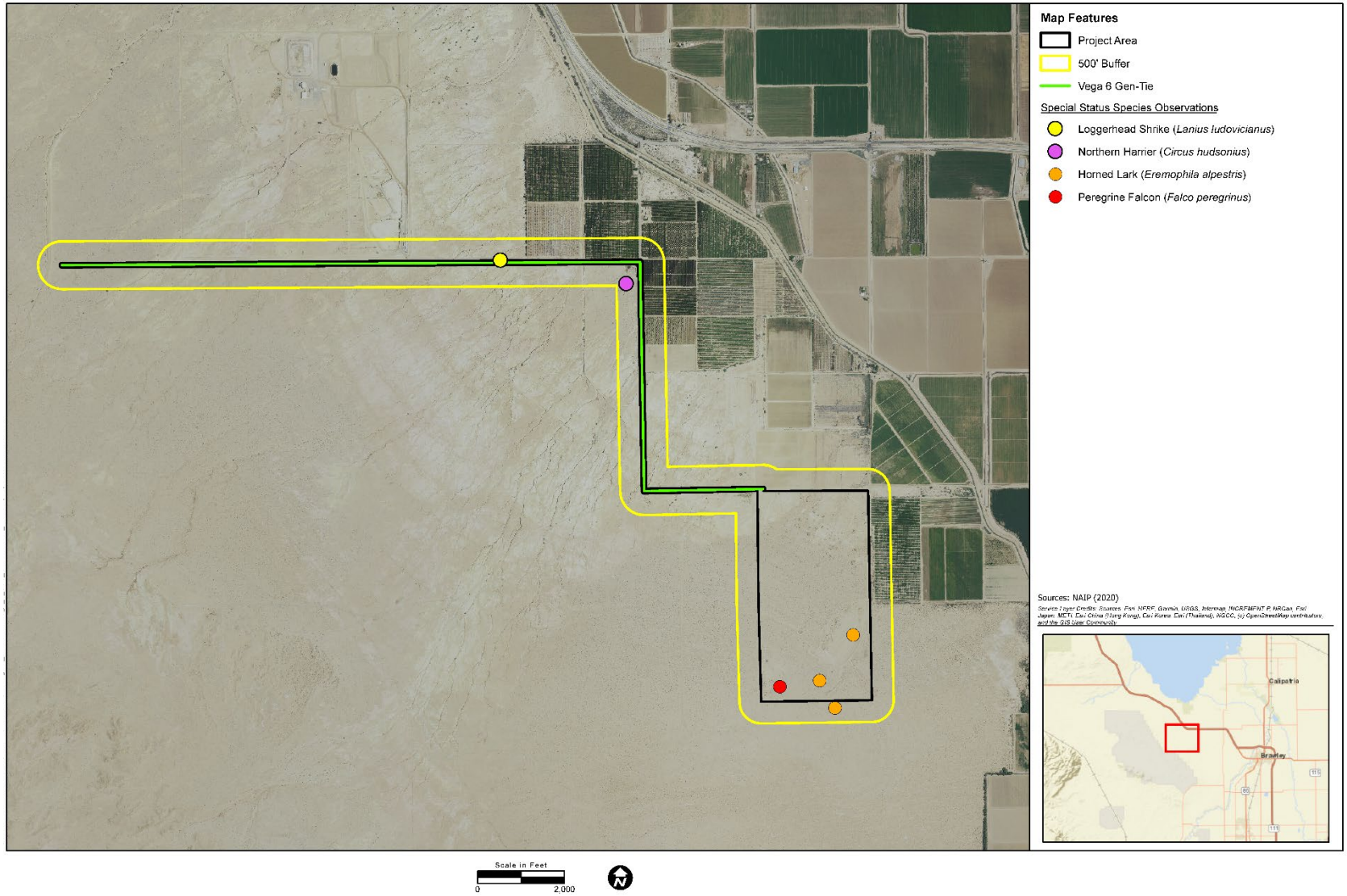
- Colorado Desert fringe-toed lizard (*Uma notata*)

- Gila woodpecker (*Melanerpes uropygialis*)
- California black rail (*Laterallus jamaicensis* ssp. *coturniculus*)
- Yuma Ridgway's rail (*Rallus obsoletus* ssp. *yumanensis*)
- white-faced ibis (*Plegadis chihi*)
- short-eared owl (*Asio flammeus*)
- California leaf-nosed bat (*Macrotus californicus*)
- western yellow bat (*Lasiurus xanthinus*)

The following 10 species are presumed absent from the VEGA 6 project area due to the lack of suitable habitat on the VEGA 6 project area:

- desert pupfish (*Cyprinodon macularius*)
- black skimmer (*Rynchops niger*)
- gray-headed junco (*Junco hyemalis* ssp. *caniceps*)
- brown pelican (*Pelecanus occidentalis*)
- western mastiff bat (*Eumops perotis* ssp. *californicus*)
- pocketed free-tailed bat (*Nyctinomops femorosaccus*)
- big free-tailed bat (*Nyctinomops macrotis*)
- Mexican long-tongued bat (*Choeronycteris mexicana*)
- pallid bat (*Antrozous pallidus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)

Figure 3.4-1. Special-Status Species Observed On-Site



Source: Appendix D1 of this EIR

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Ramon Substation Expansion

LITERATURE REVIEW

A literature review was conducted to determine the existence or potential occurrence of special-status plant and animal species on the Ramon Substation expansion area and in the vicinity. Database records for the *La Quinta, West Berdoo Canyon, Keys View, Myoma, East Deception Canyon, Indio, Seven Palms Valley, Rancho Mirage and Cathedral City, California* USGS 7.5-minute series quadrangles were searched on May 31, 2023 using the CDFW Natural Diversity Data Base *Rarefind 5* online application (version 5, dated April 30, 2023) and the California Native Plant Society's *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2023. V9.5, http://www.cnps.org/inventory). A USFWS Information for Planning and Conservation (IPaC) Trust Resource Report was generated for the Ramon Substation expansion area on June 5, 2023. Appendix D2 of this EIR includes the CNDDB, CNPS, and IPaC records search results.

BIOLOGICAL RECONNAISSANCE SURVEY

HDR biologists conducted a site visit on June 16, 2023 in order to identify general site conditions, vegetation communities, and suitability of habitat for various special-status species. The Ramon Substation BSA was surveyed by foot and binoculars were used to aid in the identification of species, potential nest locations, and foraging areas. All wildlife and plant species encountered during the field surveys were identified and recorded. Plant nomenclature follows Jepson Flora Project. The Calflora online database was also used as a tool to assist with plant identification (Appendix D2 of this EIR).

POTENTIAL FOR OCCURRENCE DETERMINATIONS

PLANT SPECIES

Based upon the results of the literature review, 38 special-status plant species are known to occur within the vicinity of the Ramon Substation expansion area (Appendix D2 of this EIR). Of the 38 species, 14 special-status plant species have a potential of occurring within the Ramon Substation BSA. Table 3.4-2 lists these species as well as their habitat requirements and occurrence probability. None of these species were observed within the Ramon Substation BSA during the field survey.

One of these 14 special-status plant species is a federally listed species, the Coachella Valley milk-vetch (*Astragalus lentiginous* var. *coachellae*, CNPS 1B.2).

- **Coachella Valley milk-vetch.** Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) is federally endangered and a CVMSCHP covered species. The species generally occurs in dunes and sandy flats, along the disturbed margins of sandy washes, and in sandy soils along roadsides adjacent to existing sand dunes. The species may also occur in sandy substrates in creosote bush scrub, not directly associated with sand dune habitats. There are core habitat areas within the Thousand Palms Preserve including a small area in the Thousand Palms Canyon and a larger area south of Ramon Road (Appendix D2 of this EIR).

  Potentially suitable habitat occurs within the sandy creosote bush scrub vegetation community in the Ramon Substation BSA with critical habitat occurring just north of the BSA. None were observed within the Ramon Substation BSA during the field survey.

The mecca-aster (*Xylorhiza cognata*, CNPS 1B.2) has a low probability of occurring within the Ramon Substation BSA and is covered under the CVMSHCP.

Table 3.4-2. Special-Status Plant Species with Potential to Occur within Ramon Substation BSA

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
Astragalus lentiginous var. borreganus **Borrego milk-vetch**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Mojavean desert scrub, Sonoran desert scrub.	Blooms February through May (annual herb)	Low. Suitable habitat present, nearest CNPS record within Myoma quadrangle.
Astragalus lentiginosus var. *coachellae* **Coachella Valley milk-vetch**	US: FE CA: None CNPS: 1B.2 CVMSHCP: C	Occurs in desert dunes and sandy Sonoran desert scrub from 40 to 655 meters (130 to 2,150 feet) above MSL.	Blooms February through May (annual/perennial herb)	Moderate. Suitable habitat present, species known from immediate vicinity, critical habitat to the north of site.
Cuscuta californica var. *apiculata* **Pointed dodder**	US: None CA: None CNPS: 3 CVMSHCP: NC	Occurs in Mojavean desert scrub and Sonoran desert scrub from 0 to 500 meters (0 to 1,640 feet) above MSL.	Blooms February through August (annual vine (parasitic))	Low. Suitable habitat present, nearest CNPS record within Cathedral City quadrangle.
Ditaxis claryana **Glandular ditaxis**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in sandy soils in Mojavean desert scrub and Sonoran desert scrub from 0 to 465 meters (0 to 1,525 feet) above MSL.	Blooms October through March (perennial herb)	Low. Suitable habitat present, nearest CNDDB records approx. 7 miles south of site.
Ditaxis serrate var. californica **California ditaxis**	US: None CA: None CNPS: 3.2 CVMSHCP: NC	Occurs in Sonoran desert scrub from 30 to 1,000 meters (100 to 3,280 feet) above MSL.	Blooms March through December (perennial herb)	Low. Suitable habitat present, nearest CNDDB records approx. 8 miles south of site.
Euphorbia abramsiana **Abrams' spurge**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in Mojavean desert scrub and Sonoran desert scrub from -5 to 1,310 meters (-15 to 4,300 feet) above MSL.	Blooms August through November (annual herb)	Low. Suitable habitat present, nearest CNDDB records approx. 4.5 miles south of site.
Euphorbia arizonica **Arizona spurge**	US: None CA: None CNPS: 2B.3 CVMSHCP: NC	Occurs in sandy Sonoran desert scrub from 50 to 300 meters (165 to 985 feet) above MSL.	Blooms March through April (perennial herb)	Low. Suitable habitat present, nearest CNDDB records approx. 3 miles north of site.
Euphorbia platysperma **flat-seeded spurge**	US: None CA: None CNPS: 1B.2 CVMSHCP: NC	Occurs in desert dunes and sandy Sonoran desert scrub from 65 to 100 meters (215 to 330 feet) above MSL.	Blooms February through September (annual herb)	Moderate. Suitable habitat present, nearest CNDDB records less then 1 mile southwest of site.
Johnstonella costata **Ribbed cryptantha**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Occurs in desert dunes, Mojavean desert scrub, Sonoran desert scrub from -60 to 500 meters (-195 to 1,640 feet) above MSL.	Blooms February through May (annual herb)	Moderate. Suitable habitat present, site within CNPS Myoma quadrangle.

Johnstonella holoptera **Winged cryptantha**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Occurs in Mojavean desert scrub, Sonoran desert scrub from 100 to 1,690 meters (330 to 5,545 feet) above MSL.	Blooms March through April (annual herb)	Moderate. Suitable habitat present, site within CNPS Myoma quadrangle.
Lycium torreyi **Torrey's box-thorn**	US: None CA: None CNPS: 4.2 CVMSHCP: NC	Occurs in Mojavean desert scrub, Sonoran desert scrub from -50 to 1,220 meters (-165 to 4,005 feet) above MSL.	Blooms January through November (perennial shrub)	Moderate. Suitable habitat present, site within CNPS Myoma quadrangle.
Nemacaulis denudata var. *gracilis* **Slender cottonheads**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in coastal dunes, desert dunes, and Sonoran desert scrub from -50 to 400 meters (-165 to 1,310 feet) above MSL.	Blooms March through May (annual herb)	Low. Suitable habitat present, nearest CNDDB records approx. 6 miles southwest of site.
Petalonyx linearis **Narrow-leaf sandpaper-plant**	US: None CA: None CNPS: 2B.3 CVMSHCP: NC	Occurs in Mojavean desert scrub, Sonoran desert scrub from -25 to 1,115 meters (-80 to 3,660 feet) above MSL.	Blooms January through December (perennial shrub)	Low. Suitable habitat present, nearest CNDDB records approx. 3 miles northeast of site.
Xylorhiza cognata **Mecca-aster**	US: None CA: None CNPS: 1B.2 CVMSHCP: C	Occurs in Sonoran desert scrub habitat from 20 to 400 meters (65 to 1,310 feet) above MSL.	Blooms January through June (perennial herb)	Low. Suitable habitat present, nearest CNDDB records approx. 6.5 miles east of site.

Notes:

US: Federal Classifications	
FE	*Taxa listed as Endangered*
FT	*Taxa listed as Threatened*
CA: State Classification	
SE	*Taxa State-listed as Endangered*
ST	*Taxa State-listed as Threatened*
CNPS Rare Plant Rank*	
List 1B.2	*List 1b: Rare, threatened, or endangered in California and elsewhere. 0.2: Fairly endangered in California*
List 2.3	*List 2: Rare, threatened, or endangered in California, but more common elsewhere. O.3: Not very endangered in California.*
List 4.2	*Limited distribution (Watch list). 0.2: Fairly endangered in California.*
List 4.3	*Limited distribution (Watch list). 0.3: Not very endangered in California.*
List A	*Plants rare, threatened or endangered in California and elsewhere.*
List B	*Plants rare, threatened or endangered in California but more common elsewhere.*
**California Rare Plant Ranks are assigned by a committee of government agency and non-governmental botanical experts and are not official State designations of rarity status.*	
CVMSHCP Conservation Status	
NC	*Impacts to this species are not covered through participation in the CVMSHCP.*
C	*Impacts to this species are covered through participation in the CVMSHCP.*

Source: Appendix D2 of this EIR

WILDLIFE SPECIES

Based upon the results of the literature review, 29 special-status wildlife species are known to occur within the vicinity of the Ramon Substation expansion area. Of the 29 species, nine special-status wildlife species have a potential of occurring within the Ramon Substation BSA. Table 3.4-3 lists these species as well as their habitat requirements and occurrence probability.

One of these species is listed as endangered, threatened or is a candidate for listing under the federal and/or California Endangered Species Acts:

- Coachella Valley fringe-toed lizard (*Uma inornate*). The Coachella Valley fringe-toed lizard is federally threatened, state endangered and a CVMSHCP covered species. The species is restricted to the Coachella Valley and historically ranged from Cabazon, east to Thermal. The lizard is associated with aeolian sands and has developed morphological and behavioral adaptations including a unique way of "swimming" through the loose sand. As a result, the lizard is dependent on less compacted sands for burrowing to escape the heat of the day, sometimes deeper than five centimeters and in the shade on the hottest days. During normal and wet years, the species feeds on flowers and plant dwelling arthropods, switching to leaves and ants during the dry years (Appendix D2 of this EIR).

  The Ramon Substation BSA is located within designated critical habitat for the species and adjacent to the Thousand Palms Conservation Area of the CVMSCHP. The majority of the Ramon Substation BSA contains creosote bush scrub habitat with looser sands, however, proper aeolian sands that the species is closely associated with is absent from the Ramon Substation BSA.

Table 3.4-3. Special-Status Wildlife Species with Potential to Occur within Ramon Substation BSA

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
INSECTS			
Bombus crotchii **Crotch bumble bee**	US: None CA: CE CVMSHCP: NC	Found between San Diego and Redding in a variety of habitats including open grasslands, shrublands, chaparral, desert margins including Joshua tree and creosote scrub, and semi-urban settings. It is near endemic to California, with only a few records from Nevada and Mexico (CDFW 2022). Williams et al. (2014) report plants in the genera *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia*, and *Salvia* as example food plants.	Potentially suitable creosote scrub habitat onsite, however, nearest CNDDB occurrence is over 9.5 miles west of the site.
REPTILES			
Phrynosoma mcallii **Flat-tailed horned lizard**	US: None CA: SSC CVMSHCP: C	Sandy desert hardpan or gravel flats with scattered sparse vegetation of low species diversity. Common in areas with high density of harvester ants and fine windblown sand, but rarely occurs on dunes.	Suitable habitat onsite, nearest CNDDB occurrence is less than 1 mile northeast of the site.

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
Uma inornata **Coachella Valley fringe-toed lizard**	US: FT CA: SE CVMSHCP: C	Sparsely-vegetated arid areas with fine wind-blown sand, including dunes, washes, and flats with sandy hummocks formed around the bases of vegetation. Needs fine, loose sand for burrowing.	Suitable habitat onsite, nearest CNDDB occurrence is less than .5 miles west and east of the site. Within critical habitat.
BIRDS			
Athene cunicularia **Burrowing Owl**	US: None CA: SSC CVMSHCP: C	Open country in much of North and South America. Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. They avoid thick, tall vegetation, brush, and trees.	Low: The site does not contain suitable natural habitat to support this species, but debris piles are present within the site.
Lanius ludovicianus **Loggerhead shrike**	US: None CA: SSC CVMSHCP: NC	Inhabits open country with short vegetation and well-spaced shrubs or low trees, particular those with spines or thorns. Frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries.	Moderate: Site contains suitable habitat to support this species. Nearest CNNDB occurrence is 4 miles southeast of site.
Pyrocephalus rubinus **Vermilion flycatcher**	US: None CA: SSC CVMSHCP: NC	Scrub, desert, cultivated lands, and riparian woodlands.	Moderate: Site contains suitable habitat to support this species. Nearest CNNDB occurrence is 7 miles southeast of site.
MAMMALS			
Perognathus longimembris bangsi **Palm Springs pocket mouse**	US: None CA: SSC CVMSHCP: C	Creosote scrub, desert scrub, and grasslands, generally occurring on loosely packed or sandy soils with sparse to moderately dense vegetative cover.	Low: The site contains suitable habitat to support this species but is disturbed. Nearest CNDDB occurrence is 5 miles southeast of site.
Taxidea taxus **American badger**	US: None CA: SSC CVMSHCP: NC	Agricultural land, grassland and other open areas and brush lands with sparse groundcover.	Low: The site contains suitable habitat to support this species, however, nearest CNDDB occurrence is 10 miles southeast of site.

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
Xerospermophilus tereticaudus chlorus **Coachella Valley round-tailed ground squirrel**	US: None CA: SSC CVMSHCP: C	Sandy arid areas with scrub and wash habitats including mesquite- and creosote-dominated sand dunes, creosote bush scrub, creosote-palo verde, and saltbush/alkali scrub. Wind-blown sand, coarse sand, and packed silt with desert pavement.	Low: The site contains suitable habitat to support this species but is disturbed. Nearest CNDDB occurrence is 5 miles southeast of site.

Notes:

FE	*Federally Endangered*
FT	*Federally Threatened*
FC	*Federal Candidate for Listing*
SE	*Endangered in California*
ST	*Threatened in California*
CE	*Candidate for Endangered Status*
CT	*Candidate for Threatened Status*
CR	*Rare in California*
SSP	*State Species of Concern*
FP	*State Fully Protected*

CVMSHCP Conservation Status	
NC	*Impacts to this species are not covered through participation in the CVMSHCP.*
C	*Impacts to this species are covered through participation in the CVMSHCP.*

Source: Appendix D2 of this EIR

Aquatic Resources

VEGA 6

Aquatic resources have been mapped within the VEGA 6 project area. Each resource is summarized by features in Table 3 and Figure 5 of the *Aquatic Resources Delineation – VEGA SES 6 Solar Project* (Appendix E1 of this EIR). Features identified as an aquatic resource had physical evidence of flow, including at least two OHWM field indicators: defined bed and bank, scour, presence of a clear and natural line impressed on the bank, presence of leaf litter and/or debris, sediment sorting, shelving, destruction of terrestrial vegetation, and/or vegetation matted down, bent, or missing indicating active hydrology within the channel.

EPHEMERAL DRAINAGE

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 6 project area 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.

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 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. Sampling points were not taken within the ephemeral features, as the presence of a wetland was not expected.

DETENTION BASIN

Detention basins are man-made surface storage basins in upland areas that provide flow control of stormwater runoff. They are typically dry most of the year and can also be used for recreational or agricultural purposes.

There are two detention basins located within the VEGA 6 aquatic resources study area. Detention Basin 201, which is located in the northwest corner of the solar facility site, has soil cracks and rows of young tamarisk trees but lacks hydric soils. Detention Basin 301, which is located in the southern section of the solar facility site, appears to be abandoned with remnant disturbed tamarisk thickets and no signs of hydrology.

CONSTRUCTED CHANNEL

Constructed channels (CC) are manufactured features constructed for the purpose of channeling stormwater and ephemeral features to a desired location. Within the VEGA 6 aquatic resources study area, these include ephemeral ditches that retain water within their berms, as well as ephemeral drainage systems that convey water through culverts to natural drainage features that eventually drain into the Salton Sea. Three CC features appear to be created to catch stormwater runoff and man-made berms are present where the features are intersected by roads and canals, so the water remains within the features.

POTENTIAL CDFW REGULATED HABITATS

Riparian habitat is present primarily within the eastern and southern portions of the VEGA 6 aquatic resources study area. There is riparian habitat associated with the detention basins within the solar facility site. Additional riparian habitat is associated with the agricultural drains and roadside ditches. Riparian habitat associated with Detention Basins 201 and 301 appear in historic aerials dating as early as 1992, which appear to have been part of agriculture systems. Both detention basins no longer appear to be in use, though the riparian habitat associated with the relic basins has persisted.

Ramon Substation Expansion

No aquatic resources were observed within the Ramon Substation aquatic resources study area during the field visit.

Jurisdictional Assessment

Aquatic resources that are potentially regulated under the CWA, the Porter-Cologne Act, and California Fish and Game Code Section 1602 are summarized below. These results are subject to modification following agency verification.

VEGA 6

CLEAN WATER ACT

The ephemeral drainages within the VEGA 6 project area are tributary to the Salton Sea, which is a TNW. Under the current definition of waters of the U.S., the *Rapanos* guidance, the ephemeral drainages onsite would be considered non-navigable tributaries that are not relatively permanent. In

which, case, a significant nexus evaluation of the ephemeral drainages would be necessary to determine jurisdiction if seeking an Approved Jurisdictional Determination (AJD).

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The following categories meet the definition of waters of the state and are regulated pursuant to the Porter-Cologne Act. The Porter-Cologne Act defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The Porter-Cologne Act defines "Waters of the State" very broadly, with no physical descriptors, and no interstate commerce limitation. The categories are:

- Ephemeral Drainages
- Detention Basins
- Constructed Channels

The remaining features are excluded from the definition of waters of the state pursuant to current guidance from the SWRCB and include the inactive ephemeral drainages. Impacts to features that fall under the definition of waters of the state would trigger the need for permits through the WDR process.

CALIFORNIA FISH AND GAME CODE SECTION 1600-1602

The following categories meet the criteria for resources that are regulated under Section 1600 of the California Fish and Game Code. This includes all resources with surface or subsurface flow, and a body of water that "flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life." Areas with associated riparian vegetation that is supported by the surface and subsurface flow through these streambeds that are also added to CDFW's jurisdiction under Section 1600. The categories are:

- Ephemeral Drainages
- Detention Basins
- Constructed Channels
- Associated Riparian Habitat

The remaining features are excluded from Sections 1600-1602 pursuant to current guidance from CDFW and include the inactive ephemeral drainages, because they do not meet the definition of a bed, channel, or bank of any river, stream, or lake and associated riparian habitat. Impacts to features that fall under the definition of streambed and associated riparian habitat would trigger the need for Streambed Alteration Notification and the project may need to enter into formal Agreements with CDFW. Additional areas mapped as riparian habitat, such as those located within the solar facility site, are not associated with any streams with flow but have likely established opportunistically in areas that were recently left fallow, previously irrigated and farmed, and are in artificially moist areas where surface and subsurface flow are unlikely.

Ramon Substation Expansion

CLEAN WATER ACT

No aquatic resources were observed within the Ramon Substation aquatic resources study area during the field visit. The area is entirely upland dominated by creosote bush scrub with no features exhibiting

any hydrologic indicators or containing hydrophytic plants. No soil samples were taken during the field visit.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

No aquatic resources were observed within the Ramon Substation aquatic resources study area during the field visit. The area is entirely upland dominated by creosote bush scrub with no features exhibiting any hydrologic indicators or containing hydrophytic plants.

CALIFORNIA FISH AND GAME CODE SECTION 1600-1602

Features within the Ramon Substation aquatic resources study area were assessed for CDFW jurisdiction based on whether they exhibited a stream bed and bank, provided habitat value for terrestrial and/or aquatic wildlife, and/or associated with a naturally occurring drainage feature. No aquatic resources were observed within the Ramon Substation aquatic resources study area during the field.

Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

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

VEGA 6

The VEGA 6 project area was assessed for its ability to function as a wildlife corridor. The solar facility site and western portion of the gen-tie line currently provide wildlife movement opportunities because they consist of open and relatively unimpeded land. However, it 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 vicinity and the VEGA project area's proximity to agricultural areas. The VEGA 6 project area is also mostly surrounded by additional open unimpeded land, functioning as a single contiguous block of habitat rather than a corridor. The solar facility site is exposed and does not contain any major features that would be considered critical movement corridors for wildlife.

Although the dirt roads and desert washes located within the VEGA 6 project boundary are likely utilized by wildlife moving through the area, these features would not be considered necessary linkages between conserved natural habitat areas or critical for wildlife movement because of the nearby open space surrounding the VEGA 6 project area. Existing development in the vicinity of the VEGA 6 project area and presence of anthropogenic uses throughout the area (e.g., trash dumping,

OHV use) further limit ability for wildlife to use the VEGA 6 project area for travel and regional movement.

Ramon Substation Expansion

The Ramon Substation expansion area is disturbed and contains very little native vegetation, additionally, the expansion area is bordered by the existing SCE Mirage substation to the west, the existing Ramon Substation and Ramon Road to the south, which limits wildlife movement through the expansion area.

Habitat Conservation Plans

VEGA 6

The VEGA 6 project area is within the designated boundaries of the Desert Renewable Energy Natural Community Conservation Plan & Habitat Conservation Plan (NCCP/HCP). The VEGA 6 project area is adjacent to an Area of Critical Environmental Concern and BLM land.

Ramon Substation Expansion

The Ramon Substation expansion area is located within the boundaries of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) (Figure 3.4-2), adjacent to the Thousand Palms Conservation Area. The CVMSHCP covers approximately 240,000 acres of land in Coachella Valley with the purpose to balance growth while conserving sensitive habitats and species.

Figure 3.4-2. Coachella Valley Multiple Species Conservation Plan Area

Source: Appendix E2 of this EIR

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3.4.2 Regulatory Setting

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

Federal

Bald and Golden Eagle Protection Act of 1940

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

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) protects federally listed threatened and endangered species and their habitats from unlawful take and ensures that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Under the ESA, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The U.S. Fish and Wildlife Service (USFWS) regulations define harm to mean "an act which actually kills or injures wildlife" (50 CFR 17.3).

Migratory Bird Treaty Act

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

Section 404 Permit (Clean Water Act)

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

of Engineers (USACE). Activities regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. Either an individual 404b permit or authorization to use an existing USACE Nationwide Permit will need to be obtained if any portion of the construction requires fill into a river, stream, or stream bed that has been determined to be a jurisdictional waterway.

State

California Endangered Species Act

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

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

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

California Fish and Game Code Section 1600 et. seq (as amended)

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

California Fish and Game Code Sections 3503, 3503.5 and 3513

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

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

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

Porter-Cologne Water Quality Control Act

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

California Environmental Quality Act

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

Desert Renewable Energy Conservation Plan Land Use Plan Amendment

The Desert Renewable Energy Conservation Plan (DRECP) is designed to provide effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. The DRECP Area contains both federal and non-federal California desert land. Some of these lands are designated as California Desert Conservation Areas. The federal portion of the plan area was released by the BLM as a Land Use Plan Amendment. The DRECP Land Use Plan Amendment supports the conservation goals of the DRECP and organizes land into ecoregions and subregions with specific management goals, objectives, allowable uses, and management actions for biological and cultural resources. The BLM designates Areas of Critical Environmental Concern where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources. The BLM also designates Renewable Energy Development Focus Areas which are on BLM-administered lands within which solar, wind, and geothermal renewable energy development and associated activities are allowable uses and that have been determined to be of low or lower resource conflict. The intent is to incentivize and streamline such development in these areas (Appendix D of this EIR).

Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan provides detailed plans and measures for the preservation and management of biological and cultural resources, soils, minerals, energy, regional aesthetics, air quality, and open space. The purpose of this element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public and to protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and for public health and safety. In addition, the purpose of this element is to promote the protection, maintenance, and use of the County's natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the state's natural resources. Table 3.4-4 analyzes the consistency of the project with specific policies contained in the Imperial County General Plan associated with biological resources.

Table 3.4-4. VEGA 6 Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
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 VEGA 6 project site to evaluate the proposed project's potential impacts on biological resources. Implementation of the proposed VEGA 6 project has the potential to impact special-status wildlife species. Implementation of Mitigation Measures BIO-1 through BIO-7 would reduce impacts to a level less than significant. Applicable agencies responsible for protecting plants and wildlife will be notified of the proposed VEGA 6 project and provided an opportunity to comment on this EIR prior to the County's consideration of any approvals for the project. As described in Chapter 2, Project Description, implementation of the project would require the approval of a CUP, General Plan Amendment, and Zone Change by the County to allow for the construction and operation of the project.
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 VEGA 6 project site to evaluate the project's potential impacts on biological resources. Implementation of the proposed project has the potential to impact special-status wildlife species. However, with implementation of mitigation (Mitigation Measures BIO-1 through BIO-7), the VEGA 6 project would not result in residual significant or unmitigable impacts on biological resources.

Source: County of Imperial 2016

Riverside County General Plan

The Multipurpose Open Space Element of the Riverside County General Plan contain policies to preserve natural resources that are sensitive, rare, threatened, endangered and irreplaceable. To address the issues of wildlife health and sustainability, the County of Riverside has participated in or directed the development of two Multiple Species Habitat Conservation Plans (MSHCP's) – the Western Riverside County MSHCP and the Coachella Valley MSHCP. The Western Riverside County MSHCP has been adopted by the County of Riverside and approved by other jurisdictions and the Wildlife Agencies. The Coachella Valley Association of Governments' MSHCP has also been adopted

and received its final permit from the U.S. Fish and Wildlife Service on October 1, 2008 (County of Riverside 2015).

Coachella Valley Multiple Species Habitat Conservation Plan

The Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) received its California state permit in September 2008 and its federal permit in October 2008. The CVMSHCP is a comprehensive habitat conservation-planning program focusing on preservation of species and their associated habitats within the Coachella Valley region of Riverside County. Signatories to the CVMSHCP include the cities of Cathedral City, Coachella, Desert Hot Springs (I-10 annexation area only), Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, Rancho Mirage as well as Coachella Valley Water District, Imperial Irrigation District, Coachella Valley Association of Governments, and Caltrans. The intent of the CVMSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the CVMSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the CVMSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach.

The CVMSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species. Through agreements with the USFWS and the CDFW, the CVMSHCP designates approximately 27 special-status animal and plant species that receive some level of coverage under the plan. Of the 27 covered species designated under the CVMSHCP, the majority of these species have no additional survey/ conservation requirements. In addition, the CVMSHCP provides mitigation for project-specific impacts to these species so that the impacts would be reduced to below a level of significance pursuant to CEQA. Beyond the fully covered species, there are species with additional survey/conservation requirements.

Each participating city or local jurisdiction within the Coachella Valley region will impose a development mitigation fee for new development projects within its jurisdiction. As of July 1, 2023, the current fees for development are:

- $1,625 for 0 to 8 residential units per acre
- $675 for 8.1 to 14 residential units per acre
- $300 for more than 14 residential units per acre
- $7,225 per acre for commercial/industrial

3.4.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

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

Methodology

VEGA 6

This analysis evaluates the potential for the VEGA 6 project, as described in Chapter 2, Project Description to result in significant impacts related biological resources on or in the vicinity of the project site. A biological resources technical report and aquatic resources report were prepared for the VEGA 6 project. The information obtained from the sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with biological resources that could result from project construction and operational activities were evaluated qualitatively based on-site conditions; expected construction practices; and materials, locations, and duration of project construction and related activities.

Ramon Substation Expansion

This analysis evaluates the potential for the Ramon Substation expansion, as described in Chapter 2, Project Description to result in significant impacts related biological resources on or in the vicinity of the expansion area. A biological resources technical report and aquatic resources report were prepared for the proposed Ramon Substation expansion. The information obtained from the sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the significance criteria presented in this section. Impacts associated with biological resources that could result from project construction and operational activities were evaluated qualitatively based on-site conditions; expected construction practices; and materials, locations, and duration of project construction and related activities.

Impact Analysis

Impact 3.4-1 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?

VEGA 6

SPECIAL-STATUS PLANTS

Eleven special-status plant species have the potential occur in the VEGA 6 project vicinity. However, due to lack of suitable habitat and soils as well as the site's current condition of being heavily disturbed and developed, all special-status plant species were determined to have low potential of occurrence. None of these species are federally or state listed. If these special-status plant species were to be present on the site, they would likely occur in low numbers due to the limiting factors listed above (anthropogenic and mechanical disturbances, urban development, and lack of connectivity) and project-related impacts would not contribute to the overall decline of populations for these species and therefore not considered significant.

SPECIAL-STATUS WILDLIFE

Four special-status wildlife species were found to be present within the VEGA 6 project area and adjacent habitat: California horned lark, loggerhead shrike, northern harrier, and peregrine falcon. These species were observed within a variety of habitats within the VEGA 6 BSA. 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 6 project area. The VEGA 6 project area provides nesting habitat for ground-nesting species as well as species that nest in various scrub habitats. Direct impacts to nesting avian species include injury, mortality, loss of young, and nest failure. Indirect impacts include loss of foraging and nesting habitat for passerine and raptor species, increase in noise and human activities, and potential introduction of invasive or nonnative species. These potential impacts are considered significant. Implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 would reduce impacts to a level less than significant.

Four special-status wildlife species were found to have a high potential to occur within the VEGA 6 project area and adjacent habitats: flat-tailed horned lizard, black-tailed gnatcatcher, burrowing owl, and Palm Springs pocket mouse. The creosote bush scrub in the VEGA 6 project area and buffer provides habitat for flat-tailed horned lizard. Direct impacts to these species could occur in the form of injury and mortality. Indirect impacts could occur in the form of habitat loss, increased human and vehicular activity, ground vibrations, noise, and increased dust. Implementation of Mitigation Measures BIO-3 and BIO-4 would reduce impacts to a level less than significant. The various scrub habitats and tamarisk thickets provides foraging and nesting habitat for black-tailed gnatcatcher. Direct impacts to these species could occur in the form of injury, mortality, and the loss of nests or young. Indirect impacts could occur in the form of habitat loss, increased human and vehicular activity, ground vibrations, noise, and increased dust. These potential impacts are considered significant. Implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 would reduce impacts to a level less than significant.

Burrowing owl has a high potential to occur on the VEGA 6 project area and buffer due to the number of previously documented occurrences and suitable habitat on the VEGA 6 project area. Suitable burrowing owl burrows and burrow structures were identified during the survey. Although no burrowing

owl were observed or burrows with sign identified at the time of the survey, due to the mobile nature of the species it is possible that burrowing owl could use the site prior to the start of project activities. If burrowing owl are found to be using or nesting on the site prior to the start of construction due to a change in potential burrow presence, direct impacts in the form of ground disturbance, vegetation removal, habitat loss, and mortality and indirect impacts from construction noise and vibrations may occur. Potential project-related direct impacts to these species could be significant and occur in the form of injury, mortality, and loss of active nests or young. Indirect impacts could occur in the form of habitat loss, increased human and vehicular activity, ground disturbances, noise, and increased dust. Implementation of Mitigation Measure BIO-5 would reduce impacts to a level less than significant.

Palm Springs pocket mouse has a high potential to occur in the creosote bush scrub habitat of the VEGA 6 project area. Therefore, there is potential for project-related impacts to be significant if this species occurs in the VEGA 6 project area in the form of direct mortality and destruction of habitat. Implementation of Mitigation Measure BIO-6 would reduce impacts to a level less than significant.

Four special-status wildlife species were found to have a moderate potential to occur within the VEGA 6 project area: mountain plover, Crissal thrasher, Yuma hispid cotton rat, and American badger. Direct impacts to these species could occur in the form of injury, mortality, and the loss of nests or young. Indirect impacts could occur in the form of habitat loss, increased human and vehicular activity, ground vibrations, noise, and increased dust. These potential impacts are considered significant. Implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-7 would reduce impacts to a level less than significant.

Ramon Substation Expansion

SPECIAL-STATUS PLANTS

One federally and/or state listed plant species would have a moderate probability of occurring within the Ramon Substation BSA. The Coachella Valley milk-vetch is known to occur within sandy substrates in creosote bush scrub habitat which occurs within the proposed Ramon Substation expansion area. Potential impacts that may occur during construction of the proposed Ramon Substation expansion 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. The Coachella Valley milk-vetch is a CVMSCHP covered species and direct impacts to this species is considered a covered activity and mitigated through participation in the CVMSCHP. In addition, Mitigation Measure RS-BIO-1 would be implemented and would require payment of the mitigation fee as required by the CVMSCHP. Implementation of Mitigation Measure RS-BIO-1 would reduce impacts to a level less than significant.

As shown in Table 3.4-2, 13 non-listed special-status plant species have the potential to occur in the Ramon Substation BSA. None of these species were observed during the field visit. Implementation of the proposed Ramon Substation expansion would impact disturbed creosote bush scrub and creosote bush scrub vegetation communities that may be suitable habitat for these non-listed special-status plant species. These potential impacts are considered significant. Mitigation Measure RS-BIO-2 would implement biological resource protection measures prior to construction including a worker's environmental training and review of approved work areas with appropriate fencing. Mitigation Measure RS-BIO-3 would require preconstruction surveys for the presence of any of these special-status plant species and would work to avoid impacts. In this context, impacts to non-listed special-status plant species would be reduced to less than significant with implementation of Mitigation Measures RS-BIO-2 and RS-BIO-3.

SPECIAL-STATUS WILDLIFE

One federally and/or state listed wildlife species would have a potential of occurring within the BSA. The Coachella Valley fringe-toed lizard has the potential of occurring within the sandy substrates of the creosote bush scrub located within the Ramon Substation expansion area. No Coachella Valley fringe-toed lizard individuals were observed during the field visit; however, no protocol surveys were conducted. The project footprint is located within federally designated critical habitat for the species. Direct impacts to these species could occur in the form of injury and mortality. Indirect impacts could occur in the form of habitat loss, increased human and vehicular activity, ground vibrations, noise, and increased dust. These impacts are considered potentially significant. The Coachella Valley fringe-toed lizard is a CVMSCHP covered species and direct impacts to this species is considered a covered activity and mitigated through participation in the CVMSCHP. Mitigation Measure RS-BIO-1 would also be implemented and would require payment of the mitigation fee as required by the CVMSCHP. Implementation of Mitigation Measure RS-BIO-1 would reduce impacts to a level less than significant.

As shown in Table 3.4-3, eight non-listed special-status wildlife species have the potential to occur within the Ramon Substation BSA. The proposed expansion would be limited to the disturbed creosote bush scrub habitat that occurs north of the existing Ramon substation. In addition, surrounding land uses are residential with living areas and buildings located to the west. The flat-tailed horned lizard, Palm Springs pocket mouse, and Coachella Valley round-tailed ground squirrel are CDFW species of special concern and CVMSCHP covered species that are known to occur in active dunes and creosote bush scrub habitats. They are noted to occur north and south of Ramon Road in active dune sites. The loggerhead shrike and vermilion flycatcher are known to forage and hunt within creosote bush scrub. The American badger is known to occur within a variety of habitat, including the present creosote bush scrub. Suitable habitat for the burrowing owl does not occur within the BSA, however, dumped materials observed onsite may provide suitable burrows for the species to utilize.

Implementation of Mitigation Measures RS-BIO-2 and RS-BIO-3 would help to reduce impacts to any special-status wildlife species. Mitigation Measure RS-BIO-2 would require the implementation of biological resource protection measure prior to construction, including worker environmental trainings and review of the approved work area with appropriate fencing. Mitigation Measure RS-BIO-3 would require preconstruction surveys for non-CVMSCHP covered or non-listed special-status wildlife species and work to avoid any impacts to these species. In this context, impacts to non-listed special-status wildlife species would be less than significant with implementation of Mitigation Measures RS-BIO-2 and RS-BIO-3.

Mitigation Measure(s)

VEGA 6

BIO-1 **Preconstruction 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 preconstruction nesting-bird survey shall be conducted by a qualified avian biologist to ensure that active bird nests, including those for the northern harrier, loggerhead shrike, black-tailed gnatcatcher, and burrowing owl, will not be disturbed or destroyed. The survey shall be completed no more than 3 days prior to initial ground disturbance. The nesting bird survey shall include the project area 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.

BIO-2 **Riparian Habitat or Sensitive Habitat Avoidance:** To the greatest extent possible, plans shall avoid impacts to disturbed tamarisk thicket habitats to minimize potential impacts to special-status species.

BIO-3 **Minimization of Impacts to Sensitive Species on BLM Land:** All vehicles shall stay on designated roads within BLM land to minimize impacts to habitat. Coordination with a qualified biologist shall occur prior to the staging of equipment and placement of temporary or permanent structures within BLM land. Additionally, a biologist shall demarcate temporary and permanent work spaces in the field prior to the commencement of construction-related activities. Construction plans shall incorporate measures to minimize and avoid impacts to habitats within this area. To control for introduction of invasive plant species, tires shall be cleaned prior to entering BLM lands.

BIO-4 **Biological Monitoring:** A qualified biologist shall be present to monitor all ground-disturbing in vegetated areas and vegetation-clearing activities conducted for the project. During each monitoring day, the biological monitor shall perform clearance survey “sweeps” at the start of each workday that vegetation clearing takes place to minimize impacts on special-status species with potential to occur (including, but not limited to, special-status or nesting bird species, flat-tailed horned lizard, and American badger). The monitor will be responsible for ensuring that impacts to special-status species, nesting birds, and active nests will be avoided to the greatest extent possible. Biological monitoring shall take place until the project area has been completely cleared of any vegetation. If an active nest is identified, the biological monitor shall establish an appropriate 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 no longer active by the biologist. If special-status wildlife species are detected during biological monitoring activities, then consultation with the USFWS or CDFW shall be conducted, and a mitigation plan shall be developed to avoid and offset impacts to these species. Mitigation measures may consist of work restrictions or additional biological monitoring activities after ground-disturbing activities are complete.

BIO-5 **Preconstruction Surveys for Burrowing Owl:** Preconstruction surveys for burrowing owl shall be conducted within the areas assessed as having burrowing owl potential of the project area and adjacent areas prior to the start of ground-disturbing activities. Two surveys shall be conducted, with the first survey being conducted between 30 and 14 days before initial ground disturbance (grading, grubbing, and construction), and the second survey being conducted no more than 24 hours prior to initial ground disturbance. If burrowing owls or suitable burrowing owl burrows with sign (e.g., whitewash, pellets, feathers, prey remains) are identified in the project area during the survey and impacts to those features are unavoidable, consultation with the CDFW shall be conducted and the methods for avoidance or passive relocation should be followed.

BIO-6 **Minimization of Impacts to Palm Springs Pocket Mouse:** Habitats on the VEGA 6 solar facility site and parts of the gen-tie line are suitable for the Palm Springs pocket mouse; presence could be assumed based on proximity of records and recommendations from small mammal experts that were consulted. If presence is assumed, consultation to develop suitable mitigation measures or in-kind mitigation to offset impacts with the CDFW may need to occur. If presence is not assumed, protocol surveys to determine presence or absence of Palm Springs pocket mouse are recommended. A preconstruction small mammal trapping survey shall be conducted for Palm Springs pocket mouse within suitable habitat in all areas of potential permanent and temporary disturbance lead by qualified biologists that are permitted to trap and handle small mammals under Memorandums of Understanding and Scientific Collection Permits with CDFW. Should Palm Springs pocket mouse individuals be identified during the preconstruction survey, consultation to develop suitable mitigation measures with the CDFW will occur. If the project area is found to be absent of Palm Springs pocket mouse, no further mitigation is required.

BIO-7 **Minimization of Impacts to Wetland/Riparian Habitat:** New structures shall not be placed within 50 feet of wetland or riparian habitat boundaries. A construction buffer of 300 feet shall be established around the wetlands and riparian habitats during bird breeding season (February 1 to August 31). Prior to construction, fencing shall be installed approximately 10 feet from the wetland and riparian habitat boundaries within 50 feet of the VEGA 6 project area. Fencing shall be easily visible to construction personnel.

Ramon Substation Expansion

RS-BIO-1 **Coachella Valley Multiple Species Habitat Conservation Plan Fee Payment:** As a signatory to the Coachella Valley Multiple Species Habitat Conservation Plan, the IID shall require a local development mitigation fee prior to the issuance of building permits for the proposed use on the project site at the rates applicable at the time of payment of the fee as set forth in the most recent fee schedule. The Project applicant shall be required to provide documentation to the IID confirming the payment of the local development mitigation fee.

The Coachella Valley milk-vetch and Coachella Valley fringe-toed lizard are federally listed species and CVMSHCP covered species with potential to occur within the project footprint. Direct impacts to these species' as a result of the covered Project activity would be in compliance with the CVMSHCP as long as the IID, a permittee of the CVMSHCP, submits a payment of the mitigation fee, complies with the requirements of CVMSHCP Section 4.2, Conservation Areas; Section 4.4, Avoidance, Minimization, and Mitigation Measures; and Section 4.5 Land Use Adjacency Guidelines, and is in full compliance with CEQA, CESA, and FESA requirements.

RS-BIO-2 **Biological Resource Protection Measures Prior to Construction:**

a. Prior to the commencement of construction, a project biologist (a person with, at minimum, a bachelor's degree in biology, ecology, or environmental studies with familiarity with special status plant and wildlife species with the potential to be affected by the proposed Ramon Substation expansion) 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, and shall maintain communications with the contractor to ensure that issues relating to biological resources are appropriately and lawfully managed. The project biologist may designate qualified biologists or biological monitors to help oversee project compliance or conduct preconstruction surveys for special status species. These biologists shall have familiarity with the species for which they would be conducting preconstruction surveys or monitoring construction activities.

b. The project biologist or designated qualified biologist shall review final plans, designate areas that need temporary fencing (e.g., environmentally sensitive area [ESA] fencing), and monitor construction activities within and adjacent to areas with native vegetation communities or special status plant and wildlife species. The qualified biologist shall monitor activities within designated areas during critical times such as vegetation removal, initial ground disturbing activities, and the installation of BMPs and fencing to protect jurisdictional resources, and shall ensure that all regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed. The qualified biologist shall check construction barriers or exclusion fencing and shall provide corrective measures to the contractor to ensure that the barriers or fencing are maintained throughout construction. The qualified biologist shall have the authority to stop work if a special status wildlife species is encountered within the Project area during construction. Construction activities shall cease until the Project Biologist or qualified biologist determine(s) that the animal will not be harmed or that it has left the construction area on its own. The appropriate regulatory agency(ies) shall be notified within 24 hours of sighting of a special status wildlife species.

c. Prior to the start of construction, all project personnel and contractors who will be on site during construction shall complete mandatory training conducted by the project biologist or a designated qualified biologist. Any new project personnel or contractors that come on board after the initiation of construction shall also be required to complete the mandatory Worker Environmental Awareness Program training before they commence with work. The training shall advise workers of potential impacts on jurisdictional resources. At a minimum, the training shall include the following topics: (1) occurrences of special status species and special status vegetation communities in the project area (including vegetation communities subject to USACE, CDFW, and RWQCB jurisdiction), (2) the purpose for resource protection; (3) protective measures to be implemented in the field, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced to avoid jurisdictional resource areas in the field (i.e., avoid areas delineated on maps or on the Project site by fencing); (5) environmentally responsible construction practices; and (6) the protocol to resolve conflicts that may arise at any time during the construction process.

d. Prior to any ground disturbance the project boundary will be fenced as a means to protect the adjacent lands. The fencing/signage shall be clearly marked in the field by construction personnel under the guidance of the biologist or designated employee. The fencing/signage will remain in place for the duration of the project activities and no work or other project activities will occur outside of the fenced

area to incidental impacts to nearby species. Upon completion of project activities, the fencing/signage will be removed.

e. Construction activities shall be limited to daylight hours to the extent feasible. If nighttime activities are unavoidable, then workers shall direct all lights for nighttime lighting into the work area and shall minimize the lighting of natural habitat areas adjacent to the work area. The contractor shall use light glare shields to reduce the extent of illumination into special status vegetation communities. If the work area is located near surface waters, the lighting shall be shielded such that it does not shine directly into the water.

f. Clearing shall be confined to the minimum area necessary to facilitate construction activities. Cleared vegetation and spoils shall be disposed of daily at a permanent off site spoils location or at a temporary on site location that will not create habitat for special status wildlife species. Spoils and dredged material shall be disposed of at an approved site or facility in accordance with all applicable federal, state, and local regulations.

g. The Contractor shall avoid wildlife entrapment by completely covering or providing escape ramps for all excavated steep walled holes or trenches more than 1 foot deep at the end of each construction workday. The qualified biologist shall inspect open trenches and holes and shall remove or release any trapped wildlife found in the trenches or holes prior to filling by the construction contractor.

h. Wildlife can be attracted to den like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar features; construction equipment; or construction debris left overnight in areas that may be occupied by special status species that could occupy such structures shall be inspected by a qualified biologist prior to being used for construction. Such inspections shall occur at the beginning of each day's activities for those materials to be used or moved that day. If necessary, and under the direct supervision of the biologist, the structure may be moved up to one time to isolate it from construction activities, until the special status species has moved from the structure of its own volition, has been captured and relocated, or has otherwise been removed from the structure.

i. The spread of dust from work sites to special-status vegetation communities or habitats for special-status species on adjacent lands shall be minimized by use of a water truck. Dirt access roads, haul roads, and spoils areas shall be watered at least twice each day when being used during construction dry periods.

RS-BIO-3 Minimize and Avoid Impacts on Special-Status Species:

a. The project biologist shall conduct focused pre-construction surveys for federal- and State-listed and other special-status plants. All special-status plant species (including listed threatened or endangered species, and all CRPR 1A, 1B, 2, 3, and 4 ranked species) impacted by project activities shall be documented in pre-construction survey reports. Surveys shall be conducted during the appropriate season in all suitable habitat located within the project footprint. The field surveys and reporting must conform to current CDFW botanical field survey protocol (CDFG 2009) or more recent updates, if available.

b. The project biologist shall conduct focused pre-construction surveys for any special-status wildlife species, including Coachella Valley fringe-toed lizard, flat-tailed horned lizard, burrowing owl, loggerhead shrike, vermilion flycatcher, Palm Springs pocket mouse, American badger, and Coachella Valley round-tailed ground squirrel. Surveys shall be conducted at least 14 days prior to the start of construction within suitable habitat located within the project footprint. At the discretion of the project Biologist, work will be halted if the species are highly disturbed.

Significance after Mitigation

VEGA 6

The proposed VEGA 6 project has the potential to impact special-status wildlife species during construction. However, implementation of Mitigation Measures BIO-1 through BIO-7 would reduce potential impacts to a level less than significant.

Ramon Substation Expansion

The proposed Ramon Substation expansion has the potential to impact special-status wildlife species during construction. However, implementation of Mitigation Measures RS-BIO-1 through RS-BIO-3 would reduce potential impacts to a level less than significant.

Impact 3.4-2 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 6

According to CDFW's Sensitive Natural Communities List, there are no sensitive vegetation communities within the VEGA 6 project area. Therefore, the proposed VEGA 6 project would have no impact on any sensitive natural community.

Riparian habitat is present primarily within the eastern and southern portions of the VEGA 6 aquatic resources study area. There is riparian habitat associated with the detention basins within the solar facility site. Additional riparian habitat is associated with the agricultural drains and roadside ditches. Riparian habitat would be directly impacted by grading activities, which would be considered significant. However, the proposed VEGA 6 project would comply with mitigation requirements recommended through consultation with CDFW. Implementation of Mitigation Measures BIO-2, BIO-7, and BIO-8 would reduce impacts to a level less than significant.

Ramon Substation Expansion

There are no sensitive vegetation communities or riparian habitat within the Ramon Substation expansion area. Therefore, the proposed expansion would not have no impact on any riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFW.

Mitigation Measure(s)

VEGA 6

BIO-8 **Aquatic Resources Permitting:** If project-related impacts will occur to areas under the jurisdiction of the USACE, CDFW, or RWQCB, a regulatory permit with those agencies will be required prior to the impact occurring. Permitting includes preparation and submittal of a Preconstruction 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. 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 project must also identify and approve mitigation through the respective agencies. Mitigation can include onsite or offsite options or could include 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.

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

Riparian habitat would be directly impacted by grading activities, which would be considered significant. However, implementation of Mitigation Measures BIO-2, BIO-7, and BIO-8 would reduce impacts to a level less than significant.

Impact 3.4-3 ***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?***

VEGA 6

As previously described, there are several jurisdictional features within the VEGA 6 project area. Construction of the VEGA 6 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. With implementation of Mitigation Measures Mitigation Measures BIO-2, BIO-7, and BIO-8, 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.

Ramon Substation Expansion

No jurisdictional aquatic resources were found during the field visit. The proposed Ramon Substation expansion would be limited to the area north of the existing Ramon substation and utilize established access routes or previously disturbed or developed areas. No impacts to jurisdictional aquatic resources would be expected.

Mitigation Measure(s)

VEGA 6

Implement Mitigation Measures Mitigation Measures BIO-2, BIO-7, and BIO-8.

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

The proposed VEGA 6 project has the potential to impact aquatic resources including state or federally-protected wetlands. However, implementation of Mitigation Measures Mitigation Measures BIO-2, BIO-7, and BIO-8 would reduce potential impacts to a level less than significant.

Impact 3.4-4 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?

VEGA 6

Portions of the VEGA 6 project area and gen-tie alignment are located adjacent to areas containing existing disturbances (i.e., roads and active agricultural land). A majority of this area does not contain suitable vegetation or cover to support wildlife movement in the form of a corridor. The solar facility site and the western segment of the gen-tie are adjacent to open space/BLM land but overall these areas are disturbed and do not support wildlife movement opportunities connecting the area to large, undeveloped natural areas to the southwest. Wildlife would choose instead to use the more suitable and less disturbed creosote bush scrub to the west within BLM land as a wildlife movement area. No native nursery sites were identified within the VEGA 6 project area. Therefore, no impacts to wildlife corridors or nursery sites are expected to occur from the development of the VEGA 6 project.

Ramon Substation Expansion

The Ramon Substation expansion area is disturbed and contains very little native vegetation. Additionally, the expansion area is bordered by the existing SCE Mirage substation to the west, the existing Ramon Substation and Ramon Road to the south, which limits wildlife movement through the expansion area. The proposed Ramon Substation expansion would not result in the loss of any potential wildlife movement areas, wildlife corridors or nursery sites as the expansion area is not located within an established habitat corridor or linkage area. Therefore, no impacts to wildlife corridors or nursery sites are expected to occur from the proposed Ramon Substation expansion.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.4-5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

VEGA 6

The proposed VEGA 6 project consists of the construction and operation of a solar energy facility, BESS, and associated electrical transmission lines. Development of the solar facility would be subject to the County's zoning ordinance.

The VEGA 6 project is located on a privately-owned vacant parcel designated Agriculture and within the S-2 zone. Pursuant, to Title 9, Division 5, Chapter 19 (County of Imperial 2020), the following use is permitted in the S-2 zone subject to approval of a CUP from Imperial County: major facilities relating to the generation and transmission of electrical energy.

As discussed in Section 3.11, Land Use and Planning, with approval of a CUP, General Plan Amendment, and Zone Change, the VEGA 6 project would be consistent with the Imperial County General Plan, and with biological resources contained therein. Therefore, implementation of the proposed VEGA 6 project would not result in a significant impact associated with the project's potential to conflict with local policies protecting biological resources.

Ramon Substation Expansion

County General Plans and development ordinances may include regulations or policies governing biological resources. For example, policies may include tree preservation, locally designated species survey areas, local species of interest, and significant ecological areas. There are no local ordinances applicable to biological resources on site except for code provisions related to the CVMSHCP mitigation fee and land credits. The proposed Ramon Substation expansion would not be in conflict with any local policies or ordinances applicable to existing biological resources on site. No impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.4-6 Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

VEGA 6

The western and southern buffer of the solar facility site falls within the DRECP with a conservation designation of California Desert National Conserved Lands. None of the VEGA 6 BSA falls within Areas of Environmental Concern. Portions of the western alignment of the gen-tie falls within BLM Renewable Energy Development Focus Area. If habitat within the California Desert National Conserved Lands area of the project is to be impacted, implementation of Mitigation Measure BIO-3 is recommended to minimize for potential significant impacts. The VEGA 6 project will follow the guidelines in Imperial County's Conservation and Open Space Element and meet the requirements

outlined in the plan. Consultation with BLM, County of Imperial Department of Planning and Development, USFWS, and CDFW would be required should listed plant or wildlife species be found to occur. With implementation of Mitigation Measure BIO-3, this impact would be reduced to a level less than significant.

Ramon Substation Expansion

The Ramon Substation expansion area is located within the boundaries of the CVMSHCP. As described above under Impact 3.4-1, the proposed expansion would result in impacts to Coachella Valley milk-vetch and Coachella Valley fringe-toed lizard, which are CVMSHCP covered species. Direct impacts to these species are considered a covered activity and mitigated through participation in the CVMSHCP. In addition, Mitigation Measure RS-BIO-1 would be implemented and would require payment of the mitigation fee as required by the CVMSCHP. Implementation of Mitigation Measure RS-BIO-1 would reduce impacts to a level less than significant.

Mitigation Measure(s)

VEGA 6

Implement Mitigation Measure BIO-3.

Ramon Substation Expansion

Implement Mitigation Measure RS-BIO-1.

3.4.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Project decommissioning activities will require construction vehicles to drive across the solar facility, transmission line, and access roads. Concrete footings, foundations, and pads would be removed using heavy equipment and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. Similar to project construction, decommissioning activities have the potential to directly impact special-status species. his is a potentially significant impact; however, implementation of Mitigation Measures BIO-1 through BIO-7 at the time of decommissioning would reduce impacts to a level less than significant.

Residual

With the implementation of Mitigation Measures BIO-1 through BIO-7, potential impacts to special-status species would be reduced to a level less than significant. With implementation of Mitigation Measures BIO-2, BIO-7, and BIO-8, potential impacts to riparian habitat and aquatic resources would be reduced to a level less than significant. Therefore, the project would not result in residual significant and unmitigable impacts related to biological resources.

3.5 Cultural Resources

This section discusses cultural resources that may be potentially impacted by the proposed VEGA 6 project and Ramon Substation expansion. The following identifies the existing cultural resources within the project site, analyzes potential impacts of the proposed project, and recommends mitigation measures to avoid or reduce potential impacts of the proposed project.

Information for this section is summarized from the *VEGA 6 Cultural Resources Inventory Report* prepared by ECORP Consulting, Inc. and the *Ramon Substation Expansion – Cultural Resource Technical Study* prepared by HDR, Inc. These reports are contained in Appendix F1 and Appendix F2 of this EIR, respectively. Both of the cultural reports prepared included a records search, literature review, and pedestrian survey.

3.5.1 Existing Conditions

Pre-history

VEGA 6

The VEGA 6 project site is located in unincorporated Imperial County, within the Imperial Valley approximately 5 miles southwest of the community of Westmorland and 6 miles south of the Salton Sea. The predominant archaeological patterns through time in relation to behavioral traditions and temporal periods, and in specific reference to the Project Area, are discussed below.

Little archaeological material dating to the Early and Middle Holocene is known from the Salton Trough area of the Colorado Desert. The only indications of use of this area during this long 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. 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 has produced evidence for Archaic occupation on the west side of the Salton Trough. Pinto series and Elko series projectile points recovered during investigations at the Test Base yielded a date of 5,840 ±250 years before present (BP). These data suggest 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 F1 of this EIR).

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 (Appendix F1 of this EIR)

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. The lake dried when water ceased to flow from the river, markedly reducing the availability of resources. Occupation of the Salton Trough during the Late Period (1,300 BP to Contact) correlates with three cycles of inundation and desiccation in Lake Cahuilla that occurred between AD 1200 and 1680. 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. Lake Cahuilla

was much larger than the current Salton Sea. Whereas the current Salton Sea shoreline is about 70 meters (230 feet) below sea level, the maximum Lake Cahuilla shoreline was about sea level. 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 F1 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. Large multi-seasonal residential bases were occupied along the ancient shorelines in the Coachella Valley when Lake Cahuilla was present. These sites contain abundant fish bone, waterfowl bone, and shell from freshwater shellfish. Animal and plant remains indicated use of both lowland and upland resources. Floral remains indicated use of these sites during all four seasons. Cottonwood and Desert Side-Notched arrow points, along with buff ware ceramics and late pre-contact marine shell beads, indicate occupation during the Late Period. These sites were likely occupied during the three Lake Cahuilla lake stands between AD 1200 and 1680. The final desiccation is marked by 15 episodes of fish trap construction (along 15 successively lower shorelines) as the lake receded (Appendix F1 of this EIR).

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 that had residential bases or villages along the Colorado River. Sites generated by this use of the desert 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. Because the Chemehuevi did not have access to the Colorado River Valley (still occupied by Yuman speakers), their use of the desert area was more intensive. Temporary camps used by ancestors of the Chemehuevi should be larger than those dating prior to AD 1200 with a greater quantity and variety of artifacts. There should be differences between low- and medium-elevation camps used for general hunting and gathering and higher elevation camps used for hunting big horn sheep and deer. Lithic scatters will also likely be larger and denser compared to earlier periods. 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 (Appendix F1 of this EIR).

The southern part of the Salton Trough was occupied by ancestors of the Yuman-speaking Tipai, Kumeyaay, or Kamia. 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. Late Prehistoric archaeological sites in this area belong to the Patayan pattern characterized by use of the bow and arrow and ceramics. Patayan I begins about 1,300 BP with the introduction of the bow and arrow, indicated archaeologically by the presence of small projectile points (arrow points) and, along the Colorado River, by the appearance of ceramics. 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. Elsewhere, in the southern Salton Trough area, ceramics first appear about 1,000 BP at the beginning of Patayan II. Patayan I ceramics along the Colorado River include Black Mesa Buff and Colorado Beige. Later Patayan II (AD 1000 to 1700) and III (AD 1700 to 1850) ceramics include Tumco Buff and Colorado Buff. There is also a Salton Brown ware that is transitional between the valley buff wares and the Tizon Brown ware of the Peninsular Ranges to the west (Appendix F1 of this EIR).

The Colorado River Yumans practiced horticulture beginning in Patayan I. Domesticates, including corn and squash, probably came from the Hohokam area of Arizona or from northern Mexico. At the time of European contact, the Imperial Valley Yumans were practicing floodplain agriculture using small dams and ditches along the New and Alamo rivers. Horticulture in the Imperial Valley probably began after the last recession of Lake Cahuilla during Patayan III using domesticates obtained from the Colorado River Yumans (Appendix F1 of this EIR).

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 (Appendix F1 of this EIR).

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 (Appendix F1 of this EIR).

Ramon Substation Expansion

Riverside County environmental conditions during the late Pleistocene and Holocence periods fostered an ecologically rich region for human settlement. This 14,000-year period of human occupation was marked by an overall trend toward increasing aridity and warmer temperatures, with some temporary reversals as well as periods of climatic stability. As environmental conditions changed, Native American populations adapted with modifications in settlement patterns, subsistence practices, social organization and technology.

Three primary geomorphic provinces are found in Riverside County: the Mojave Desert, the Colorado Desert and the Peninsular Ranges. The diverse prehistoric landscape and habitats of the internally drained basins and pluvial (landlocked) lakes of the Mojave Desert region, the fresh water lakes of the Colorado Desert and the prominent ranges of the Peninsular Range were used by ancient and indigenous groups of people, leaving a rich archeological heritage. The following artifacts and features are characteristic of the Prehistoric Period: ceramics, projectile points of many types, grinding implements (mortars and pestles, metates and manos), enigmatic cogstones, shell, bone, clay beads and pendants, evidence of big game hunting.

Ethnohistory

VEGA 6

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. Spanish missionaries and settlers used the collective term Diegueño for these people, which referred to people living near the presidio and mission of San Diego de Alcalá. Today,

these people refer to themselves as Kumeyaay or as Ipai and Tipai, which are northern and southern subgroups of Kumeyaay language speakers, respectivel. 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 (Appendix F1 of this EIR).

The primary source of Kumeyaay subsistence was vegetal food. Seasonal travel followed the ripening of plants from the lowlands to higher elevations of the mountain slopes. Acorns, grass and sage seeds, cactus fruits, wild plums, pinyon nuts, and agave stalks were the principal plant foods. Women sometimes transplanted wild onion and tobacco plants to convenient locations and sowed wild tobacco seeds. Deer, rabbits, small rodents, and birds provided meat. Village locations were selected for seasonal use and were occupied by exogamous, patrilineal clans or bands. Three or four clans might winter together and disperse into smaller bands during the spring and summer (Appendix F1 of this EIR).

The Kumeyaay were loosely organized into exogamous patrilineal groups termed sibs, clans, gens, and tribelets by ethnographers. The Kumeyaay term was cimul. The cimul used certain areas for hunting and gathering, but apparently did not control a bounded and defended territory, as did the Luiseño and Cahuilla. In addition, members of several different cimul usually lived in the same residential base, unlike the Luiseño, where a single party or clan controlled a village and its territory. 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 to ensure an abundance of food, were held in the winter residential bases. The cimul leader directed the ceremonies and settled disputes. One of the most important ceremonies was the mourning ceremony. Upon death, the Kumeyaay cremated the body of the deceased. Ashes were placed in a ceramic urn and buried or hidden in a cluster of rocks. The family customarily held a mourning ceremony 1 year after the death of a family member. During this ceremony, the clothes of the deceased individual were burned to ensure that the spirit would not return for his or her possessions (Appendix F1 of this EIR).

The Kumeyaay were geographically and linguistically divided into western and eastern Kumeyaay. The western and eastern Kumeyaay spoke two different dialects. 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 western Kumeyaay spent the winter in residential bases in the lowland valleys and then broke into smaller cimul groups that moved gradually eastward toward the mountains, following ripening plants and occupying temporary residential bases along the way. Thus, each group occupied several different residential bases during the course of a year. The eastern Kumeyaay spent the winter in villages on the desert margin where water was available from springs at canyon mouths. They moved up the canyons toward the mountains during spring and summer. The eastern and western Kumeyaay met in the mountains in the fall where they gathered black oak acorns, traded, and held ceremonies. The large residential bases in the mountains appear archaeologically to be village sites (Appendix F1 of this EIR).

The Kumeyaay population was estimated to be between 10,000 and 20,000 at the time of European contact, based on Spanish accounts and ethnographies. Beginning in 1775, the seminomadic life of the Kumeyaay began to change as a result of contact with European-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 (Appendix F1 of this EIR).

Ramon Substation Expansion

The Ethnohistoric Period of Riverside County at the time of Euro-American contact was distinguished by eight distinct resident cultural groups of Native Americans: Cahuilla (primarily), Gabrielino, Juaneño, Luiseño, Quechan, Halichidhoma, Chemehuevi and Serrano. These groups occupied territories across Southern California.

The majority of western Riverside County was occupied by the Cahuilla who spoke a Cupan language within the Takic family of the Uto-Aztecan language stock. The western part of the county, in the vicinity of the Santa Ana Mountains fell within the territory of the Gabrielinos, Juaneños and Luiseños who also spoke Cupan languages. These three populations had territories that extended from the coast eastward and northeastward across the Santa Ana and Palomar mountains, encompassing Temescal Valley and Lake Elsinore, and extending toward the foothills of the San Jacinto and Santa Rosa Mountains.

Records Search

VEGA 6

ECORP requested a records search for the VEGA 6 project site from the South Coastal Information Center (SCIC) of the California Historical Resources Information System (CHRIS) at San Diego State University on September 15, 2020 (Appendix F1 of this EIR). The purpose of the records search was to determine the extent of previous surveys within a 1-mile radius of the VEGA 6 project area (Survey Area), and if previously documented pre-contact or historic-period archaeological sites, architectural resources, or traditional cultural properties exist within this area.

The results of the CHRIS records search were received by ECORP on September 18, 2020 and are contained in the the *Cultural Resources Inventory Report* (Appendix F1 of this EIR).

Two previous cultural resource investigations have been conducted within 1 mile of the VEGA 6 property, covering approximately 5 percent of the total area surrounding the property within the records search radius. Neither study was conducted within the VEGA 6 Survey Area. These studies were both negative for cultural resources; they were conducted in 1983 and 1998 and vary in size from 65 to 458 acres. The results of the records search indicate that none of the property has been previously surveyed for cultural resources; therefore, a pedestrian survey of the VEGA 6 project area was warranted (Appendix F1 of this EIR).

The records search also determined that 61 previously recorded pre-contact and historic-era cultural resources are located within 1 mile of the VEGA 6 project area (see Appendix F1 of this EIR for full list). Of these, 60 are believed to be associated with Native American occupation of the vicinity, and one is a historic-era site, associated with irrigation activities. There are no previously recorded cultural resources in or within 600 feet of the VEGA 6 project area.

Ramon Substation Expansion

HDR carried out archival research, including a record search at the Eastern Information Center (EIC) of the CHRIS and a review of available historical aerial photographs and maps to identify potential cultural resources that may be present within the Ramon Substation expansion area. The EIC visit included a search of all previous cultural resource investigations and all previously recorded cultural resources within 0.25 miles of the expansion area. The EIC search identified two previous investigations within the record search area, one of which was carried out in 2000 and covered the entire expansion area. One previously recorded resource – P-33-009665, a historic “jackrabbit

homestead" – was identified approximately 500 feet south of the expansion area. However, this homestead is no longer extant as it was demolished during construction of the existing Ramon Substation. No previously recorded or potential cultural resources were identified within the expansion area as a result of the archival research. In addition to the archival research, an intensive pedestrian survey of the expansion area was undertaken. The results of the pedestrian survey were negative for cultural resources. The results of the EIC record search area provided in Appendix F2 of this EIR.

Sacred Lands File Coordination

VEGA 6

In addition to the records search, ECORP contacted the California Native American Heritage Commission (NAHC) on September 15, 2020, to request a search of the Sacred Lands File for the VEGA 6 project area (Appendix F1 of this EIR). A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the VEGA 6 Survey Area. A record of all correspondence is provided in the *Cultural Resources Inventory Report* (Appendix F1 of this EIR).

Ramon Substation Expansion

On June 12, 2023, HDR submitted to the NAHC a request for a search of the Sacred Lands File in correspondence with the Ramon Substation expansion area. The NAHC responded on July 10, 2023, stating that the results of the Sacred Lands File search were negative and provided a contact list for twelve Native American tribes who may also have knowledge of cultural resources in the vicinity of the Ramon Substation expansion area (Appendix F2 of this EIR).

Field Survey

VEGA 6

ECORP conducted a pedestrian survey of the VEGA 6 project area between October 5 and 12, 2020, under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* using 15-meter transects (Appendix F1 of this EIR). ECORP expended 19 person-days in the field. At the time, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, ECORP examined the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey (Appendix F1 of this EIR).

Ramon Substation Expansion

On June 16, 2023, HDR cultural resource specialists conducted a full-coverage, intensive pedestrian survey of the Ramon Substation expansion area. All accessible portions of the Ramon Substation expansion area were covered with survey transects using 10- to 15-meter spacing. Disturbance from vehicle activity, grading of the existing substation, installation of transmission poles, and other construction activities was observed throughout the expansion area.

Historical Resources

VEGA 6

The VEGA 6 Survey Area had not been previously surveyed for cultural resources; as a result, no resources were previously recorded. The 2020 survey by ECORP identified 39 new cultural resources within the VEGA 6 Survey Area. None of the newly recorded resources within the VEGA 6 Survey Area have been evaluated using NRHP and CRHR eligibility criteria; therefore, it is not currently known if any of these are considered historical resources under CEQA or historic properties under Section 106 NHPA. The process of evaluation requires a combination of archival research and archaeological excavation if sites are not presumed eligible.

The field survey and records search for the VEGA 6 project area did not yield any historic-period or pre-contact cultural resources.

Ramon Substation Expansion

The results of the pedestrian survey were negative for cultural resources within the Ramon Substation expansion area. No artifacts, ecofacts, features, historic structures, midden soils, or other evidence of cultural resources were identified within the expansion area (Appendix F2 of this EIR).

3.5.2 Regulatory Setting

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

Federal

National Historic Preservation Act

Federal regulations (36 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.
4. The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

CEQA Guidelines: Archaeological Resources

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

1. When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
2. If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section

15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

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

CEQA Guidelines: Human Remains

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

d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the NAHC as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the NAHC. Action implementing such an agreement is exempt from:
    a. The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (HSC Section 7050.5).
    b. 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:
    a. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    b. If the coroner determines the remains to be Native American:
        i. The coroner shall contact the NAHC within 24 hours
        ii. The NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American
        iii. 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

c. 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.

i. 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.

ii. The descendant fails to make a recommendation; or

iii. 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 3.10, Land Use and Planning, of this EIR analyzes the VEGA 6 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 3.5-1.

Table 3.5-1. VEGA 6 Project Consistency with General Plan

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
Goal 1 - Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value. **Objective 1.4** - Ensure the conservation and management of the County's natural and cultural resources.	Consistent	A cultural resources inventory was prepared for the project area. The proposed VEGA 6 project has the potential to encounter undocumented historical, archaeological resources, and human remains. Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce potential impacts on historical resources to a level less than significant. With implementation of Mitigation Measure CUL-3, potential impacts to previously unrecorded cultural resources would be reduced to a level less than significant. Mitigation Measure CUL-4 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA.
Objective 3.1 - Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	

Source: County of Imperial 2016

Riverside County Planning Department Procedures

The Riverside County Archaeologist reviews all proposed land use projects subject to CEQA and not otherwise deemed categorically exempt. The Riverside County Archaeologist reviews various internal databases for information that might pertain to the age of any buildings found on site, grading permits, ground disturbance activities and building permits. Where buildings are 45 years or older, the project applicant is required to perform an architectural history evaluation to assess potential historic value as part of a Phase I Cultural Resources study. When the study is completed, and if historic-period resources were identified during a survey, a copy of the report is transmitted to the Riverside County Historic Preservation Officer (CHPO) for review and comment. The CHPO sends relevant comments back to the Riverside County Archaeologist.

Vacant parcels within areas known to have prehistoric or historic resources trigger a Phase I Cultural Resources study. Similarly, any parcels with environmental, geomorphological, or vegetative features known to increase the likelihood of cultural resources being present trigger a "Phase I" cultural resources study. Such studies are required to follow the reporting formula found on the Riverside County Planning Department's website which mirror the recommendations published by the SHPO in 1987.

The Riverside County Archaeologist reviews all Phase I cultural resources studies for completeness and reasonable conclusions based on current industry standards in archaeology. The Phase I study serves to advise the Riverside County Archaeologist on matters relating to any identified prehistoric or historic resources, provide the requisite information to complete the project-related CEQA analysis and guide the Riverside County Archaeologist in determining which land use conditions of approval and/or mitigation measures apply to the proposed project.

Copies of studies are provided to tribes, upon their request, as a confidential document. If a proposed project is subject to the requirements of the Traditional Tribal Places Act (commonly referred to as Senate Bill 18), a Phase 1 report is forwarded to tribes who request it as part of consultation under SB 18. Typically, official tribal consultations are scheduled after the report has been sent to the tribe(s) to maximize consultation efforts.

3.5.3 Impacts and Mitigation Measures

This section presents the significance criteria used for considering project impacts related to cultural and archaeological 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 project, as described in Chapter 2, Project Description to interact with cultural resources in the VEGA 6 project area and the Ramon Substation expansion 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 previously mentioned, the Cultural Resources Inventory Report was prepared for the VEGA 6 project and the Cultural Resource Technical Study was prepared for the Ramon Substation expansion (Appendix F1 and F2 of this EIR). Both reports provide the results of the SCIC and EIC records search and field survey which have been completed for the project areas pursuant to CEQA.

The information from the cultural 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 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 3.5-1 Would the project cause a substantial adverse change in the significance of a historical resources pursuant to §15064.5?

VEGA 6

Pursuant to *CEQA Guidelines* Section 15064.5 (b), substantial adverse change in the significance of a historical resource would include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired. This can occur when a project:

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

The 2020 field survey by ECORP identified 39 new cultural resources within the VEGA 6 Survey Area. None of the newly recorded resources within the VEGA 6 Survey Area have been evaluated using NRHP and CRHR eligibility criteria; therefore, it is not currently known if any of these are considered historical resources under CEQA. Based on this, implementation of the VEGA 6 project could potentially cause a substantial adverse change in the significance of historical resources. The potential impact is considered significant. Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce the potential impact associated with historical resources to a level less than significant.

Ramon Substation Expansion

According to the *Ramon Substation Expansion – Cultural Resource Technical Study*, archival research and an intensive pedestrian survey identified no cultural resources within the expansion area (Appendix F2 of this EIR). The negative results of the archival research and field survey support a determination that the proposed expansion would not result in a significant impact to cultural resources. Construction of the Ramon Substation expansion would not entail demolition or substantial alteration of any historical resources within the expansion area. Therefore, the proposed Ramon Substation expansion would not result in a significant impact to any historical resources pursuant to Section 15064.5(b) of the *CEQA Guidelines*.

Mitigation Measure(s)

VEGA 6

CUL-1 **Prepare Phase I Cultural Resources Survey Report.** Prior to issuance of a grading permit, the project applicant shall retain a qualified archaeologist defined as one meeting the Secretary of the Interior's Professional Qualification Standards (U.S. Department of the Interior 2008) to oversee a Phase I cultural resources survey for the VEGA 6 project, to determine if previously unidentified cultural resources exist within the project site and to relocate and evaluate the previously identified resources that have not yet been evaluated. The methods and results of the survey, as well as the records search, shall be summarized in a Phase I cultural resources survey report that follows the guidelines in *Archaeological Resource Management Reports*: *Recommended Contents and Format*, Department of Parks and Recreation, Office of Historic Preservation, State of California, 1990. The report shall address the requirements of CEQA.

CUL-2 **Evaluate Significance of Find.** If previously documented but unevaluated and/or newly documented archaeological resources are identified within the project site, they shall be evaluated for inclusion in the CRHR and/or as unique archaeological resources. Should newly documented archaeological resources be found eligible for listing in the CRHR and/or constitute unique archaeological resources, avoidance and preservation in place is the preferred manner of mitigation. If avoidance is not feasible, a treatment plan shall be developed by the qualified archaeologist in coordination with the project applicant and the lead agency that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resources.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.5-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

VEGA 6

Pursuant to CEQA Guidelines §15064.5(c)(1) and (2), an archaeological resource includes an archaeological site that qualifies as a significant historical resource as described for Impact 3.5-1. If an archaeological site does not meet any of the criteria outlined in the provisions under Impact 3.5-1 but meets the definition of a "unique archaeological resource" in PRC 21083.2, the site shall be treated in accordance with the provisions of PRC 21083.2, unless the project applicant and public agency elect to comply with all other applicable provisions of CEQA with regards to archaeological resources. "Unique archaeological resource" means an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1) Contains information needed to answer important scientific research questions that there is a demonstrable public interest in that information.

2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3) Is directly associated with a scientifically recognized important historic event or person.

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

As discussed above, although the Cultural Resources Inventory Report (Appendix F1 of this EIR) identified 39 new cultural resources within the VEGA 6 Survey Area, none of the newly recorded resources within the VEGA 6 Survey Area have been evaluated using NRHP and CRHR eligibility criteria. However, surface sediments found within the VEGA 6 Survey Area consist of Holocene surficial sediments in which regional pre-contact archaeological deposits have been previously identified and documented, and upon which pre-contact resources were identified in the cultural report. The potential for subsurface cultural deposits still exists due to the presence of sediments contemporaneous with human occupation of the region, and the location of the VEGA 6 Survey Area within the dry lakebed or along the ancient shoreline of Lake Cahuilla (Appendix F1 of this EIR).

Therefore, although unlikely, the potential for unearthing a previously undiscovered archaeological resource during construction does exist. This potential impact is considered significant. However, implementation of Mitigation Measures CUL-3 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant.

Ramon Substation Expansion

According to the *Ramon Substation Expansion – Cultural Resource Technical Study* (Appendix F2 of this EIR), the soils in the Ramon Substation expansion area are young and their geomorphic surfaces are unstable and the possibility exists for archaeological sites to be buried under them. Therefore, the potential to encounter buried archaeological resources in the expansion area during construction does exist. This potential impact is considered significant. However, implementation Mitigation Measures RS-CUL-1 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant.

Mitigation Measure(s)

VEGA 6

CUL-3 **Evaluate Significance of Find (Unknown Archaeological Resources).** 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.

Ramon Substation Expansion

RS-CUL-1 **Evaluate Significance of Find (Unknown Archaeological Resources).** 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 County of Riverside Planning Department. 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 3.5-3 Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

VEGA 6

The VEGA 6 project site is not located on a known cemetery and no human remains are anticipated to be disturbed during project construction. However, during construction, grading, excavation, and trenching would be required. It was also noted that in other areas along the ancient shoreline and lakebed of Lake Cahuilla, extensive archaeological deposits with human remains have been encountered (Appendix F1 of this EIR). Although the potential for encountering subsurface human remains within the VEGA 6 project site is low, there remains a possibility that human remains are present beneath the ground surface and such remains could be exposed during construction. The potential to encounter human remains is considered a potentially significant impact. Mitigation Measure CUL-4 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA. Therefore, with implementation of Mitigation Measure CUL-4, impacts would be less than significant.

Ramon Substation Expansion

Ground disturbing activities during construction of the proposed Ramon Substation expansion could adversely impact presently unidentified human remains, including those interred outside of dedicated cemeteries. Although the potential for encountering subsurface human remains within the expansion area is low, there remains a possibility that human remains are present beneath the ground surface and such remains could be exposed during construction. The potential to encounter human remains is considered a potentially significant impact. Mitigation Measure RS-CUL-2 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA. Therefore, with implementation of Mitigation Measure RS-CUL-2, impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

CUL-4 **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.

Ramon Substation Expansion

RS-CUL-2 **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 Riverside 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 County of Riverside Planning Department, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

3.5.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. No impact is anticipated from restoration activities as the ground disturbance and associated impacts on cultural resources will have occurred during the construction phase of the proposed project.

Residual

Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce potential impacts on historical resources to a level less than significant. With implementation of Mitigation Measure CUL-3, potential impacts to previously unrecorded cultural resources would be reduced to a level less than significant. Mitigation Measure CUL-4 would ensure that the potential impact on previously unknown human remains does not rise to the level of significance pursuant to CEQA. No unmitigable impacts on cultural resources would occur with implementation of the proposed project.

3.6 Geology and Soils

This section includes an evaluation of the project in relation to existing geologic and soils conditions within the project site. Information contained in this section is summarized from the *Geotechnical Report for the VEGA 6 Solar Project* prepared by Landmark Consultants, Inc. This report is contained in Appendix G of this EIR.

3.6.1 Existing Conditions

Regional Setting

VEGA 6

The VEGA 6 project site is located in the Salton Trough region of the Colorado Desert physiographic province of southeastern California. The Salton Trough encompasses the Coachella, Imperial and Mexicali Valley which extend from northeast of Palm Springs near San Gorgonio Pass to the Gulf of California. The Salton Trough is bounded on the northeast by the San Andreas Fault and Chocolate Mountains and the southwest by the Peninsular Range and faults of the San Jacinto Fault Zone (Appendix G of this EIR).

The Salton Trough represents the northward extension of the Gulf of California, containing both marine and non-marine sediments deposited since the Miocene Epoch. Tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of seismicity (Appendix G of this EIR).

The Imperial Valley is directly underlain by lacustrine deposits, which consist of interbedded lenticular and tabular silt, sand, and clay. The Late Pleistocene to Holocene (present) lake deposits are probably less than 100 feet thick and derived from periodic flooding of the Colorado River which intermittently formed a freshwater lake (Lake Cahuilla). Older deposits consist of Miocene to Pleistocene non-marine and marine sediments deposited during intrusions of the Gulf of California. Basement rock consisting of Mesozoic granite and Paleozoic metamorphic rocks are estimated to exist at depths between 15,000 - 20,000 feet (Appendix G of this EIR).

Ramon Substation Expansion

The Ramon Substation expansion area is located in the northern Coachella Valley, an elongated rift valley that forms the northwestern extent of the Salton Trough. The expansion area is approximately two miles southwest of the Indio Hills, a low range formed by uplift between the two main faults of the San Andreas fault system (Appendix F2 of this EIR).

Local Geology and Surface Conditions

VEGA 6The VEGA 6 project site is located in the Imperial Valley region of the California low desert. According to the Geotechnical Report prepared for the VEGA 6 project, the northern 1/3 of the solar energy facility site consists of surficial hard silty clay/clay soils, followed by interbedded layers of dense to very dense clayey/sandy silts, sands/silty sand, and very stiff to hard clay soils and the southern 2/3 of the project site consists of surficial medium dense to very dense sand/silty sand soils with layers of dense to very dense clayey/sandy silts and very stiff to hard clay soils (Appendix G of this EIR).

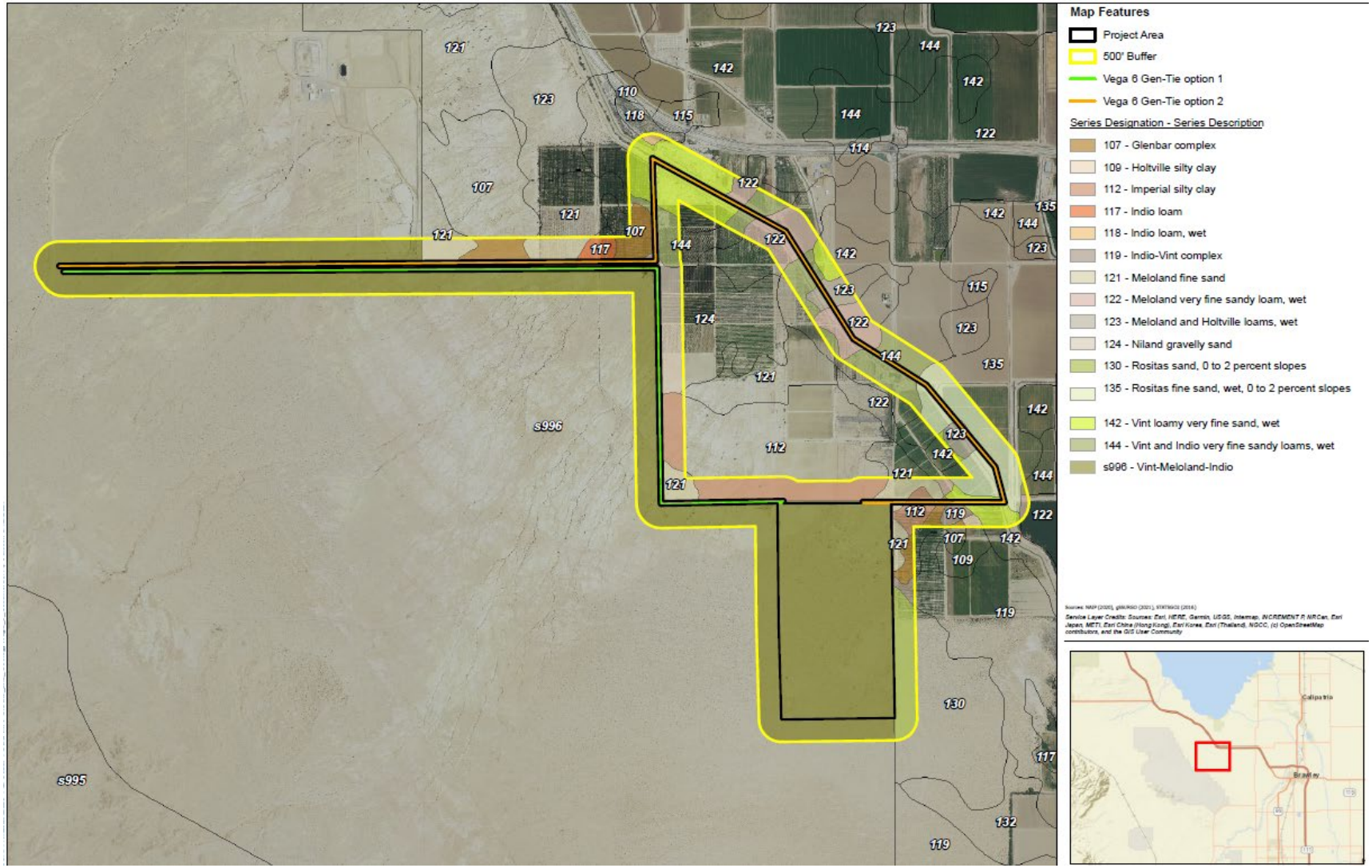
As shown in Figure 3.6-1, soil types mapped on the VEGA 6 project site include:

- 107 – Glenbar complex
- 109 – Holtville silty clay
- 112 – Imperial silty clay
- 117 – Indio loam
- 118 – Indio loam, wet
- 119 – Indio-Vint complex
- 121 – Meloland fine sand
- 122 – Meloland very fine sandy loam, wet
- 123 – Meloland and Holtville loams, wet
- 124 - Niland gravelly sand
- 130 - Rositas sand, 0 to 2 percent slopes
- 135 - Rositas fine sand, wet, 0 to 2 percent slopes
- 142 – Vint loamy very fine sand, wet
- 144 – Vint and Indio very fine sandy loams, wet
- s996 – Vint-Meloland-Indio

Ramon Substation Expansion

The surface geology of the Coachella Valley where the Ramon Substation expansion area is located consists of Quaternary alluvium. The majority of soils in the expansion area are classified as Myoma fine sand and Carsitas gravelly sand is found in approximately 15 percent of the expansion area north and east of the existing Ramon Substation, and a small area (less than 5 percent of the total acreage) of Coachella fine sand exists in the far eastern part of the expansion area (Appendix F2 of this EIR).

Figure 3.6-1. VEGA 6 Project Site Soil Types



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Faulting and Seismicity

Earthquakes are the result of an abrupt release of energy stored in the earth. This energy is generated from the forces which cause the continents to change their relative position on the earth's surface, a process called “continental drift.” The earth's outer shell is composed of a number of relatively rigid plates which move slowly over the comparatively fluid molten layer below. The boundaries between plates are where the more active geologic processes take place. Earthquakes are an incidental product of these processes.

VEGA 6

The VEGA 6 project site is located in the seismically active Imperial Valley of southern California with numerous mapped faults traversing the region including the San Andreas, San Jacinto, and Elsinore Fault Zones in southern California. The Imperial fault represents a transition from the more continuous San Andreas fault to a more nearly echelon pattern characteristic of the faults under the Gulf of California. The criterion for fault classification adopted by the California Geological Survey defines Earthquake Fault Zones along Holocene-active or pre-Holocene faults. Earthquake Fault Zones are regulatory zones that address the hazard of surface fault rupture. A Holocene-active fault is one that has ruptured during Holocene time (within the last 11,700 years). A pre-Holocene fault is a fault that has not ruptured in the last 11,700 years. Pre-Holocene faults may still be capable of surface rupture in the future but are not regulated by the Alquist-Priolo Act. Figure 3.6-2 shows the VEGA 6 project site in relation to local faults.

Based on the review of current Earthquake Fault Zone maps, the VEGA 6 project site does not lie within an Alquist-Priolo Earthquake Fault Zone. The nearest zoned fault to the VEGA 6 project site is the Superstition Hills fault located approximately 4.5 miles southwest of the project site (Appendix G of this EIR).

Ramon Substation Expansion

The Ramon Substation expansion area is located in the Western Coachella Valley which is traversed by several active and potentially active fault zones, including the San Andreas Fault. Based on the review of current Earthquake Fault Zone maps, the Ramon Substation expansion area is not located within an Alquist-Priolo Earthquake Fault Zone (CGS 2023). The nearest zoned fault to the expansion area is the San Andreas Fault, approximately 1.3 miles north of the Ramon Substation expansion area.

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.

VEGA 6

As the VEGA 6 project site is located in the seismically active southern California region, the primary seismic hazard at the project site is the potential for strong ground shaking during earthquakes along

the San Andreas, Elmore Ranch, and Imperial faults. The VEGA 6 project site is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. Ground motions are dependent primarily on the earthquake magnitude and distance to the rupture zone (Appendix G of this EIR).

Ramon Substation Expansion

As previously mentioned, the Ramon Substation expansion area is located within a seismically active region and located approximately 1.3 miles north of the San Andreas Fault. According to the Western Coachella Valley Area Plan (WCVAP), the Western Coachella Valley has experienced several earthquakes of moderate magnitude accompanied by seismic groundshaking since records have been kept (County of Riverside 2021). The Ramon Substation expansion area is considered likely to be subject to moderate to strong seismic groundshaking due to its location in a seismically active region.

Groundwater Conditions

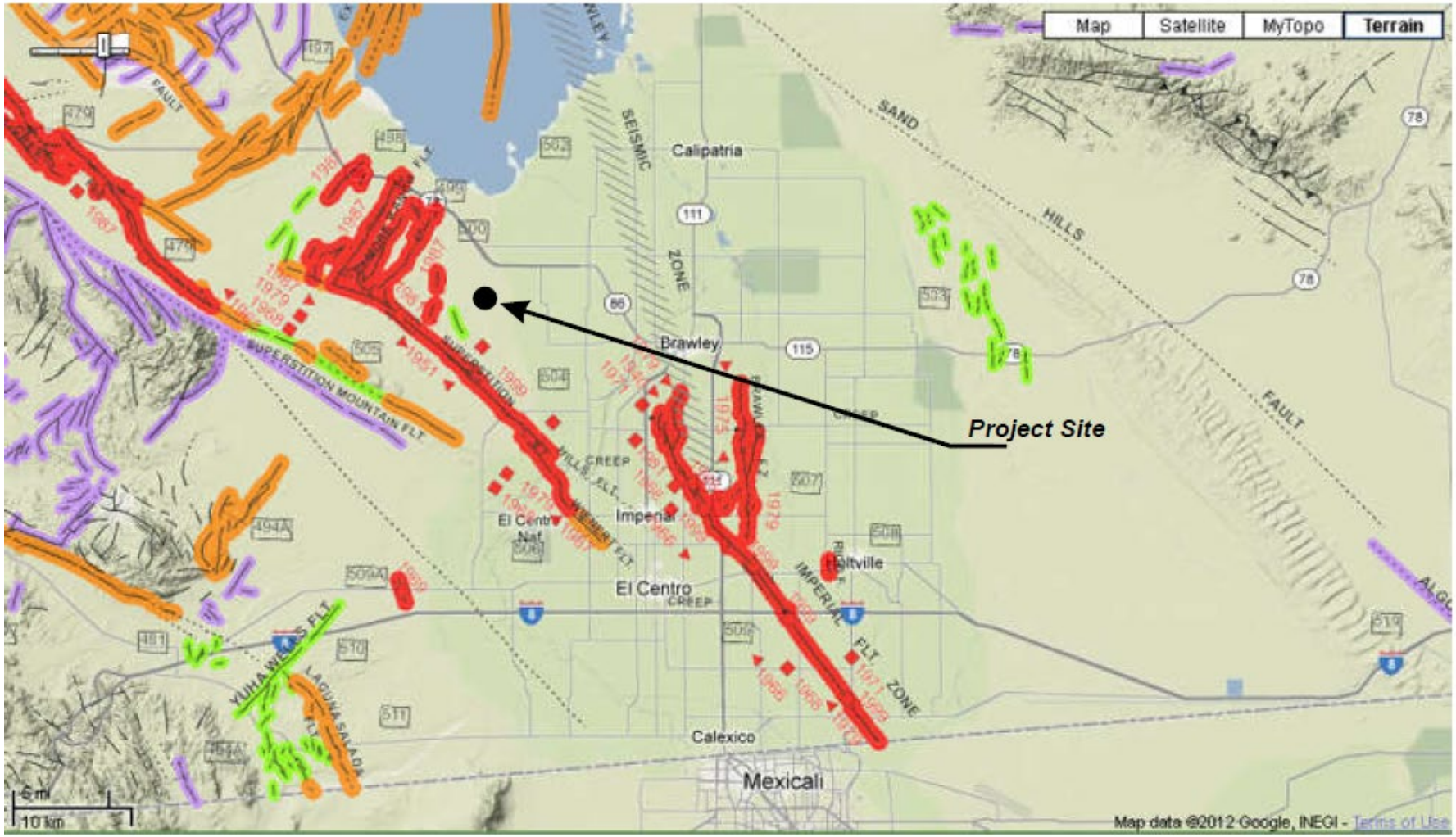
VEGA 6

During subsurface exploration of the solar energy facility site, groundwater was encountered at approximately 48 feet below the existing grade at the northwestern corner of the solar energy facility site (Appendix G of this EIR).

Ramon Substation Expansion

The Ramon Substation expansion area does not contain any groundwater wells. The nearest groundwater well (KW_013) is located approximately 1.2 miles west of the Ramon Substation expansion area. Groundwater at this well was encountered approximately 518 feet below ground surface (bgs) (DWR 2023).

Figure 3.6-2. Regional VEGA 6 Fault Map



Source: California Geological Survey 2010 Fault Activity Map of California
http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html#

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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.

VEGA 6

As previously mentioned, the nearest zoned fault to the project site is the Superstition Hills fault located approximately 4.5 miles southwest of the project site. Based on this distance, the potential for surface fault rupture to occur on the project site is considered low.

Ramon Substation Expansion

As previously mentioned, the Ramon Substation expansion area is located approximately 1.3 miles north of the San Andreas Fault. Based on this distance, the potential for surface fault rupture to occur on the expansion area is considered low.

Liquefaction

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations. Four conditions are generally required for liquefaction to occur (Appendix G of this EIR):

1. The soil must be saturated (relatively shallow groundwater);
2. The soil must be loosely packed (low to medium relative density);
3. The soil mut be relatively cohesionless (not clayey); and
4. Ground shaking of sufficient intensity must occur to function as a trigger mechanism.

VEGA 6

The granular soil encountered at the points of exploration at the VEGA 6 project site is not considered to be susceptible to liquefaction due to the high density of the sands and groundwater being encountered deeper than 40 feet. Therefore, due to the high density of the subsurface sandy soils and since groundwater is deeper than 40 feet, liquefaction is unlikely to be a potential hazard at the VEGA 6 site (Appendix G of this EIR).

Ramon Substation Expansion

According to the County of Riverside’s GIS Mapping Portal (Map My County), the Ramon Substation expansion area is mapped in an area of moderate susceptibility to liquefaction (RCIT 2023).

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.

VEGA 6

The hazard of landslides is unlikely on the VEGA 6 project site due to the regional planar topography. No ancient landslides are shown on geologic maps, aerial photographs and topographic maps of the region and no indications of landslides were observed on the site during the geotechnical site investigation (Appendix G of this EIR). Additionally, according to the County of Imperial General Plan, Seismic and Public Safety Element (County of Imperial 1997), the VEGA 6 project site is not located within an area with the potential for landslides.

Ramon Substation Expansion

According to the WCVAP, the Western Coachella Valley experiences secondary seismic hazards that result from the interaction of groundshaking with existing soil and bedrock conditions which includes landslides. According to Figure 16, Slope Instability, in the WCVAP, the Ramon Substation expansion area is not located in an area mapped with potential for seismically induced landslides and rockfalls (County of Riverside 2021).

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.

VEGA 6

Because the VEGA 6 project site is unlikely to experience landslides and is not located within an area susceptible to liquefaction, lateral spreading is also considered to be unlikely to be a potential hazard at the site (Appendix G of this EIR).

Ramon Substation Expansion

The Ramon Substation expansion area is relatively flat, therefore there is a low potential for lateral spreading to occur on-site.

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.

VEGA 6

Based on the site conditions and gentle to relatively flat topography across the majority of the VEGA 6 project site, ground subsidence is considered unlikely to occur (Appendix G of this EIR).

Ramon Substation Expansion

According to the County of Riverside's GIS Mapping Portal (Map My County), the Ramon Substation expansion area is located in an area susceptible to land subsidence (RCIT 2023).

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.

VEGA 6

According to the Geotechnical Report prepared for the VEGA 6 project, heavy clays, which are highly expansive, exist in the northern ⅓ of the solar energy facility site. The native surface clays on the solar energy facility site likely exhibit high swell potential (Expansion Index, EI = 91 to 130) when correlated to Plasticity Index tests performed on the native soils (Appendix G of this EIR).

The clay can become expansive when wetted and can shrink with moisture loss (drying). Large shrinkage cracks and blocky fracturing of the clays occur with long periods of drying. Causes for soil saturation include standing storm water, broken utility lines, or capillary rise in moisture upon sealing the ground surface to evaporation. Moisture losses can occur with lack of landscape watering, close proximity of structures to downslopes and root system moisture extraction from deep rooted shrubs and trees placed near the foundations (Appendix G of this EIR).

Ramon Substation Expansion

The Ramon Substation expansion area consists of Myoma and Carsitas soils, neither of which are considered expansive soils (USDA 2023). Both soils are characterized as somewhat excessively drained, with very slow runoff, and rapid permeability, making them unable to undergo significant volume changes (shrink or swell) (USDA 2015a and 2015b). Therefore, the potential for soil expansion within the Ramon Substation expansion area is considered low.

Collapsible Soils

Collapsible soil generally consists of dry, loose, low-density material that have the potential collapse and compact (decrease in volume) when subjected to the addition of water or excessive loading. Soils found to be most susceptible to collapse include loess (fine grained wind-blown soils), young alluvium fan deposits in semi-arid to arid climates, debris flow deposits and residual soil deposits.

VEGA 6

Due to the cohesive nature of the subsurface soils and the natural density (dense to very dense) of the granular soils, the potential for hydro-collapse of the subsurface soils at the VEGA 6 project site is considered very low (Appendix G of this EIR).

Ramon Substation Expansion

It is unknown whether collapsible soils are present on the Ramon Substation expansion area. Corrosive Soils

VEGA 6

Corrosive soils can damage underground utilities including pipelines and cables, or weaken roadway structures. According to the Site Corrosivity Assessment Report prepared for the VEGA 6 project (included in Appendix G of this EIR), the solar energy facility site has varying levels of soil corrosivity. The soil in the northern and southern end of the solar energy facility site is considered moderately corrosive and the soil on the eastern side of the solar energy facility site is considered highly corrosive. As such, screening tests concluded that the soil is considered aggressive enough to initiate and support the corrosion of buried metallic utilities (Appendix G of this EIR).

Ramon Substation Expansion

The soils underlying the Ramon Substation expansion area do not include any clay or silty clay soils, which are known to be corrosive. Myoma soils and Carsitas soils located on-site have low corrosivity potential.

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.

VEGA 6

Late Pleistocene to Holocene Lake Cahuilla deposits exist within the project area. Therefore, there is a possibility that exposed and/or underlying deposits may be located within the project area. Lake Cahuilla Beds have yielded well-preserved subfossil remains of freshwater clams and snails and sparse remains of freshwater fish. The paleontological resources of the Lake Cahuilla Beds are considered significant because of the paleoclimatic and palaeoecological information they can provide, and these deposits are therefore assigned a high paleontological potential. Therefore, the site does have paleontological sensitivity, with high potential for paleontological resource discovery.

Ramon Substation Expansion

According to the County's GIS Mapping Portal (Map My County), the Ramon Substation expansion area is located in an area with low sensitivity for paleontological resources (RCIT 2023).

3.6.2 Regulatory Setting

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

Federal

Earthquake Hazards Reduction Act

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

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

State

Alquist-Priolo Special Studies Earthquake Hazards Act

The APEHA was passed into law following the destructive February 9, 1971 San Fernando earthquake. The APEHA provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the APEHA is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The state geologist (Chief of the California Division of Mines and Geology) is required to identify "earthquake fault zones" along known active faults in California. Counties and cities must withhold development permits for human occupancy projects within these zones unless geologic studies demonstrate that there would be no issues associated with the development of projects. The project site is not located within a currently mapped APEHA zone.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California PRC Sections 2690–2699.6) directs the DOC's CGS to map areas of earthquake hazard, including areas of liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslides, strong ground shaking, or other earthquake and geologic hazards. The Seismic Hazards Mapping Act requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development (DOC 2019).

As required by the act, the CGS has issued official Seismic Hazard Zone Maps that indicate zones of required investigation for earthquake faulting, landslides, and liquefaction. Prior to approving specific types of development, local permit authorities require a project's applicant to submit a geotechnical investigation report for review and approval by the jurisdiction.

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 3.6-1 analyzes the consistency of the VEGA 6 project with specific policies contained in the County of Imperial General Plan associated with geology, soils, and seismicity. While this EIR analyzes the VEGA 6 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 3.6-1. Project Consistency with Applicable General Plan Policies

Applicable Policies	Consistency Determination	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
Objective 1.1. Ensure that data on geological hazards is incorporated into the land use review process, and future development process.		

Applicable Policies	Consistency Determination	Analysis
Objective 1.3. Regulate development adjacent to or near all mineral deposits and geothermal operations.		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 VEGA 6 project site is located in a seismically active area, the project is required to be designed in accordance with the CBC for near source factors derived from a design basis earthquake based on a peak ground acceleration of 0.48 gravity. It should be noted that, the VEGA 6 project would be remotely operated and would not require any habitable structures on site. In considering these factors in conjunction with mitigation requirements outlined in the impact analysis, the risks associated with seismic hazards would be minimized. A preliminary geotechnical study has been prepared for the proposed VEGA 6 project. The preliminary geotechnical study has been referenced in this environmental document. Additionally, a design-level geotechnical investigation will be conducted to evaluate the potential for site specific hazards associated with seismic activity.
Objective 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

County of Riverside General Plan

The General Plan includes several policies related to seismic hazards, code conformance, and development regulations that are enforced to minimize the potential impacts of seismic and geologic hazards on the County's citizens, property, and economy (County of Riverside 2021). The General Plan policies applicable to the proposed Ramon Substation expansion area are listed below.

SAFETY ELEMENT

- **S 2.1** Minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following:

  a) Require geologic studies or analyses for critical structures, and lifelines, high-occupancy, schools, and high-risk structures, within 0.5 mile of all Quaternary to historic faults shown

on the Earthquake Fault Studies Zones map. The County geologist shall review and make recommendations based on the results to reduce the potential risk.

b) Request geologic trenching studies within all designated Earthquake Fault Studies Zones, unless adequate evidence, as determined and accepted by the County Engineering Geologist, is presented. The County of Riverside may require geologic trenching of non-zoned faults for especially critical or vulnerable structures or lifelines.

c) Require that infrastructure systems, such as energy, communications, and transportation infrastructure be designed to resist, without failure to the extent feasible, their crossing of a fault, should fault rupture occur.

d) Support efforts by the California Department of Conservation, California Geological Survey to develop geologic and engineering solutions in areas of ground deformation due to faulting and seismic activity in those areas where a through-going fault cannot be reliably located.

e) Encourage and support efforts by the geologic research community to define better the locations and risks of Riverside County faults. Such efforts could include data sharing and database development with regional entities, other local governments, private organizations, utility agencies or companies, and local universities.

- **S 2.2** Request geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landslides, or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory structures/buildings, as determined by County officials. Any studies or surveys should be prepared/completed by a state-licensed professional.
- **S 2.3** Require that a state-licensed professional investigate the potential for liquefaction in areas designated as underlain by “Susceptible Sediments” and “Shallow Ground Water” for all general construction projects, except for accessory buildings.
- **S 2.4** Request that engineered slopes be designed to resist seismically induced failure as appropriate. For lower-risk projects, this may include requiring slope design to be based on pseudo-static stability analyses using soil engineering parameters that are established on a site-specific basis. For higher risk projects, appropriate standards may include requiring the stability analyses to factor in the intensity of expected ground-shaking, using a Newmark-type deformation analysis or other analyses as appropriate.
- **S 2.6** Request structures in liquefaction and slope stability hazards to mitigate the potential of seismically induced differential settlement through appropriate techniques as determined by geotechnical studies, including a 100-percent maximum variation of fill depths as warranted.
- **S 2.8** Request the following in landslide potential hazard management zones, or when deemed necessary for compliance with CEQA, prior to the issuance of development permits or approval of project designs:

  a) Preliminary geotechnical and geologic investigations, including certification regarding the stability of the site against adverse effects of earthquake and subsidence.

  b) Evaluations of site stability, including any possible impact on adjacent properties.

c) Consultant reports, investigations, and design recommendations required for grading permits, building permits, and subdivision applications, shall be prepared by state-licensed professionals.

- **S 2.9** Require new development in areas prone to geologic hazards (e.g., landslides, steep topography, slope instability) to be adequately mitigated against these hazards, as feasible. Any development in hillside areas should prepare drainage plans to direct runoff and drainage away from potentially unstable slopes. New developments should incorporate hillside design techniques and features to mitigate and support slope stability.
- **S 2.15** Request geotechnical studies within documented subsidence zones, as well as zones that may be susceptible to subsidence, prior to the issuance of development permits. Within the documented subsidence zones of the Coachella, San Jacinto, and Elsinore Valleys, the studies should address the potential for reactivation of these zones, consider the potential impact on the project, and provide adequate and acceptable mitigation measures.

County of Riverside Municipal Code (RMC)

The following are applicable to the proposed Ramon Substation expansion area:

- Title 15, Buildings and Construction, contains provisions related to building regulations, and incorporates the CBC by reference. Chapter 15.16, Earthquake Fault Area Construction Regulations was adopted pursuant to the requirements of the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code, Section 2621, et seq.) and the adopted policies and criteria of the State Mining and Geology Board.

Riverside County Ordinance No. 547 – Implementation of the Alquist-Priolo Earthquake Fault Zoning Act

This ordinance establishes the policies and procedures used by the County of Riverside to implement the A-P Act. Among other things, it requires all projects proposed within an “earthquake fault zone,” as shown on the maps prepared by the State Geologist to comply with the provisions of the A-P Act. It establishes regulations for construction, including for grading, slopes and compaction, erosion control, retaining wall design, and earthquake fault zone setbacks.

Riverside County Ordinance No. 457 – Riverside County Building and Fire Codes

Every three years, the County’s Building and Fire Codes are adapted from the CBSC (CCR Title 24), which includes both building and fire codes. These codes establish site-specific investigation requirements, construction standards, and inspection procedures to ensure that development authorized by the County does not pose a threat to the health, safety, or welfare of the public. The CBSC contains minimum baseline standards to guard against unsafe development. County of Riverside Ordinance No. 457 also adopts, in some cases with modification to a stricter standard, a number of California State’s Title 24 codes (fire, building, plumbing, electrical, etc.). The Riverside County Department of Building and Safety provides technical expertise in reviewing and enforcing these codes.

3.6.3 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 by 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

The analysis evaluates the potential for the project, as described in Chapter 2, Project Description, to interact with local geologic and soil conditions, as well as paleontological resources on the VEGA 6 project site. A Geotechnical Report prepared by Landmark Consultants, Inc. (Appendix G of this EIR). The information obtained from the geotechnical report was reviewed and summarized to present the existing geologic and soil conditions on the VEGA 6 project site. This analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

Impact Analysis

Impact 3.6-1 Would the project directly or indirectly cause potential substantive adverse effects, including 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)?

VEGA 6

As previously discussed above, the VEGA 6 project site is located in a seismically active region with several mapped faults of the San Andreas Fault System in the project site vicinity. As shown in Figure 3.6-2, the VEGA 6 project site is not located on an active fault. Furthermore, no portion of the VEGA 6 project site is within or near a designated APEHA zone, and therefore, the potential for ground rupture to occur within the VEGA 6 project site is considered unlikely. As such, the probability of surface fault rupture within the VEGA 6 project site during construction and operation is considered low and the project would not increase or exacerbate existing hazards related to fault rupture. The proposed VEGA 6 project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a major fault as delineated on the most recent Alquist-Priolo Fault Zoning map. This impact would be less than significant.

Ramon Substation Expansion

As previously described, based on the review of current Earthquake Fault Zone maps, the Ramon Substation expansion area is not located within an Alquist-Priolo Earthquake Fault Zone (CGS 2023). The Ramon Substation expansion area is approximately 1.3 miles south of the San Andreas Fault zone. Because the expansion area is not within 0.5-mile of the fault zone, the potential for ground rupture to occur within the expansion area is considered unlikely. As such, the probability of surface fault rupture within the Ramon Substation expansion area during construction and operation is considered low and the proposed expansion would not increase or exacerbate existing hazards related to fault rupture. Impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.6-2 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Strong seismic ground shaking?

VEGA 6

As previously mentioned, the closest mapped fault to the project site is the Superstition Hills fault located approximately 4.5 miles southwest of the VEGA 6 project site. In the event of an earthquake along this fault or another regional fault, seismic hazards related to ground motion could occur in susceptible areas within the project site. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking.

Even with the integration of building standards that are designed to resist the effects of strong ground motion, ground shaking within the project site could cause some structural damage to the facility structures or, at least, cause unsecured objects to fall. During a stronger seismic event, ground shaking could result in structural damage or collapse of electrical distribution facilities. Given the potentially hazardous nature of the project facilities, the potential impact of ground motion during an earthquake is considered a significant impact, as proposed structures, such as the substation and

transmission lines could be damaged. However, the proposed VEGA 6 project would be constructed in accordance with the applicable geotechnical and seismic design standards as well as the site-specific design recommendations in the final geotechnical report per Mitigation Measure GEO-1; and upon operation, the VEGA 6 project would not result in any significant changes related to the risk of seismic hazards on the project site when compared to existing conditions, nor would project operation increase or exacerbate the potential for strong seismic ground shaking to occur. Impacts would be reduced to a level less than significant.

Ramon Substation Expansion

As previously mentioned, the Ramon Substation expansion area is located approximately 1.3 miles south of the San Andreas Fault zone. In the event of an earthquake along this fault or another nearby regional fault, seismic hazards related to ground motion could occur within the expansion area. While the potential for seismically induced ground shaking in the area during operation of the Ramon Substation is unavoidable, the proposed substation expansion would not include any occupied structures that would expose people to significant hazards due to seismic shaking. It is unlikely that the below grade and above-ground components would be damaged by moderate seismic ground shaking. In addition, the Ramon Substation expansion would be designed and constructed in compliance with the CBC, Riverside County Building Code, and other state and local regulations pertaining to earthquake hazards reduction. Additionally, construction and operation of the Ramon Substation expansion would not increase or exacerbate the potential for strong seismic ground shaking to occur. Therefore, the Ramon Substation expansion would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic groundshaking. Impacts are considered less than significant.

Mitigation Measure(s)

VEGA 6

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.

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

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 3.6-3 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?

VEGA 6

Based on the exploratory borings from the Geotechnical Report prepared for the VEGA 6 project, the potential for liquefaction at the solar energy facility site is considered to be low due to the high density of the sands at the project site and groundwater being encountered deeper than 40 feet below ground surface (Appendix G of this EIR). Therefore, the potential impact associated with liquefaction is considered less than significant.

Ramon Substation Expansion

According to the County of Riverside's GIS Mapping Portal (Map My County), the Ramon Substation expansion area is located in an area that has moderate susceptibility to liquefaction (RCIT 2023). However, the proposed Ramon Substation expansion would be designed to resist seismic forces in accordance with the criteria contained in the CBC and the Riverside County Building Code. IID would be required to obtain building permits from the County, which would ensure that project plans and specifications comply with the CBC and County seismic design requirements. Therefore, with adherence to the CBC and County seismic design requirements, the Ramon Substation expansion would not cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.6-4 Would the project directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving:

Landslides?

VEGA 6

The solar energy facility site slopes gently (about 1.5 to 2 percent) to the north-northeast. As stated above, the hazard of landsliding is unlikely due to the regional planar topography. Additionally, no historic landslides are shown on geologic maps, aerial photographs and topographic maps of the region and no indications of landslides were observed during site investigation according to the Geotechnical Report. Based on these factors the potential for a landslide is considered negligible (Appendix G of this EIR). Therefore, the VEGA 6 project would not directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving landslides and no impact would occur.

Ramon Substation Expansion

According to Figure 16, Slope Instability, in the WCVAP, the Ramon Substation expansion area is not mapped in area with susceptibility to seismically induced landslides and rockfalls (County of Riverside 2021). Additionally, the expansion area is relatively flat and does not contain any slopes, the Ramon Substation expansion area would not be prone to landslides. Accordingly, impacts due to landslide hazards would be less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.6-5 Would the project result in substantial soil erosion or the loss of topsoil?

VEGA 6

The proposed VEGA 6 project would require site grading and construction that would expose the project site to erosive forces by water for extended periods of time. Construction activities would involve grading of the VEGA 6 project site to establish access roads and pads for electrical equipment, trenching for underground electrical collection lines, and the installation of solar equipment and security fencing which could result in increased erosion and sedimentation to surface waters. Construction could also produce sediment-laden stormwater runoff (nonpoint source pollution), a

major contributor to the degradation of water quality. If precautions are not taken to contain contaminants, construction-related erosion impacts are considered a significant impact.

Since the proposed VEGA 6 project would disturb at least 1 acre of land during construction, it would be required to obtain a Construction General Permit from the California State Water Resources Control Board (State Water Board) consistent with Imperial County's General Permit (No. CA000004) and to comply with its conditions and requirements, which are designed to minimize potential erosion issues. Further, the project would be consistent with Section 93101.00 of the Imperial County Municipal Code, which establishes the Stormwater Control Ordinance and ensures compliance with the County's NPDES permit (County of Imperial 2015a). Compliance with the NPDES permit would require the project to implement applicable BMPs to control runoff and include erosion and sediment control practices.

Furthermore, as provided in Mitigation Measure GEO-1, during final engineering for the VEGA 6 project, a design-level geotechnical study would identify appropriate measures for the project related to soil erosion. The proposed project would also implement Mitigation Measure HYD-1 provided in Section 3.9, Hydrology and Water Quality, potential impacts from erosion during construction activities would be reduced to a level less than significant with the preparation of a SWPPP for sediment and erosion control and implementation of BMPs to reduce erosion from the construction site.

The VEGA 6 project is not expected to result in substantial soil erosion or the loss of topsoil over the long term. The project applicant would be required to implement on-site erosion control measures in accordance with County standards, which require the preparation, review, and approval of a grading plan by the County Engineer. Therefore, with implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1 identified in Section 3.9 Hydrology/Water Quality as well as adherence to existing requirements, impacts from construction-related erosion would be reduced to a level less than significant. Impacts related to soil erosion or loss of topsoil are limited to construction impacts. No respective operational impacts would occur.

Ramon Substation Expansion

Soil erosion could result during construction of the proposed Ramon Substation expansion area in association with grading and earthmoving activities. The expansion area would be disturbed by construction activities such as grading and clearing as a part of site preparation. To the extent feasible, site preparation would be planned and designed to minimize the amount of earth movement. 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; and compliance with the NPDES General Construction Permit and project-specific SWPPP, as outlined in Mitigation Measure RS-HYD-1. Implementation of Mitigation Measure RS-HYD-1 would reduce impacts to a level less than significant.

Mitigation Measure(s)

VEGA 6

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

Ramon Substation Expansion

No additional mitigation measures beyond Mitigation Measure RS-HYD-1.

Significance after Mitigation

VEGA 6

With implementation of Mitigation Measure GEO-1 and Mitigation Measure HYD-1 in Section 3.9 Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a level less than significant with the preparation of a SWPPP and implementation of BMPs to reduce erosion from the construction site.

Ramon Substation Expansion

With implementation of Mitigation Measure RS-HYD-1 in Section 3.9, Hydrology/Water Quality, potential impacts from erosion during construction activities would be reduced to a level less than significant.

Impact 3.6-6 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?

VEGA 6

Based on the site conditions and relatively flat topography, landslides, lateral spreading, liquefaction, and subsidence, are considered unlikely. As previously described above, due to the high density of the sands at the VEGA 6 project site and groundwater being encountered deeper than 40 feet below ground surface, the potential for liquefaction at the VEGA 6 project site is considered to be low.

The VEGA 6 project site, including the areas proposed for off-site improvements, do not contain steep slopes or exposed hillsides. Due to the gently sloping nature of the project site, including the areas proposed for off-site improvements, the potential for landslides is low.

In regard to collapse, the cohesive nature of the subsurface soils and the natural density (dense to very dense) of the granular soils, the potential for hydro-collapse of the subsurface soils at the solar energy facility site is considered very low (Appendix G of this EIR).

The Geotechnical Report prepared for the VEGA 6 project determined that the solar energy facility site has varying levels of soil corrosivity. The soil in the northern and southern end of the solar energy facility site is considered moderately corrosive and the soil on the eastern side of the site is considered highly corrosive. As such, screening tests concluded that the soil is considered aggressive enough to initiate and support the corrosion of buried metallic utilities (Appendix G of this EIR).

Implementation of Mitigation Measure GEO-1, which requires the preparation of a design-level geotechnical report, would reduce the potential impacts associated with corrosive soils to a level less than significant.

Ramon Substation Expansion

The Ramon Substation expansion area is relatively flat and does not contain any slopes, therefore, the project site would not be prone to landslides and the potential for lateral spreading to occur on-site is low.

The Ramon Substation expansion area is located in an area that has moderate susceptibility for liquefaction (RCIT 2023). Additionally, the expansion area is located in an area susceptible to land subsidence. These potential impacts are considered significant. However, the Ramon Substation expansion would be designed to resist liquefaction and subsidence in accordance with the criteria

contained in the CBC and the Riverside County Building Code. Therefore, potential significant impacts would be reduced to a level less than significant.

Mitigation Measure(s)

VEGA 6

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

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

With implementation of Mitigation Measure GEO-1, potential impacts associated with corrosive soils would be reduced to a level less than significant with the implementation of recommendations made by a licensed geotechnical engineer in compliance with the CBC prepared as part of a formal geotechnical investigation.

Impact 3.6-7 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?

VEGA 6

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. According to the Geotechnical Report prepared for the VEGA 6 project, heavy clays, which are highly expansive, exist in the northern ⅓ of the solar energy facility site. The native surface clays on the solar energy facility site likely exhibit high swell potential. The subsurface soils at the proposed electrical substation and O&M building area are predominately hard fat clay soils which would likely exhibit high swell potential.

Therefore, unless properly mitigated, shrink-swell soils could exert additional pressure on buried structures and electrical connections producing shrinkage cracks that could allow water infiltration and compromise the integrity of backfill material. These conditions could be worsened if structural facilities are constructed directly on expansive soil materials. This potential impact would be significant as structures could be damaged by these types of soils. A site-specific geotechnical investigation would be required at the project site to determine the extent and effect of problematic soils which have been identified during preliminary laboratory screenings of near surface on-site soils. Implementation of Mitigation Measure GEO-1, which requires the preparation of a design-level geotechnical report, would reduce potential impacts associated with expansive soils to a level less than significant.

Ramon Substation Expansion

As previously described, the potential for soil expansion within the Ramon Substation expansion area is considered low. The Ramon Substation expansion would also be designed to resist soil expansion

in accordance with the criteria contained in the CBC and the Riverside County Building Code. Therefore, impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

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

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

With implementation of Mitigation Measure GEO-1, potential impacts associated with expansive soils would be reduced to a level less than significant with the implementation of recommendations made by a licensed geotechnical engineer in compliance with the CBC prepared as part of a formal geotechnical investigation.

Impact 3.6-8 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?

VEGA 6

The proposed VEGA 6 project would not require an operations and maintenance building. The proposed solar facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Therefore, no septic or other wastewater disposal systems would be required for the VEGA 6 project and no impact would occur.

Ramon Substation Expansion

The Ramon Substation expansion would be primarily an unmanned substation and would not require a wastewater disposal system. Therefore, no impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.6-9 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

VEGA 6

The Lake Cahuilla Beds have yielded well-preserved subfossil remains of freshwater clams and snails and sparse remains of freshwater fish. The paleontological resources of the Lake Cahuilla Beds are considered significant because of the paleoclimatic and palaeoecological information they can provide, and these deposits are therefore assigned a high paleontological potential. Therefore, the VEGA 6 project site is considered to be paleontologically sensitive with a high potential for paleontological resource discovery. As such, 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.

Ramon Substation Expansion

According to the County's GIS Mapping Portal (Map My County) for paleontological sensitivity, the Ramon Substation expansion area is located in an area with low sensitivity for paleontological resources (RCIT 2023). Construction of the Ramon Substation expansion would have a low potential to unearth or potentially destroy previously undiscovered paleontological resources. As such, impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

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 site, the consulting paleontologist shall prepare a paleontological Treatment and Monitoring Plan to include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation of specimens into an accredited repository, and preparation of a report at the conclusion of the monitoring program.

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

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.

3.6.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Decommissioning and restoration of the project site at the end of its use as a solar facility would involve the removal of structures and restoration to prior (pre-solar project) conditions. No geologic or soil impacts associated with the restoration activities would be anticipated, and, therefore, no impact is identified.

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

Residual

With implementation of Mitigation Measure GEO-1, impacts related to strong seismic ground shaking, 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 3.9 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 project would not result in residual significant and unmitigable impacts related to geology and soil resources.

3.7 Greenhouse Gas Emissions

This section includes an overview of existing greenhouse gas emissions (GHG) within the VEGA 6 project area and Ramon Substation expansion area, and identifies applicable laws and regulations related to global climate change. The impact assessment provides an evaluation of potential adverse effects with regards to GHG emissions based on criteria derived from the CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description.

Information contained in this section for the VEGA 6 project is summarized from the *Air Quality and Greenhouse Gas Assessment for the VEGA SES 6 Solar and Battery Storage Project* prepared by ECORP Consulting, Inc. This report is included in Appendix C1 of this EIR. GHG emissions for the proposed Ramon Substation expansion were estimated 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. The CalEEMod worksheets generated for the proposed Ramon Substation expansion are contained in Appendix C2 of this EIR.

3.7.1 Existing Conditions

Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHGs), play a critical role in the Earth's radiation amount by trapping infrared radiation from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change.

Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Emissions of CO_2 and N_2O are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. Table 3.7-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contribution to the greenhouse effect.

Table 3.7-1. Greenhouse Gas Descriptions

Greenhouse Gas	Description
CO_2	Carbon dioxide is a colorless, odorless gas. CO2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO2 emissions. The atmospheric lifetime of CO2 is variable because it is so readily exchanged in the atmosphere.
CH_4	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH4 to the atmosphere. Natural sources of CH4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH4 is about 12 years.
N_2O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N2O is approximately 120 years.

Source: Appendix C1 of this EIR

Greenhouse Gas Emissions Inventory

In 2021, CARB released the California GHG inventory covering calendar year 2019 emissions. In 2019, California emitted 418.2 million gross metric tons of CO_2e including from imported electricity. The current inventory covers the years 2000 to 2019 and is summarized in Table 3.7-2. 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 3.7-2, combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2018, accounting for approximately 39.7 percent of total GHG emissions in the State (CARB 2021).

Table 3.7-2. California Greenhouse Gas Emissions Inventory 2000 to 2019

Sector	Total 2000 Emissions ($MMTCO_2e$)	Total 2019 Emissions ($MMTCO_2e$))
Agriculture	30.97	31.8
Commercial and Residential	43.95	43.8
Electric Power	104.75	58.8
Industrial	96.18	88.2
Transportation	178.40	166.1

Sector	Total 2000 Emissions ($MMTCO_2e$)	Total 2019 Emissions ($MMTCO_2e$))
Recycling and Waste	7.67	8.9
High GWP Gases	6.28	20.6

Source: CARB 2021
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).

3.7.2 Regulatory Setting

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

Federal

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

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

Corporate Average Fuel Standards

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

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

State

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by previous Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality

problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

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 31 – 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.

Senate Bill 100 of 2018

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 Renewable Portfolio Standard (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.

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.

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, 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 MTCO2e in the initial Scoping Plan.

CARB adopted the latest update to the Climate Change Scoping Plan in December 2017. The 2017 Scoping Plan is guided by the 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 3.3, Air Quality, of this EIR). The following SCAG goal is applicable to the project:

- Reduce greenhouse gas emissions and improve air quality

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

Local

County of Imperial

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the CEQA Guidelines to provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts. Formal CEQA thresholds for lead agencies must always be established through a public hearing process. Imperial County has not established formal quantitative or qualitative thresholds through a public rulemaking process, but CEQA permits the lead agency to establish a project-specific threshold of significance if backed by substantial evidence, until such time as a formal threshold is approved.

County of Riverside Climate Action Plan

The County of Riverside adopted the 2019 Climate Action Plan (CAP) Update on December 17, 2019. The 2019 CAP Update considers the previous GHG reduction targets identified in the 2015 CAP and refines the County's efforts to meet GHG reduction strategies in 2035 and 2050 and proposes new targets that are consistent with updates in State climate change regulations in order to meet the requirements of SB 32.

The 2019 CAP Update establishes a framework under which future projects would be designed for the purposes of reducing GHG emissions. Although the 2019 CAP Update is designed as a standalone GHG policy document, it would be utilized to provide a more comprehensive and detailed framework for land-based policy decisions to reduce GHG emissions from existing and future development. Any future projects proposed pursuant to the 2019 CAP Update would be developed in accordance with General Plan Policies for energy conservation while maximizing efficient use of resources, maintaining a high quality of life, enhancing job opportunities, promoting sustainability, and facilitating access to transportation facilities.

The 2019 CAP Update includes an update to the County's GHG inventory for the year 2017 and sets a target to reduce communitywide GHG emissions by 16.3 percent by 2030. GHG reduction measures prescribed in the 2019 CAP Update build upon those adopted under the County's 2015 CAP to ensure that the County meets the reduction targets established pursuant to SB 32.

The CAP Update provides a flexible way of demonstrating GHG reductions consistent with the CAP through the use of screening tables. The screening tables included in the CAP Update provide a menu of options for energy efficiency, renewable energy, water conservation measures, and additional measures that provide predictable GHG reductions. Each option within the screening tables includes point values based upon the GHG reduction that each measure can achieve relative to a development project. Projects that achieve at least 100 points from the screening tables are determined to have provided a fair-share contribution of GHG reductions and, therefore, are considered consistent with the County of Riverside CAP Update (County of Riverside 2019).

3.7.3 Impacts Analysis

This section presents the methodology used for the evaluation, provides the significance criteria used for considering project impacts related to GHGs, provides an impact evaluation, and identifies feasible mitigation measures to avoid or minimize potential impacts, if necessary.

Thresholds of Significance

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

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting

from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1. 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.

VEGA 6

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT SIGNIFICANCE THRESHOLD

The ICAPCD has not adopted a GHG significance threshold. As previously described, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). Thus, in the absence of any GHG emissions significance thresholds, project GHG emissions are compared to the Mojave Desert Air Quality Management District's (MDAQMD) numeric threshold of 100,000 metric tons of CO_2e annually. While MDAQMD's significance threshold is not binding on the ICAPCD or County of Imperial, they are instructive for comparison purposes. The MDAQMD's significance threshold is appropriate because it was 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.

Ramon Substation Expansion

COUNTY OF RIVERSIDE CLIMATE ACTION PLAN

The County of Riverside 2019 CAP Update aims to reduce GHG emissions from development projects under County jurisdiction. The CAP Update builds on state and regional policies aimed at reducing GHG emissions consistent with the SB 32 2030 GHG reduction target and statewide post-2030 reduction goals. The CAP Update identifies a two-step approach in evaluating GHG emissions. First,

a screening threshold of 3,000 $MTCO_2e$/year is used to determine if additional analysis is required. Projects that do not exceed the 3,000 $MTCO_2e$/year screening threshold are considered to have a less than significant impact. Projects that exceed the 3,000 $MTCO_2e$/year screening threshold will be required to either:

1. Demonstrate and achieve a 25 percent reduction minimum of GHG emissions from a 2011-year level of efficiency compared to the mitigated project buildout year, or
2. Demonstrate at least 100 points (equivalent to an approximate 15 percent reduction in GHG emissions) through the CAP Screening Tables.

Projects that achieve at least 100 points from the screening tables are determined to have provided a fair-share contribution of GHG reductions and, therefore, are considered consistent with the County of Riverside CAP Update. As such, projects that achieve a total of 100 points or more are considered to have a less than significant individual and cumulative impact on GHG emissions.

Methodology

VEGA 6

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 3.3 Air Quality. Emissions were estimated using existing conditions, project construction and operations information, as well as a combination of emission factors from various sources. Where GHG emission quantification was required, emissions were modeled using the CalEEMod, version 2016.3.2. 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. The CalEEMod worksheets generated for the VEGA 6 project are contained in the Air Quality and Greenhouse Gas Assessment prepared by ECORP Consulting, Inc. (Appendix C1 of this EIR).

Ramon Substation Expansion

Emissions were estimated using existing conditions, project construction and operations information, as well as a combination of emission factors from various sources. Where GHG emission quantification was required, emissions were modeled using the CalEEMod, version 2020.4.0. The CalEEMod worksheets generated for the proposed Ramon Substation expansion are contained in Appendix C2 of this EIR.

Impact Analysis

Impact 3.7-1 Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

VEGA 6

Construction and operation of the VEGA 6 project would result in a relatively small amount of GHG emissions. The VEGA 6 project would generate GHG emissions during construction and routine operational activities at the VEGA 6 project site.

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 3.7-3 shows the VEGA 6 project's construction-related GHG emissions. As previously described above, in the absence of an

established threshold from the ICAPCD, construction emissions were compared to MDAQMD's significance threshold of 100,000 metric tons of CO_2e per year. As shown in Table 3.7-3, construction of the VEGA 6 project (solar energy facility, BESS, and gen-tie line) would result in the generation of approximately 1,228 metric tons of CO_2e/year, which is below the significance threshold of 100,000 metric tons of CO_2e/year. This impact would be less than significant.

Table 3.7-3. VEGA 6 Project Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Total VEGA 6 Project Construction with Gen-Tie Line	1,228
MDAQMD Significance Threshold	*100,000*
Exceed Significance Threshold?	**No**

Source: Appendix C1 of this EIR

Operation. Once the VEGA 6 project is constructed and operational, the proposed project would have no major stationary emission sources and would require minimal vehicular trips. Operation of the VEGA 6 project would result in an increase in GHG emissions solely associated with motor vehicle trips.

As shown in Table 3.7-4, the VEGA 6 project's operational-generated GHG emissions of 2.45 metric tons of CO_2e /year would not exceed the MDAQMD's threshold of 100,000 metric tons of CO_2e/year. This impact would be less than significant.

Table 3.7-4. VEGA 6 Project Operation-Related Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons/Year)
Area Source	0
Energy	0
Mobile	2.45
Waste	0
Water	0
Total	**2.45**
MDAQMD Significance Threshold	*100,000*
Exceed Significance Threshold?	**No**

Source: Appendix C1 of this EIR

Ramon Substation Expansion

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 3.7-5 shows the construction-related GHG emissions generated by the proposed Ramon Substation expansion. As shown in Table 3.7-5, construction of the proposed Ramon Substation expansion would result in the generation of approximately 214 metric tons of CO_2e/year. According to SCAQMD methodology, GHG emissions from construction are to be analyzed over the 30-year lifetime of the project. A 30-year amortization of construction emissions would be approximately 7.1 $MTCO_2e$ per year, which is below the County of Riverside's screening threshold of 3,000 metric tons of CO_2e/year. This impact would be less than significant.

Operation. Once the proposed Ramon Substation expansion is constructed and operational, there would be no major stationary emission sources. Furthermore, the proposed Ramon Substation expansion would not require any long-term employees during operations. There are already existing employees staffed at the existing Ramon Substation. These existing employees are anticipated to perform routine maintenance work and site security for the proposed expansion area. The proposed Ramon Substation expansion would not generate GHG emissions during operations and no impact would occur.

Table 3.7-5. Ramon Substation Expansion Construction-Related Greenhouse Gas Emissions

Construction Phase	CO_2e (Metric Tons/Year)
Site Preparation	9
Grading	11
Structural Facilities	180
Paving	14
Total	**214**
Amortized Construction-Related GHG Emissions	**7.1**
County of Riverside Screening Threshold	*3,000*
Exceed Screening Threshold?	**No**

Source: Appendix C2

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.7-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

VEGA 6

As discussed in Impact 3.7-1, the proposed VEGA 6 project would generate a relatively small amount of GHG emissions during project construction and its operational lifetime. The project-generated GHG emissions would not exceed the MDAQMD significance threshold of 100,000 metric tons of CO_2e/year, which was prepared with the purpose of complying with statewide GHG-reduction efforts. While the VEGA 6 project would emit some GHG emissions during construction and a very small amount during operations, the contribution of renewable resource energy production to meet the goals of the Renewable Portfolio Standard (Scoping Plan Measure E-3) would result in a net cumulative reduction of GHG emissions, a key environmental benefit. Scoping Plan Measure E-3, Renewable Portfolio Standard, of the Climate Change Scoping Plan requires that all investor-owned utility companies generate 60 percent of their energy demand from renewable sources by the year 2030. Therefore, the short-term minor generation of GHG emissions during construction, which is necessary to create this new, low-GHG emitting power-generating facility, as well as the negligible amount generated during

ongoing maintenance operations, would be more than offset by GHG emission reductions associated with solar-generated energy during operation.

Increasing sources of solar energy is one of the measures identified under the Scoping Plan to reduce statewide GHG emissions. The proposed VEGA 6 project would reduce GHG emissions in a manner consistent with SB 32 and other California GHG-reducing legislation by creating a new source of solar power to replace the current use of fossil-fuel power and reduce GHG emissions power generation and use. Furthermore, the proposed VEGA 6 project would contribute to the continued reduction of GHG emissions in the interconnected California and western U.S. electricity systems, as the energy produced by the project 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).

The VEGA 6 project would generate a maximum of 80 MW of electricity at any one time. Table 3.7-5 shows the emissions that would potentially be displaced by the proposed VEGA 6 project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-combustion sources (wind, solar, nuclear, hydro-electric). As shown in Table 3.7-5, the VEGA 6 project would potentially displace approximately 42,576 metric tons of CO_2e per year, and approximately 1,277,277 metric tons of CO_2e over the course of 30 years.

Implementation of the proposed VEGA 6 project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHG, and this is considered a less than significant impact.

Table 3.7-6. Proposed VEGA 6 Project Displaced GHG Emissions

	Emissions (Metric Tons)				
	CO_2	CH_4	N_2O	CO_2e	
Emissions Displaced Annually (Metric Tons)					
Displaced Natural Gas-Source Emissions	38,068	0.00	0.00	38,068	
Displaced Coal-Source Emissions	4,500	0.03	0.02	4,508	
Total	**42,568**	**0.03**	**0.02**	**42,576**	
Emissions Displaced over 30 Years (Metric Tons)					
Total		**1,277,047**	**0.89**	**0.67**	**1,277,277**

Source: Appendix C1 of this EIR

Notes: In order to provide a conservative analysis, the proposed VEGA 6 project is assumed to generate electricity 25 percent of the time available (2,190 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" (2019) 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]. 100 MW (219,000,000 annual kWH) x 9,313 heat rate = 2,039,547,000,000 Btu displaced from fossil fuel production. Fossil fuel-based energy consumption in California is predominately derived from natural gas (37.06 percent). Coal constitutes 2.74 percent of all fossil fuel-based energy. Therefore, 865,175,837,400 of the displaced Btu is displaced natural gas consumption and 55,883,587,800 of the 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 2,328 tons of burned coal annually.

Ramon Substation Expansion

As discussed above, the estimated construction GHG emissions from the proposed Ramon Substation expansion are below the County of Riverside's screening threshold of 3,000 metric tons of CO_2e/year. Also, the proposed Ramon Substation expansion would not otherwise result in the generation of GHG emissions as a result of operational activities. Consequently, implementation of the proposed Ramon Substation expansion would not conflict with the County of Riverside's CAP and would not hinder the state's ability to achieve SB 32's goal of achieving a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. Implementation of the proposed Ramon Substation expansion would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHG, and this is considered a less than significant impact.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

3.7.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Similar to construction activities, decommissioning and restoration would result in GHG emissions below allowable thresholds.

Residual

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

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3.8 Hazards and Hazardous Materials

Information contained in this section for the VEGA 6 project is summarized from the *Phase I Environmental Site Assessment Report for the VEGA 6 Solar Site* (Phase I ESA) prepared by GS Lyon Consultants, Inc. The Phase I ESA was used to assess the potential hazards and hazardous materials found on-site or near the VEGA 6 project site. This report is included in Appendix H of this EIR. Additionally, supporting information in this section is summarized from review of data from Envirostor, GeoTracker, and relevant Imperial County plans to present the existing conditions, in addition to identifying potential environmental impacts. For the Ramon Substation expansion area, the analysis relied on a review of DTSC's EnviroStor database, SWRCB's Geotracker database, and relevant Riverside County plans.

3.8.1 Existing Conditions

VEGA 6

The solar energy facility site is located within unincorporated Imperial County and consists of approximately 320 acres of privately-owned vacant desert land. The solar energy facility site has been vacant desert land since prior to 1937. Minor surface mining for clay and sandy soils has occurred in the southern and northwestern portions of the solar energy facility site. The solar energy facility site is bound by undeveloped Open Space/BLM land immediately to the west and south, and active agricultural land to the north and east. A citrus orchard is located to the east and farm fields are located to the north.

The proposed project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the BLM.

VEGA 6 Records Review

The Phase I ESA includes a review of historic aerial photographs, historic topographic maps, governmental regulatory databases, and other regulatory and agency databases to evaluate the potentially adverse environmental conditions resulting from previous uses at the VEGA 6 project site.

REGULATORY DATABASE REVIEW

GS Lyon Consultants contracted Environmental Data Resources, Inc. (EDR) 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 the American Society of Testing Materials (ASTM) E1527-13. The search of each database was conducted using the approximate minimum search distances from the project site defined by the ASTM 1527-13 Standard. The purpose of the records review is to obtain and review reasonably ascertainable records that will help identify recognized environmental conditions (RECs) or historical recognized environmental conditions (HRECs) in connection with the project site. The full results of the background review are presented in the Phase I ESA (Appendix H of this EIR). The following summarizes the sites that were identified during the regulatory database review.

FEDERAL RESOURCE RECOVERY ACT LIST

The Federal Resource Conservation Act (RCRA) Notifiers List was reviewed to determine if RCRA treatment, storage, or disposal sites are located within 1 mile of the VEGA 6 project site. The RCRA Correction Action Sites List (CORRACTS) is maintained for risk sites which are undergoing a "correction action". A corrective action order is issued when there has been a release of hazardous waste constituents into the environmental from a RCRA facility.

The RCRA and RCRA CORRACTS database searches identified one RCRA CORRACTS site within ½ mile of the VEGA 6 project site:

- The Laidlaw Environmental facility (currently operated by Clean Harbors) located at 5295 South Garvey Road is located approximately 2 miles northwest of the solar energy facility site, but a portion of the proposed gen-tie route runs along the southern boundary of the Clean Harbors facility.

DEPARTMENT OF TOXIC SUBSTANCES CONTROL SITE MITIGATION AND BROWNFIELDS REUSE PROGRAM'S ENVIROSTOR DATABASE

The Department of Toxic Substances Control's (DTSC) Site Mitigation and Brownfields Reuse Program's EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further.

The EnviroStor database search identified one risk site within 1 mile of the VEGA 6 project site as described below:

- The Laidlaw Environmental facility

Because of the distance of the facility from the VEGA 6 project site, the environmental risk to the project site is considered very low (Appendix H of this EIR).

STATE AND TRIBAL UNDERGROUND AND ABOVEGROUND STORAGE TANK SITES

The California State Water Resource Control Board (SWRCB) underground storage tank (UST) and above ground storage tank (AST) inventory list was reviewed to determine if any UAST's are located on or adjacent to the VEGA 6 project site.

One AST site was identified within ¼ mile of the VEGA 6 project site as described below:

- Imperial Farming, located at 5253 Garvey Road is listed as having an AST. No information was provided concerning the type of material stored or any reported leaks or spills.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

The EnviroStor database and the GeoTracker database were queried for environmental data in September 2020. No reported cases were round on the VEGA 6 project site. No risk sites were located within ½ mile of the VEGA 6 project site.

Additionally, the DTSC Imperial Certified Unified Program Agencies (CUPA) office was contacted for a records search of the VEGA 6 project site. The DTSC indicated that records are filed per address, and with no known address associated with the VEGA 6 project site, no records were found associated with the VEGA 6 project site.

HISTORICAL USE RECORDS

ASTM E1527-13 requires the environmental professional to identify all obvious uses of the property from the present back to the project site's first developed use or 1940, whichever is earliest. To identify RECs in connection with the project site, standard historical sources are reviewed including aerial photographs, fire insurance maps, property tax files, land title records, topographic maps, city directories, telephone directories, building department records, and zoning/land use records.

The Phase I ESA indicated that no past ownership or easements would indicate environmentally hazardous uses at the site and no Sanborn Fire Insurance Maps were available for the VEGA 6 project site.

Aerial photographs obtained from EDR dating back to 1947, IID archives dating back to 1949, and Google Earth aerial photographs dating back to 1996 were reviewed for historical development at the project site.

- From 1937 to 1953, aerial photographs shows the solar energy facility site and gen-tie line route as vacant desert land.
- The 1976 aerial photograph shows the solar energy facility site and gen-tie route as being vacant desert lands. Surrounding properties were also vacant desert lands except for an orchard to the east of the site and along the proposed route for the gen-tie line.
- The 1986 aerial photograph shows the solar energy facility site as being dominantly vacant desert land. There appears to be an area in the southeast corner of the solar energy facility site that has been mined for sand material and in the northwest corner where clay material has been mind. Orchards are present to the east of the solar energy facility site and along the east side of the gen-tie line route. The Laidlaw Environmental (Clean Harbors) facility has been developed to the north of the proposed gen-tie line.
- By 2003 the aerial photographs showed additional surface mining of sand soils in the southern portion of the solar energy facility site and the 2012 and 2016 aerial photographs were similar with additional surface mining in the east-central portion of the solar energy facility site.

Based on a review of historical information, the solar energy facility site has been vacant desert land since prior to 1937. Minor surface mining for clay and sandy soils has occurred in the southern and northwestern portions of the solar energy facility site.

Ramon Substation Expansion

The Ramon Substation expansion area is located within unincorporated Riverside County and consists of approximately 4 acres of vacant and undeveloped land.

Ramon Substation Expansion Database Records Review

Based on a review of DTSC's EnviroStor database in October 2023, no hazardous material sites are located within a 1-mile radius of the Ramon Substation expansion area (DTSC 2023). A review of DTSC's Cortese List in October 2023 did not identify the Ramon Substation expansion area as a hazardous waste and substances site.

Based on a review of the Geotracker database in October 2023, no hazardous material sites are associated with the Ramon Substation expansion area. However, there are several LUST clean-up sites within 2.5 miles of the of the expansion area. All LUST clean-up sites are located east of the expansion area and are marked as complete/case closed for their clean-up statuses (SWRCB 2023).

Site Reconnaissance

A site reconnaissance of the VEGA 6 project site was performed on September 5, 2020. The site visit consisted of a walking the perimeter of the VEGA 6 project site and randomly crossing the VEGA 6 project site. The reconnaissance included visual observations of surficial conditions at the VEGA 6 project site and observation of adjoining properties to the extent that they were visible from public areas. The site reconnaissance was limited to visual and/or physical observation of the exterior and interior of the VEGA 6 project site and its improvements, the current uses of the property and adjoining properties, and the current condition of the property. The site visit evaluated the VEGA 6 project site and adjoining properties for potential hazardous materials/waste and petroleum product use, storage, disposal, or accidental release, include the following: presence of tank and drum storage; mechanical or electrical equipment likely to contain liquids; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination. The site reconnaissance did not observe any of these conditions on the VEGA 6 project site.

Asbestos Containing Materials and Lead-Based Paint

VEGA 6

The potential for asbestos containing materials (ACM) and lead-based paint residues existing at the VEGA 6 project site is considered very low due to the lack of structures on the project site.

Ramon Substation Expansion

The potential for ACM and lead-based paint residues existing at the Ramon Substation expansion area is considered very low due to the lack of structures on-site.

Pesticides

VEGA 6

The VEGA 6 project site has not been in agricultural use. Therefore, the likelihood of residues of currently available pesticides and currently banned pesticides such as DDT/DDE existing on the VEGA 6 project site is very low.

Ramon Substation Expansion

The Ramon Substation expansion area has not been previously used for agricultural purposes. Therefore, the likelihood of residues of currently available pesticides and currently banned pesticides such as DDT/DDE existing in the expansion area is very low.

Airports

VEGA 6

The nearest public airport is the Brawley Municipal Airport located approximately 9.8 miles southeast of the VEGA 6 project site. The VEGA 6 project site is outside of the airport compatibility zones of the Brawley Municipal Airport (County of Imperial 1996).

Ramon Substation Expansion Area

The nearest public airport is the Palm Springs International Airport located approximately 7 miles north of the expansion area. The expansion area is located outside of the airport compatibility zones of Palm Springs International Airport (County of Riverside 2005).

Fire Hazard

VEGA 6

According to the California Department of Forestry and Fire Protection (CAL Fire), the VEGA 6 project site is not located within or near a state responsibility area or lands classified as very high severity zones (California Department of Forestry and Fire Protection 2007). The VEGA 6 project site is located within a local responsibility area.

Ramon Substation Expansion Area

The Ramon Substation expansion area is located within the unincorporated area of Riverside County. According to the WCVAP Wildfire Susceptibility Map, the expansion area is not located within an area susceptible to wildfire (County of Riverside 2021).

3.8.2 Regulatory Setting

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

Federal

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 11011 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.

County of Imperial 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.

County of Riverside General Plan

The County of Riverside General Plan includes several policies related to hazards and hazardous materials that are enforced to minimize potential impacts on the County's citizens, property, and economy (County of Riverside 2021).

SAFETY ELEMENT

- **S 5.1** Enforce land use policies and existing criteria related to hazardous materials and waste through ongoing implementation of the programs identified in the County's Hazardous Waste Management Plan (CHWMP).
- **S 5.2** Review all proposed development projects that manufacture, use, or transport hazardous materials for compliance with the CHWMP. Such projects shall provide a buffer zone, to be determined by the County, between the installation and property boundaries sufficient to protect public safety.
- **S 5.3** Require that applications for discretionary development projects that will generate hazardous wastes or use hazardous materials include detailed information on hazardous waste reduction, recycling, and storage.
- **S 5.7** Identify sites that are inappropriate for hazardous material storage, maintenance, use, and disposal facilities due to potential impacts on adjacent land uses and the surrounding natural environment. Prohibit the siting of new or expanded hazardous material facilities on such sites to the extent feasible.
- **S 5.8** Ensure that the use and disposal of hazardous materials in the County complies with local, state, and federal safety standards.

County of Riverside Emergency Operations Plan

The County's Emergency Operations Plan (EOP) is the jurisdiction's reference tool for coordinating emergencies, whether they be localized events or catastrophic disasters. The EOP serves as the foundation for response and recovery operations for the County, and establishes roles and responsibilities, assigns tasks, and specifies policies and general procedures. The EOP assists with facilitating an effective response to any emergency by providing a platform that encourages collaboration between The County of Riverside Operational Area Emergency Operations Center (EOC), first responders, and support agencies (County of Riverside 2019).

Riverside County Airport Land Use Compatibility Plan

The Riverside County ALUCP was adopted in October 2004 and establishes policies applicable to land use compatibility planning in the vicinity of airports throughout the County containing compatibility criteria and maps for the influence areas of individual airports. The ALUCP establishes safety zones that limit building heights, restrict hazardous materials and fuel tanks, bird-attracting industries, etc., from close proximity to airport runways. The Ramon Substation expansion area is located outside of Palm Springs International Airport's airport influence area (County of Riverside 2005).

3.8.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

Methodology

This analysis evaluates the potential for the project, as described in Chapter 2, Project Description to result in significant impacts related to hazards and hazardous materials on or within the 1-mile buffer zone of the project site. This analysis considers whether these conditions would result in an exceedance of one or more of the applied significance criteria as identified above.

As previously indicated, a Phase I ESA has been prepared for the VEGA 6 project site. For the Ramon Substation expansion area, the analysis relied on a review of DTSC's EnviroStor database and SWRCB's Geotracker database to identify potential hazardous materials that may be found on-site. The information obtained from these sources was reviewed and summarized to present the existing conditions, in addition to identifying potential environmental impacts, based on materials that could result from project construction and operational activities were evaluated qualitatively based on site conditions; expected construction practices; materials, locations, duration of project construction, and related activities. The conceptual site plan for the project was also used to evaluate potential impacts.

Impact Analysis

Impact 3.8-1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

VEGA 6

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

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

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

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

Additionally, hazardous material storage and management will be conducted in accordance with requirements set forth by the ICFD, Imperial County OES, DTSC, and CUPA for storage and handling of hazardous materials. Further, construction activities would occur according to OSHA regulatory requirements; therefore, it is not anticipated that the construction activities for the proposed project would release hazardous emissions or result in the handling of hazardous or acutely hazardous materials, substances, or waste. This could include the release of hazardous emissions, materials, substances, or wastes during operational activities. With the implementation of an HMMP and adherence to requirements set forth by the ICFD, Imperial County OES, DTSC, OSHA regulatory requirements and CUPA would reduce the impact to a level of less than significant.

BATTERY ENERGY STORAGE SYSTEM

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

Lithium-ion batteries used in the storage system contain cobalt oxide, manganese dioxide, nickel oxide, carbon, electrolyte, and polyvinylidene fluoride. Of these chemicals, only electrolyte should be considered hazardous, inflammable and could react dangerously when mixed with water. The U.S. Department of Transportation (DOT) regulates transport of lithium-ion batteries under the DOT's Hazardous Materials Regulations (HMR; 49 C.F.R., Parts 171-180). The HMR apply to any material DOT determines is capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Lithium-ion batteries must conform to all applicable HMR requirements when offered for transportation or transported by air, highway, rail, or water (DOT 2022). Additionally, carbon (as graphite) is flammable and could pose a fire hazard. As further detailed below, fire protection is achieved through project design features, such as monitoring, diagnostics and a fire suppression system. The project would be required to comply with state laws and county ordinance restrictions, which regulate and control hazardous materials handled on site.

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

Ramon Substation Expansion

Hazardous materials could be released during construction of the Ramon Substation expansion as a result of improper handling, accidental spills or leaks, and/or due to leaking equipment or vehicles and

could result in soil or water contamination. Human exposure to contaminated soil or water can have potential health effects from a variety of factors, including the nature of the contaminant and the degree of exposure. However, the handling, use, transport, storage, and disposal of such materials would be subject to federal, state, and local health and safety requirements. In addition, construction workers who may handle hazardous materials and substances would be required to adhere to OSHA and the California Occupational Safety and Health Administration (Cal/OSHA) health and safety regulations, which provide oversight for the implementation of procedures for handling, using, and disposing of hazardous substances on a construction site. Therefore, with adherence to OSHA requirements in combination with compliance to federal, state, and local safety requirements, impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.8-2 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?

VEGA 6

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

Based on the regulatory database review conducted as part of the Phase I ESA report, the project site is not identified on a list of hazardous materials sites. The following two sites were identified within 1 mile and 0.25 mile of the VEGA 6 project site, respectively:

- The Laidlaw Environmental facility (currently operated by Clean Harbors) located at 5295 South Garvey Road is located approximately 2 miles northwest of the solar energy facility site, but a portion of the proposed gen-tie route runs along the southern boundary of the Clean Harbors facility.
- Imperial Farming, located at 5253 Garvey Road is listed as having an AST. No information was provided concerning the type of material stored or any reported leaks or spills.

Due to the distance of the Clean Harbors facility, the Phase I ESA determined the environmental risk to the project site is considered very low. The AST located at 5253 Garvey Road was listed by the SWRCB and noted no information on the type of material stored. No reported leaks or spills were associated with the AST (Appendix H of this EIR). As such, the environmental risk is considered low.

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 (e.g., FM-200, Novatech) with smoke detectors, control panel, alarm, piping and nozzles. The fire protection system will be designed by a certified fire protection engineer and installed by a fire protection system contractor licensed in California and in accordance with all relevant building and fire codes in effect in the County at the time of building permit submission. Fire protection systems for battery systems would be designed in accordance with California Fire Code and would take into consideration the recommendations of the National Fire Protection Association (NFPA) 855.

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

Ramon Substation Expansion

As previously described in Section 3.8.1, Existing Conditions, the Ramon Substation expansion area is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and that, resultingly, could create a significant hazard to the public or the environment. Hazardous materials could be released during construction of the Ramon Substation expansion as a result of improper handling, accidental spills or leaks, and/or due to leaking equipment or vehicles during construction. However, all hazardous substances would be handled, transported, and/or disposed of in accordance with all federal, state, and local laws. Upon required compliance with these existing regulations, upset and accident conditions involving hazardous substances during construction are not reasonably foreseeable. Operation of the Ramon Substation

expansion would not 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 during project operation. Impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.8-3 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?

VEGA 6

The VEGA 6 project site is not located within 0.25 mile of an existing or proposed school. Therefore, the proposed project would not pose a risk to nearby schools and no impact would occur.

Ramon Substation Expansion

The Ramon Substation expansion area is not located within 0.25 mile of an existing or proposed school. Therefore, the Ramon Substation expansion would not pose a risk to nearby schools and no impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.8-4 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?

VEGA 6

Based on the regulatory database review conducted as part of the Phase I ESA report, the VEGA 6 project site is not identified on a list of hazardous materials sites. Furthermore, based on a review of the Cortese List conducted in May 2022, the VEGA 6 project site is not listed as a hazardous materials site. Therefore, implementation of the proposed project would result in no impact related to the project site being located on a listed hazardous materials site pursuant to Government Code Section 65962.5.

Ramon Substation Expansion

Based on a review of DTSC's EnviroStor database, no hazardous material sites are located within a 1-mile radius of the Ramon Substation expansion area (DTSC 2023). Additionally, based on a review of the Cortese List conducted in October 2023, the expansion area is not listed as a hazardous materials site. Therefore, the proposed Ramon Substation expansion would result in no impact related to the expansion area being located on a listed hazardous materials site pursuant to Government Code Section 65962.5.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.8-5 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?

VEGA 6

There are no public airports or public use airports located within 2 miles of the VEGA 6 project site. The nearest public airport is the Brawley Municipal Airport located approximately 9.8 miles southeast of the VEGA 6 project site. The project site is located outside of the airport compatibility zones of the Brawley Municipal Airport (County of Imperial 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.

Ramon Substation Expansion

There are no public airports located within 2 miles of the Ramon Substation expansion area. The nearest public airport is the Palm Springs International Airport located approximately 7 miles west of the expansion area. The expansion area is located outside of the airport compatibility zones of the Palm Springs International Airport (County of Riverside 2005). Therefore, the Ramon Substation expansion area would not result in a safety hazard or excessive noise for people residing or working in the area and no impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.8-6 Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

VEGA 6

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 applicant for the proposed project will be required, through the Conditions of Approval, to prepare a street improvement plan for the proposed project that will include emergency access points and safe vehicular travel. Additionally, local building codes would be followed to minimize flood, seismic, and fire hazard. Therefore, the proposed project would result in a less than significant impact associated with the possible impediment to emergency response plans or emergency evacuation plans.

Ramon Substation Expansion

Construction of the Ramon Substation expansion would occur within the project site boundary and would not directly encroach within any public roadway or access route utilized for emergency vehicle response. Access to the existing substation is provided by Ramon Road, which is immediately south of the existing substation. During construction, the increased movement of construction vehicles and equipment through the area may result in temporary impacts to surrounding roadways and associated delays in emergency service providers' response times. However, these impacts would be minor and temporary in nature and are not anticipated to result in significant impacts including the impairment or interference of an evacuation in the unlikely event of an emergency. Expansion of the Ramon Substation would not include any activities that would reasonably increase the probability of any localized events or other emergencies. Based on the evaluation above, project construction would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts are considered less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

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?

VEGA 6

The VEGA 6 project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low.

Proposed project facilities would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements (e.g., CPUC safety standards). The solar energy facility site would include one primary access driveway, proposed via SR 78 from the north and west, and across the Westside Main Canal, via county roadways (Garvey Road

and Andre Road). Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders.

Because the proposed project is not located in proximity to an area susceptible to wildland fires, implementation of the proposed project would result in a less than significant impact related to the possible risk to people or structures caused by wildland fires.

Ramon Substation Expansion

The Ramon Substation expansion area is located within the unincorporated area of Riverside County. According to the WCVAP Wildfire Susceptibility Map, the expansion area is not located within an area susceptible to wildfire (County of Riverside 2021). Because operation and maintenance activities must occur in compliance with federal and state-mandated safety standards and these protocols are designed reduce the likelihood of fires, the likelihood of fire hazards associated with electrical failure would be low. Implementation of the Ramon Substation expansion would result in a less than significant impact related to the possible risk to people or structures caused by wildland fires.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

3.8.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. During decommissioning and restoration of the project site, the applicant or its successor in interest would be responsible for the removal, recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on the project site. The project applicant anticipates using the best available recycling measures at the time of decommissioning. Any potentially hazardous materials located on the site would be disposed of, and/or remediated in compliance with local and state regulations, including DTSC regulations prior to construction of the project. At the end of a lithium-ion module's useful life (typically estimated to be 10 to 20+ years) and final project decommissioning, the batteries would be decommissioned and recycled per manufacturer guidelines. Certain manufacturers allow for the batteries to be returned to the manufacturing facility or a third-party recycling facility where the batteries are disassembled, and certain materials are recovered from the battery for reuse.

The operation of the solar facility would not generate hazardous wastes and therefore, implementation of applicable regulations and mitigation measures identified for construction and operations would ensure restoration of the project site to pre-project conditions during the decommissioning process in a manner that would be less than significant. Furthermore, decommissioning/restoration activities would not result in a potential impact associated with ALUCP consistency (structures would be removed and the site would remain in an undeveloped condition), wildfires (fire protection measures),

or impediment to an emergency plan (the undeveloped condition as restored, would not conflict with emergency plans).

Residual

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

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3.9 Hydrology/Water Quality

This section provides a description of existing water resources within the VEGA 6 project site and Ramon Substation expansion area, and pertinent local, state, and federal plans and policies. Each subsection includes descriptions of existing hydrology/drainage, existing flooding hazards, and the environmental impacts on hydrology and water quality resulting from implementation of the proposed VEGA project and Ramon Substation expansion, 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.

3.9.1 Existing Conditions

VEGA 6

Drainage

The VEGA 6 project site is located in the Imperial Valley Planning Area of the Colorado River Basin. The Colorado River Basin Region covers approximately 13 million acres (20,000 square miles) in the southeastern portion of California. It includes all of Imperial County and portions of San Bernardino, Riverside, and San Diego Counties. The Colorado River Basin Region is divided into seven major planning areas on the basis of different economic and hydrologic characteristics (California RWQCB 2019). The VEGA 6 project site is contained within the Brawley Hydrologic Area in the Imperial Hydrologic Unit (HU 723.10). The Imperial Valley is characterized as a closed basin and, therefore, all runoff generated within the watershed discharges into the Salton Sea (California RWQCB 2019).

The VEGA 6 project site and the western portion of the gen-tie transmission line is a part of an alluvial fan system. Alluvial fans occur when stream flow feeds into a system of distributary channels. The alluvial fan drainage system produces ephemeral conditions within the VEGA 6 project site and vicinity following large rain events and contains a network of inactive and active braided channels.

The VEGA 6 project site and the surrounding terrain is generally flat. The VEGA 6 project site is located approximately 0.50-mile west of the Westside Main Canal. The Westside Main Canal divert waters from the All-American Canal located south of the VEGA 6 project site along the U.S.-Mexico border, which brings water from the Colorado River at the Imperial Dam. It then supplies water throughout the Imperial Valley via a network of smaller irrigation channels, which ultimately drain to the Salton Sea.

There are several concrete lined lateral canals, unlined irrigation channels, and stormwater drains that either bisect or run parallel to the VEGA 6 project site throughout most of the gen-tie alignment. The channels are primarily used for agriculture, with some being managed by the IID and others being privately owned by farmland operations. (Appendix E of this EIR).

Flooding

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) (Map Number 06025C1000C) (FEMA 2008), the solar energy facility site is 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. The gen-tie transmission line runs through FEMA Zone A, a special flood hazard zone with 1 percent annual chance of flooding (FEMA 2008).

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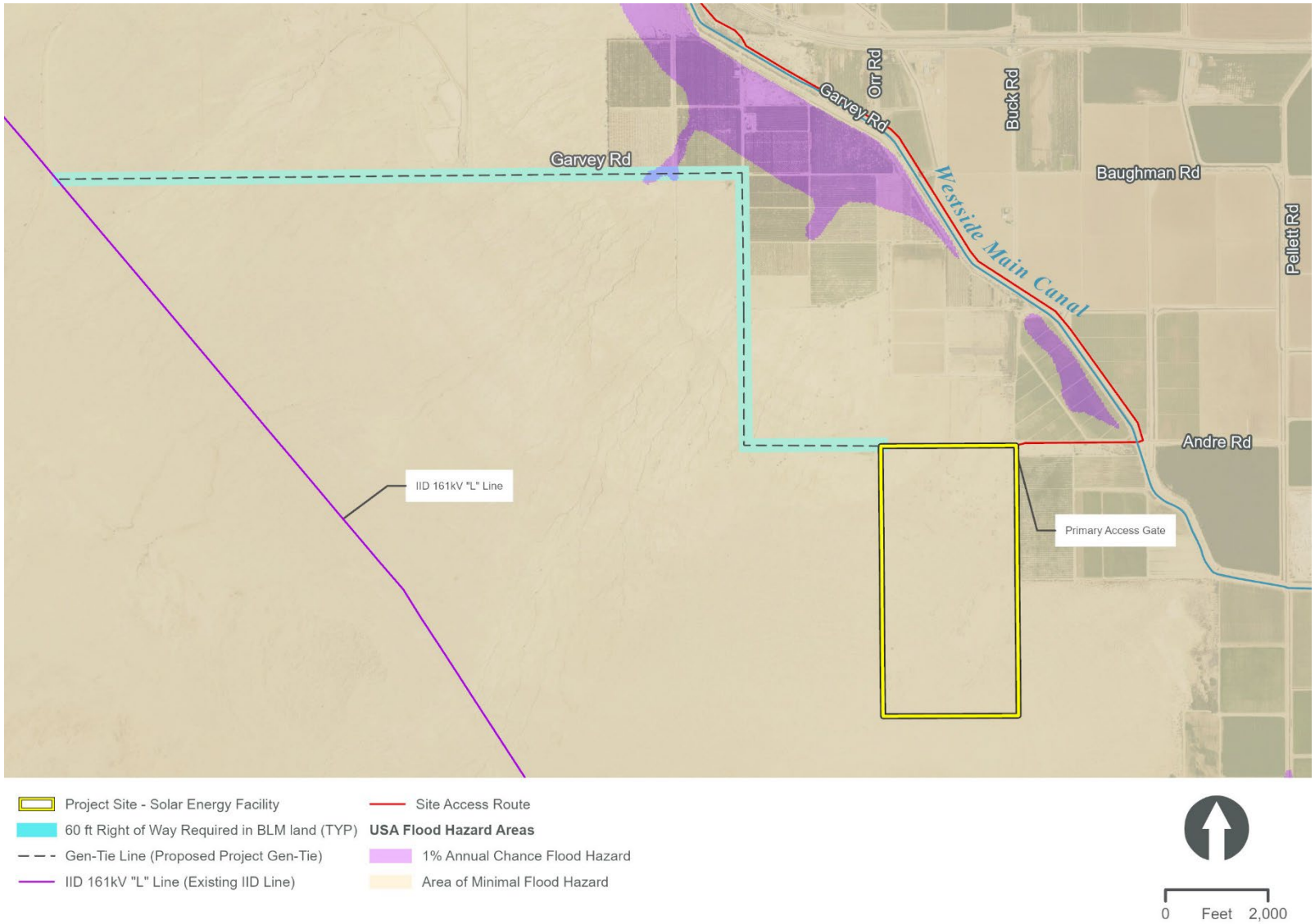
Figure 3.9-1. FEMA Flood Zone



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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 VEGA 6 project area may include, but are not limited to: sediment, nutrients (phosphorous and nitrogen), trace metals (e.g., lead, zinc, copper, nickel, iron, cadmium, and mercury), oil and grease, bacteria (e.g., coliform), viruses, pesticides and herbicides, organic matter, and solid debris/litter. Vehicles account for most of the heavy metals, fuel and fuel additives (e.g., benzene), motor oil, lubricants, coolants, rubber, battery acid, and other substances. Nutrients result from excessive fertilizing of agricultural areas, while pesticides and herbicides are widely used in agricultural fields and roadway shoulders for keeping right-of-way (ROW) areas clear of vegetation and pests. Surface waters mostly drain towards the Salton Sea. The Westside Main Canal, along with the New and Alamo Rivers (located north and east of the project area), convey agricultural irrigation drainage, surface runoff, and some treated municipal waste from the Imperial Valley. The flow in the New River also contains agricultural drainage, treated and untreated sewage, and industrial waste discharges from Mexicali, Mexico (California RWQCB 2019).

Based on the 2020-2022 Integrated Report prepared by the Colorado River Basin RWQCB, the surface water features within the Brawley Hydrologic Area include the Imperial Valley Drains (Westside Main Canal) and the Salton Sea (California RWQCB 2022). 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 (California RWQCB 2022).
- (California RWQCB 2022).

Groundwater Hydrology

The VEGA 6 project site is located within the northwestern part of the Imperial Valley Groundwater Basin. The Imperial Valley Groundwater Basin is bounded on the east by the Sand Hills and on the west by the igneous and metamorphic rocks of the Fish Creek and Coyote Mountains. The northern boundary is the Salton Sea while the southern boundary is the international border with Mexico. The groundwater basin has an area of approximately 1,200,000 acres, or 1,870 square miles. The Basin has not been adjudicated (Appendix K of this EIR).

Groundwater occurs within 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 aquifers consist mostly of

alluvial deposits of late Tertiary and Quaternary age that have eroded from the adjacent mountains and filled the valley. The upper aquifer has an average thickness of approximately 200 feet with a maximum thickness of 450 feet. The lower aquifer averages approximately 380 feet thick with a maximum thickness of 1,500 feet (Appendix K of this EIR).

The majority of the Imperial Valley Groundwater Basin area consists of irrigated agriculture (refer to Figure 4 in Appendix K of this EIR). Surface water from the Colorado River provides almost all of the irrigation and municipal water supply, through IID. Ninety-seven percent of IID's 3.1-million-acre-foot entitlement is used to irrigate almost 500,000 acres of farmland (Appendix K of this EIR). The remaining three percent of IID's allocation supplies municipal, commercial, industrial, and rural domestic needs.

Ramon Substation Expansion

The Ramon Substation expansion area is located in the Coachella Valley Planning Area of the Colorado River Basin. The expansion area is located within the Thousand Palms Hydrologic Subarea in the Whitewater Hydrologic Unit. The Upper Whitewater River watershed, approximately 201,200 acres in size, is located within the larger Whitewater River Hydrologic Unit. The major surface water within the watershed includes the Whitewater River and originates within the summit of Mount San Gorgonio in the San Bernardino Mountains. The river travels southeast joining with three other tributaries before ultimately draining into the Salton Sea at the southeastern end of the Coachella Valley (Appendix E2 of this EIR).

Flooding

According to FEMA's FIRM (Map Number 06065C105G) (FEMA 2008), the Ramon Substation expansion area is located within Zone AO. The FEMA Zone AO designation is an area of special flood hazard, with flood depths of 1 to 3 feet.

Surface Water Quality

Based on the 2020-2022 Integrated Report prepared by the Colorado River Basin RWQCB, the Whitewater River is not listed as an impaired water body (California RWQCB 2022).

Groundwater Hydrology

The Ramon Substation expansion area is located within the Coachella Valley Groundwater Basin – Indio Subbasin. Indio Subbasin is located northwest of the Salton Sea and receives low precipitation, averaging about 6 inches per year, and a wide range of temperatures. The Banning fault bounds the subbasin on the north and the semi-permeable rocks of the Indio Hills mark the northeast boundary. Impermeable rocks of the San Jacinto and Santa Rosa Mountains bound the subbasin on the south. A bedrock constriction separates the Indio Subbasin from the San Gorgonio Pass Subbasin on the northwest. The Salton Sea is the eastern boundary and the subbasin's primary discharge area. A low drainage divide forms a short boundary with the West Salton Sea Groundwater Basin in the southeast. The Indio Subbasin is drained by the Whitewater River and its tributaries. The Whitewater River rarely flows throughout the year and flow in tributaries such as San Gorgonio River is intermittent. Surface flow is southeastward to the Salton Sea. The Colorado River Aqueduct and the Coachella Branch of the All-American Canal convey imported surface water into the Coachella Valley which overlies the subbasin (DWR 2004).

Primary water-bearing materials in the subbasin are unconsolidated late Pleistocene and Holocene alluvial deposits. These deposits consist of older alluvium and the Ocotillo Conglomerate Formation, a thick sequence of poorly bedded coarse sand and gravel. The Ocotillo Conglomerate is greater than 1,000 feet thick in many places and is the primary water-bearing unit in the subbasin. In the upper part of the subbasin, groundwater is unconfined, whereas to the south and southeast groundwater is mostly confined except on the edges of the subbasin where unconfined conditions are found. Depth to groundwater varies widely in the southeast part of the subbasin and some wells historically delivered artesian flow. Confinement begins near Point Happy and continues south to the Salton Sea (DWR 2004).

3.9.2 Regulatory Setting

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

Federal

CLEAN WATER ACT

The 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 3.4, Biological Resources.

Under federal law, the U.S. EPA has published water quality regulations under Volume 40 of the CFR. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the U.S. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question; and (2) criteria that protect the designated uses. Section 304(a) requires the U.S.EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. The U.S. EPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The U.S.EPA has delegated the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the U.S. must obtain a water quality certification from the SWRCB in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate.

CWA Section 402 establishes the National Pollution Discharge Elimination System (NPDES) permit program to control point source discharges from industrial, municipal, and other facilities if their discharges go directly to surface waters. The 1987 amendments to the CWA created a new section of the CWA devoted to regulating storm water or nonpoint source discharges (Section 402[p]). The U.S.EPA has granted California primacy in administering and enforcing the provisions of the CWA and the NPDES program through the SWRCB. The SWRCB is responsible for issuing both general and individual permits for discharges from certain activities. At the local and regional levels, general and individual permits are administered by RWQCBs.

CLEAN WATER ACT SECTION 303(D) IMPAIRED WATERS LIST

CWA Section 303(d) requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers. Section 303(d) requires states to develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. A TMDL is the amount of loading that the water body can receive and still be in compliance with applicable water quality objectives and applied beneficial uses. TMDLs can also act as a planning framework for reducing loadings of a specific pollutant from various sources to achieve compliance with water quality objectives. TMDLs prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows links between loading reductions and the attainment of water quality objectives.

NATIONAL FLOOD INSURANCE PROGRAM

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRM) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection covered by the FIRM is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 (0.01) annual exceedance probability) (i.e., the 100-year flood event).

State

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the State Water Resources Control Board (SWRCB) and RWQCBs pertaining to the adoption of Water Quality Control Plans and establishment of water quality objectives. Unlike the CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater.

WATER QUALITY CONTROL PLAN FOR THE COLORADO RIVER BASIN

The Water Quality Control Plan for the Colorado River Basin (or Basin Plan) prepared by the Colorado River RWQCB (Region 7) identifies beneficial uses of surface waters within the Colorado River Basin region, establishes quantitative and qualitative water quality objectives for protection of beneficial uses, and establishes policies to guide the implementation of these water quality objectives.

Water bodies that have beneficial uses that may be affected by construction activity and post-construction activity include the Imperial Valley Drains Salton Sea, and the Whitewater River. Table 3.9-1 identifies the designated beneficial uses established for the project site's receiving waters. The following are definitions of the applicable beneficial uses:

- Aquaculture (AQUA) – Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.
- Groundwater Recharge (GWR) - Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting salt water intrusion into fresh water aquifers.

- 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 3.9-1. Beneficial Uses of Receiving Waters

Beneficial Uses	Imperial Valley Drains	Salton Sea	Whitewater River
AQUA	--	X	--
FRSH	X	--	X
GWR			X
IND	--	P	--
REC I	X	X	--
REC II	X	X	X
WARM	X	X	X
WILD	X	X	X
RARE	X	X	--

Source: RWQCB 2019

AQUA=aquaculture; FRSH=freshwater replenishment; GRW = Ground water recharge; IND=industrial service supply; P=Potential Uses; RARE=Preservation of Rare, Threatened, or Endangered Species; REC 1= water contact recreation; REC II=non-contact water recreation; WARM=Warm Freshwater Habitat; WILD=Wildlife Habitat; X=existing beneficial uses

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM GENERAL INDUSTRIAL AND CONSTRUCTION PERMITS

The NPDES General Industrial Permit requirements apply to the discharge of stormwater associated with industrial sites. The permit requires implementation of management measures that will achieve the performance standard of the best available technology economically achievable and best conventional pollutant control technology. Under the statute, operators of new facilities must implement industrial BMPs in the projects' SWPPP and perform monitoring of stormwater discharges and unauthorized non–stormwater discharges.

Construction activities are regulated under the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit) which covers stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds 1 acre. Coverage under a General Construction Permit requires the preparation of a SWPPP and submittal of a Notice of Intent (NOI) to comply with the General Construction Permit. The SWPPP includes a description of BMPs to minimize the discharge of pollutants from the sites during construction. Typical BMPs include temporary soil stabilization measures (e.g., mulching and seeding), storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or stormwater, and using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical post-construction management practices include street sweeping and cleaning stormwater drain inlet structures. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

Local

IMPERIAL COUNTY 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 3.9-2 identifies the General Plan policies and programs for water quality and flood hazards that are relevant to the VEGA 6 project and summarizes the project's consistency with the General Plan. While this EIR analyzes the VEGA 6 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 3.9-2. 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 VEGA 6 project would protect water quality during construction through compliance with Imperial County design and detention requirements and the NPDES General Construction Permit, as well as preparation and implementation of project-specific SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework, design features, and BMPs.

General Plan Policies	Consistency with General Plan	Analysis
Objective 6.3: Protect and improve water quality and quantity for all water bodies in Imperial County.	Consistent	The proposed VEGA 6 project would protect water quality during construction through compliance with the NPDES General Construction Permit, SWPPP, and BMPs. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The proposed VEGA 6 project will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.
Program: Structural development normally shall be prohibited in the designated floodways. Only structures which comply with specific development standards should be permitted in the floodplain.	Consistent	The VEGA 6 project does not contain a residential component, nor would it place housing or other structures within a 100-year flood hazard area.
Water Element		
Policy: Adoption and implementation of ordinances, policies, and guidelines which assure the safety of County ground and surface waters from toxic or hazardous materials and/or wastes.	Consistent	The VEGA 6 project would preserve ground and surface water quality from hazardous materials and wastes during construction, operation and decommissioning activities. The proposed VEGA 6 project would protect water quality during construction through compliance with NPDES General Construction Permit, SWPPP, which will incorporate the requirements referenced in the State Regulatory Framework and BMPs. Implementation of Mitigation Measure HYD-2 would require the project to incorporate post-construction BMPs into the project's drainage plan. The proposed VEGA 6 project will be designed to include site design, source control, and treatment control BMPs. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution. It is anticipated that project decommissioning activities would be subject to similar, or more stringent ground and surface water regulations than those currently required.

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 VEGA 6 project prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.
Program: All development proposals brought before the County of Imperial shall be reviewed for potential adverse effects on water quality and quantity and shall be required to implement appropriate mitigation measures for any significant impacts.	Consistent	See response for Water Element Policy above.

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

COUNTY OF IMPERIAL LAND USE ORDINANCE, TITLE 9

The County's Ordinance Code provides specific direction for the protection of water resources. Applicable ordinance requirements are contained in Division 10, Building, Sewer and Grading Regulations, and summarized below.

Chapter 10 – Grading Regulations. Section 91010.02 of the Ordinance Code outlines conditions required for issuance of a Grading Permit. These specific conditions include:

1. If the proposed grading, excavation or earthwork construction is of irrigatable land, said grading will not cause said land to be unfit for agricultural use.
2. The depth of the grading, excavation or earthwork construction will not preclude the use of drain tiles in irrigated lands.
3. The grading, excavation or earthwork construction will not extend below the water table of the immediate area.
4. Where the transition between the grading plane and adjacent ground has a slope less than the ratio of 1.5 feet on the horizontal plane to 1 foot on the vertical plane, the plans and specifications will provide for adequate safety precautions.

IMPERIAL COUNTY ENGINEERING DESIGN GUIDELINES MANUAL FOR THE PREPARATION AND CHECKING OF STREET IMPROVEMENT, DRAINAGE AND GRADING PLANS WITHIN IMPERIAL COUNTY

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

III A. GENERAL REQUIREMENTS

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.

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

IMPERIAL INTEGRATED WATER RESOURCES MANAGEMENT PLAN

In relation to the project, IID maintains regulation over the drainage of water into their drains, including the design requirements of stormwater retention basins. IID requires that retention basins be sized to handle an entire rainfall event in case the IID system is at capacity. Additionally, IID requires that outlets to IID facilities be no larger than 12 inches in diameter and must contain a backflow prevention device (IID 2009).

3.9.3 Impacts and Mitigation Measures

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

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to hydrology and 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 offsite
    - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
    - 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

3.9.4 Impact Analysis

Impact 3.9-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater water quality?

VEGA 6

CONSTRUCTION

Construction of the VEGA 6 project includes site preparation, foundation construction, erection of major equipment and structures, installation of electrical systems, control systems, and startup/ testing. In addition, the construction of transmission lines, utility pole pads, conductors, and associated structures will be required.

During the construction phase, sedimentation and erosion can occur because of tracking from earthmoving equipment, erosion and subsequent runoff of soil, or improperly designed stockpiles. The utilization of proper erosion and sediment control BMPs is critical in preventing discharge to surface waters/drains. The project would employ proper SWPPP practices to minimize any discharges in order to meet the Best Available Technology/Best Conventional Technology standard set forth in the Construction General Permit.

The VEGA 6 project has the potential to affect surface water quality. Many different types of hazardous compounds will be used during the construction phase, with proper application, management, and containment being of high importance. Poorly managed construction materials can lead to the possibility for exposure of potential contaminants to precipitation. When this occurs, these visible and/or non-visible constituents become entrained in storm water runoff. If they are not intercepted or are left uncontrolled, the polluted runoff would otherwise freely sheet flow from the project to the IID Imperial Valley Drains and could result in the accumulation of these pollutants in the receiving waters. This is considered a potentially significant impact. With the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the project would be reduced to a less than significant level. Prior to construction and grading activities, the project applicant is required to file an NOI with the SWRCB to comply with the General NPDES Construction Permit and prepare a SWPPP, which addresses the measures that would be included during construction of the VEGA 6 project to minimize and control construction and post-construction runoff to the “maximum extent practicable.” In addition, NPDES permits require the implementation of BMPs that achieve a level of pollution control to the maximum extent practical. With the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the VEGA 6 project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction. In addition, given that site decommissioning would result in similar activities as identified for construction, these impacts could also occur in the future during site restoration activities.

OPERATION

As runoff flows over developed surfaces, water can entrain a variety of potential pollutants including, but not limited to, oil and grease, pesticides, trace metals, and nutrients. These pollutants can become suspended in runoff and carried to receiving waters. These effects are commonly referred to as non-point source water quality impacts.

Long-term operation of the solar facility poses a limited threat to surface water quality after the completion of construction. The project would be subject to the County’s Grading Regulations as specified in Section 91010.02 of the Ordinance Code. However, since the VEGA 6 project site is located in unincorporated Imperial County and not subject to a Municipal Separate Storm Sewer System or NPDES General Industrial Permit, there is no regulatory mechanism in place to address post-construction water quality concerns. Based on this consideration, the project has the potential to

result in both direct and indirect water quality impacts that could be significant. Implementation of Mitigation Measure HYD-2 would require the VEGA 6 project to incorporate post-construction BMPs into the project's drainage plan. The proposed VEGA 6 project will be designed to include site design, source control, and treatment control BMPs, as described below. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.

Site Design BMPs. The VEGA 6 project will be designed to include site design BMPs, which reduce runoff, prevent storm water pollution associated with the VEGA 6 project, and conserve natural areas onsite. Table 3.9-3 lists the various site design BMPs.

Table 3.9-3. Site Design Best Management Practices

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

Source Control BMPs. Source control BMPs (both structural and non-structural) means land use or site planning practices, or structures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff. Table 3.9-4 identifies source control BMPs that would be applicable to the proposed VEGA 6 project.

Table 3.9-4. Source Control Best Management Practices

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

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

Treatment Control BMPs. The proposed VEGA 6 project will incorporate post-construction Low Impact Development Treatment Control BMPs, including but not limited to infiltration trenches or bioswales, which shall be investigated and integrated into the project layout to the maximum extent practicable. The drainage plan shall provide both short-term and long-term drainage solutions to ensure the proper sequencing of drainage facilities and treatment of runoff generated from project impervious surfaces prior to off-site discharge.

The proposed VEGA 6 project shall develop a long-term maintenance plan and implemented to support the functionality of treatment control BMPs. The facility layout shall also include sufficient container storage and on-site containment and pollution-control devices for drainage facilities to avoid the off-site release of water quality pollutants, including, but not limited to oil and grease, fertilizers, treatment chemicals, and sediment.

Ramon Substation Expansion

CONSTRUCTION

Short-term impacts related to water quality would occur during the earthwork and construction phase, when the potential for erosion, siltation, and sedimentation would be the greatest. Construction of the proposed Ramon Substation expansion has the potential to produce typical pollutants such as nutrients, heavy metals, pesticides and herbicides, toxic chemicals related to construction and cleaning, waste materials including wash water, paints, wood, paper, concrete, food containers, and sanitary wastes, fuel, and lubricants. Impacts to stormwater quality would occur from construction and associated earth moving, and increased pollutant loadings would occur immediately offsite.

The proposed Ramon Substation expansion has the potential to affect surface water quality. Many different types of hazardous compounds will be used during the construction phase, with proper application, management, and containment being of high importance. Poorly managed construction materials can lead to the possibility for exposure of potential contaminants to precipitation. When this occurs, these visible and/or non-visible constituents become entrained in storm water runoff. If they are not intercepted or are left uncontrolled, the polluted runoff would otherwise freely sheet flow from the project and could result in the accumulation of these pollutants in the receiving waters. This is considered a potentially significant impact. With the implementation of Mitigation Measure RS-HYD-

1, impacts on surface water quality as attributable to the project would be reduced to a less than significant level. Prior to construction and grading activities, IID will be required to file an NOI with the SWRCB to comply with the General NPDES Construction Permit and prepare a SWPPP, which addresses the measures that would be included during construction of the proposed Ramon Substation expansion 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 RS-HYD-1, impacts on surface water quality 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.

OPERATION

The proposed Ramon Substation expansion would include oil containment pits below the transformer equipment to ensure that any leaks or spills would be contained and would not impact receiving bodies of water. In addition, the majority of the proposed expansion area would be covered in pervious surface, such as crushed rock and natural vegetation. These aspects would minimize the runoff of water on the expansion area to receiving water bodies. In accordance with the project's Water Quality Management Plan, containment pits, crushed rock surface, and drainage infrastructure would be regularly inspected and maintained in order to ensure proper functioning. Therefore, project operation would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The proposed Ramon Substation expansion would have a less than significant impact.

Mitigation Measure(s)

VEGA 6

HYD-1 **Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration.** The project applicant or its contractor shall prepare a SWPPP specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the project. The SWPPP shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching)
- Sediment control practices (e.g., temporary sediment basins, fiber rolls)
- Temporary and post-construction on- and off-site runoff controls
- Special considerations and BMPs for water crossings and drainages

- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

HYD-2 **Incorporate Post-Construction Runoff BMPs into Project Drainage Plan**. The project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both 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.

Ramon Substation Expansion

RS-HYD-1 **Prepare SWPPP and Implement BMPs Prior to Construction.** IID or its contractor shall prepare a SWPPP specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build the project. The SWPPP shall incorporate control measures in the following categories:

- Soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching)

- Sediment control practices (e.g., temporary sediment basins, fiber rolls)
- Temporary and post-construction on- and off-site runoff controls
- Special considerations and BMPs for water crossings and drainages
- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity
- Waste management, handling, and disposal control practices
- Corrective action and spill contingency measures
- Agency and responsible party contact information
- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP

The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.

Significance after Mitigation

VEGA 6

With the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the VEGA 6 project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Monitoring and contingency response measures would be included to verify compliance with water quality objectives for all surface waters crossed during construction.

With the implementation of Mitigation Measure HYD-2, potential water quality impacts resulting from post-construction discharges during operation for the VEGA 6 project would be reduced to a less than significant level. Implementation of Mitigation Measure HYD-2 would require the VEGA 6 project to incorporate post-construction BMPs into the project's drainage plan. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution.

Ramon Substation Expansion

With the implementation of Mitigation Measure RS-HYD-1, impacts on surface water quality as attributable to the proposed Ramon Substation expansion 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.

Impact 3.9-2 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?

VEGA 6

The construction water demand of the VEGA 6 project is estimated to be 160 AF, with an additional 10 AF required for dust control on offsite access roads that are not paved. Thus, as indicated in Figure 3.9-1, the full construction water requirements are 170 acre-feet. The construction water demand represents 1.0 percent of the average annual increase in groundwater storage of 17,000 AF per year and 0.0015 percent of the volume of groundwater in storage in the Imperial Valley Groundwater Basin (accounting for the groundwater level decline from 1974 to 2022). Furthermore, 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 (Appendix K 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 be 8 acre-feet per year. Maintenance activities 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 VEGA 6 project which is anticipated to be 25 to 30 years.

The annual operational water needs are equivalent to 0.05 percent of the average annual increase in groundwater storage of 17,000 AF per year and 0.00008 percent of the volume of groundwater in storage in the Imperial Valley Groundwater Basin (accounting for the groundwater level decline from 1974 to 2022). Therefore, the long-term operation and maintenance of the VEGA 6 project would not have any measurable effect or impact on groundwater resources in the Basin (Appendix K of this EIR).

Based on the analysis above, there is sufficient water available for anticipated future water demands in the Basin to accommodate the proposed VEGA 6 project during normal, single dry year, and multiple dry year periods for the lifetime of the VEGA 6 project. As such, impacts would be less than significant.

Further, groundwater recharge in the area will not be significantly affected as the majority of the project site will feature a pervious landscape in both the existing and proposed conditions. Any runoff from solar panel washing would evaporate or percolate through the ground, as a majority of the surfaces in the solar field would remain pervious. The proposed VEGA 6 project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the VEGA 6 project may impede sustainable groundwater management of the basin. No significant impacts on groundwater supply or recharge would occur.

Ramon Substation Expansion

The proposed Ramon Substation expansion does not include residential or commercial uses that would require groundwater supplies. Therefore, the proposed expansion would have no impact on groundwater supplies or recharge in the expansion area.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.9-3 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?

VEGA 6

Project implementation would not substantially alter the existing drainage pattern of the site or area. Soil erosion could result during construction of the proposed VEGA 6 project in association with grading and earthmoving activities. The VEGA 6 project site would be disturbed by construction activities such as grading and clearing as a part of site preparation. To the extent feasible, site preparation would be planned and designed to minimize the amount of earth movement. Compaction of the soil to support building and traffic loads as well as the PV module supports may be required and is dependent on final engineering design. During construction, erosion would be controlled in accordance with County standards which include preparation, review and approval of a grading plan by the County Engineer; implementation of a Dust Control Plan (Rule 801); and compliance with the NPDES General Construction Permit and project-specific SWPPP, as outlined in Mitigation Measure HYD-1.

After construction is complete, all existing roads would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted. As such, daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to alter the existing drainage pattern such that erosion increases when compared to existing conditions. The VEGA 6 project site would remain largely impervious over the operational life of the project. Additionally, the project would implement site design BMPs, as outlined in Table 3.9-3, which would reduce soil disturbance during operation. The proposed VEGA 6 project would result in less than significant impacts associated with the alteration of drainage patterns resulting in substantial erosion or siltation on- or off-site.

Ramon Substation Expansion

Project implementation would not substantially alter the existing drainage pattern of the site or area. Soil erosion could result during construction of the proposed Ramon Substation expansion area in association with grading and earthmoving activities. The expansion area would be disturbed by construction activities such as grading and clearing as a part of site preparation. To the extent feasible, site preparation would be planned and designed to minimize the amount of earth movement. 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; and compliance with the NPDES General Construction Permit and project-specific SWPPP, as outlined in Mitigation Measure RS-HYD-1.

Minimal impervious surface would be added to the proposed expansion area and would be limited to pervious, crushed rock surface cover. This would allow for water infiltration and would not substantially alter the existing drainage pattern of the site or area. Therefore, the proposed Ramon Substation expansion would have a less than significant impact.

Mitigation Measure(s)

VEGA 6

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

Ramon Substation Expansion

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

Significance after Mitigation

VEGA 6

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.

Ramon Substation Expansion

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, and compliance with the NPDES General Construction Permit and project-specific SWPPP.

Impact 3.9-4 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 offsite?

VEGA 6

Project implementation would not substantially alter the existing drainage pattern of the site or area. The majority of the VEGA 6 project site would continue to sheet flow through the pervious native soils. The VEGA 6 project will be designed to meet County of Imperial storage requirements (100 percent of the 100-year storm (3 inches of rain)) (refer to the County's Engineering Guidelines Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage and Grading Plans within Imperial County (2008) for storm water runoff, which will result in an impoundment of runoff in excess of the anticipated volume of runoff to be generated by the 100-year storm event. Additionally, implementation of Mitigation Measure HYD-2 requires that the project Drainage Plan adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. As such, infiltration basins will be integrated

into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from project impervious surfaces as necessary.

Additionally, after construction is complete, all existing roads would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted. As such, daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to alter the existing drainage pattern such that flooding (on- or off-site) increases when compared to existing conditions. Lastly, the VEGA 6 project site would remain largely pervious over the operational life of the project. Therefore, the proposed VEGA 6 project would result in no significant impacts associated with the alteration of drainage patterns resulting in on- or off-site flooding.

Ramon Substation Expansion

Implementation of the proposed Ramon Substation expansion would involve minimal grading and various construction activities on relatively flat terrain. Standard construction procedures, and federal, state and local regulations implemented in conjunction with the site's SWPPP and its BMPs required under the NPDES General Construction Permit, would minimize potential for erosion during construction. These practices would keep substantial amounts of soil material from eroding from the expansion area and prevent deposition within receiving waters located downstream. The potential for on-site erosion may increase due to grading and excavating activities during the construction phase for the proposed expansion. However, BMPs would be implemented for maintaining water quality and reducing erosion.

Additionally, the WQMP for the proposed Ramon Substation expansion will require that natural areas outside the project footprint remain undisturbed during construction and operation, which will limit the area of disturbance during construction. The WQMP will also require inspections prior to storm events and regular maintenance and of the crushed rock surface and drainage infrastructure during operation of the substation to ensure that they are operating as designed. Off-site erosion would not be substantially affected by the proposed expansion due to the relatively flat topography that surrounds the expansion area. Therefore, the proposed expansion would have a less than significant impact on increases in water-induced erosion on- or off-site.

Mitigation Measure(s)

VEGA 6

Implement Mitigation Measure HYD-2.

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

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 VEGA 6 project's Drainage Plan to adhere to the County's Engineering Guidelines Manual, IID "Draft" Hydrology Manual, or other

recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems.

Impact 3.9-5 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

VEGA 6

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 3.9-1 for additional details).

After construction is complete, all existing roads would be left in a condition equal to or better than their preconstruction condition. All other areas disturbed by construction activities would be recontoured and decompacted. The proposed VEGA 6 project is not anticipated to generate a significant increase in the amount of runoff water when compared to existing conditions. As such, daily operations and routine maintenance (such as occasional PV panel washing) are not anticipated to alter the existing drainage pattern such that runoff increases would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The VEGA 6 project site would remain largely pervious over the operational life of the project. Water will continue to percolate through the ground, as a majority of the surfaces on the VEGA 6 project site will remain pervious. The proposed VEGA 6 project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. This is considered a less than significant impact.

Ramon Substation Expansion

Minimal impervious surface would be added to the proposed expansion area and would be limited to pervious, crushed rock surface cover. This would allow for water infiltration and would not substantially alter the existing drainage pattern of the site or area. The proposed expansion would not create or contribute to runoff that would exceed the existing capacity of stormwater drainage systems nor substantially contribute to polluted runoff. This is considered a less than significant impact.

Mitigation Measure(s)

VEGA 6

Implement Mitigation Measure HYD-1.

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

With the implementation of Mitigation Measure HYD-1, impacts on the existing drainage pattern by the VEGA 6 project that could result in substantial or polluted runoff would be reduced to a level less than significant through compliance with County standards, implementation of a Dust Control Plan (Rule 801), and compliance with the NPDES General Construction Permit and project-specific SWPPP.

Impact 3.9-6 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?

VEGA 6

Project implementation would not substantially alter the existing drainage pattern of the site or area. The proposed VEGA 6 project is not anticipated to generate a significant increase in the amount of runoff water from water use involving solar panel washing. Water will continue to percolate through the ground, as a majority of the surfaces on the VEGA 6 project site will remain pervious. Additionally, according to the FEMA's FIRM (Map Number Map Number 06025C100C) (FEMA 2008), the proposed solar energy facility and access roads located on the project site are located in Zone X (unshaded). The FEMA Zone X (unshaded) designation is an area determined to be outside the 0.2 percent annual chance floodplain. The gen-tie transmission line runs through FEMA Flood Zone A, which is a special flood hazard zone with 1 percent annual chance of flooding. The transmission pole foundations would be small relative to the width of the floodplain and would not pose a substantial obstruction to flood flow flows and would be located outside the floodplain to the maximum extent practical. Therefore, the proposed VEGA 6 project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows, and impacts would be less than significant.

Ramon Substation Expansion

Minimal impervious surface would be added to the proposed expansion area and would be limited to pervious, crushed rock surface cover. This would allow for water infiltration and would not substantially alter the existing drainage pattern of the site or area. The proposed expansion is not anticipated to impede or redirect flood flows. This is considered a less than significant impact.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.9-7 In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

VEGA 6

The VEGA 6 project site is not located near any large bodies of water. The Salton Sea is located approximately 6 miles north of the VEGA 6 project site. Because of the distance, the Salton Sea does not pose a danger of inundation from seiche or tsunami as related to the VEGA 6 project site. Furthermore, the VEGA 6 project site is over 100 miles inland from the Pacific Ocean. In addition, the VEGA 6 project site is relatively flat. Therefore, there is no potential for the project site to be inundated by seiches or tsunamis. No impact would occur.

Ramon Substation Expansion

The Ramon Substation expansion area is not located near any large bodies of water. The expansion area is located approximately 30 miles northwest of the Salton Sea. Because of the distance, the Salton Sea does not pose a danger of inundation from seiche or tsunami. Furthermore, the expansion area is approximately 79 miles inland from the Pacific Ocean. In addition, the expansion area is relatively flat. Therefore, there is no potential for the project site to be inundated by seiches or tsunamis. No impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.9-8 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

VEGA 6

As described under Impact 3.9-1 above, with the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the VEGA 6 project would be reduced to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources. Implementation of Mitigation Measure HYD-2 would require the VEGA 6 project to incorporate post-construction BMPs into the project's drainage plan. The use of source control, site design, and treatment BMPs would result in a decrease potential for storm water pollution. Additionally, the VEGA 6 project would not require the direct use of groundwater. Therefore, the proposed VEGA 6 project would not pose a significant threat to local surface water features or shallow groundwater resources, and, as such would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Implementation of Mitigation Measures HYD-1 and HYD-2 would reduce impacts to a level less than significant.

Ramon Substation Expansion

As described under Impact 3.9-1 above, with the implementation of Mitigation Measure HYD-1, impacts on surface water quality as attributable to the Ramon Substation expansion would be reduced

to a less than significant level through the inclusion of focused BMPs for the protection of surface water resources.

The proposed Ramon Substation expansion does not include residential or commercial uses that would require groundwater supplies. Therefore, the proposed expansion would not conflict with nor obstruct implementation of a sustainable groundwater management plan. Therefore, no impact would occur.

Mitigation Measure(s)

VEGA 6

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

Ramon Substation Expansion

No mitigation measures are required.

Significance after Mitigation

VEGA 6

With the implementation of Mitigation Measures HYD-1 and HYD-2, the potential water quality impacts resulting during construction and operation of the VEGA 6 project would be reduced to a level less than significant.

3.9.5 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Decommissioning and restoration activities would result in similar impacts on hydrology and water quality as would occur during construction of the proposed project. The primary water quality issue associated with decommissioning/restoration would be potential impacts on surface water quality, as the decommissioning activities would be similar to construction activities and would be considered a significant impact. However, during decommissioning, soil erosion would be controlled in accordance with NPDES General Construction Permit(s) and project-specific SWPPP. Compliance with requirements and best available control technologies in place at the time of decommissioning are anticipated to be similar to, or more stringent than, those currently required. Compliance with all applicable water quality regulations would reduce the project's impacts during decommissioning to a level less than significant. Impacts on other water resource issues, including alteration of drainage patterns, contributing to off-site flooding, impacts on groundwater recharge and supply, would be less than significant. There would be no impact associated with inundation from flooding or mudflows.

Residual

With implementation of the mitigation measures listed above, implementation of the project would not result in any residual significant impacts related to increased risk of flooding from stormwater runoff, from water quality effects from long-term urban runoff, or from short-term alteration of drainages and associated surface water quality and sedimentation. With the implementation of the required mitigation

measures during construction and decommissioning of the project, water quality impacts would be minimized to a less than significant level. Based on these circumstances, the project would not result in any residential significant and unmitigable adverse impacts on surface water hydrology and water quality.

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3.10 Land Use and Planning

This section provides information regarding current land use, land use designations, and land use policies within and in the vicinity of the VEGA 6 project site and Ramon Substation expansion area. 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 applicable County General Plan and other applicable federal, state, and local requirements, which govern land use within the project area and evaluates the project's potential to conflict with policies adopted for the purpose of avoiding or mitigating significant environmental effects. Where appropriate, mitigation is applied, and the resulting level of impact identified.

3.10.1 Existing Conditions

VEGA 6

Solar Energy Facility Site

The solar energy facility site is located on approximately 320 acres of privately-owned vacant land on a single parcel (APN 034-160-002) in the unincorporated area of Imperial County, CA. The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal.

As shown in Figure 3.10-1, the solar energy facility site's land use designation is Agriculture under the County's General Plan. As shown in Figure 3.10-2, the solar energy facility site is currently zoned Open Space/Preservation (S-2).

As discussed in Chapter 2, the County adopted the Renewable Energy and Transmission Element, which includes a RE Zone (RE Overlay Map). The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of renewable energy facilities while minimizing the impact on other established uses. As shown in Figure 2-1, the solar energy facility site is located outside of the RE Overlay Zone. The project applicant is requesting a General Plan Amendment and Zone Change to include/classify the solar energy facility site (APN No. 034-160-002) into the RE Overlay Zone. Further, implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility with an integrated battery storage system.

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Figure 3.10-1. General Plan Land Use Designations

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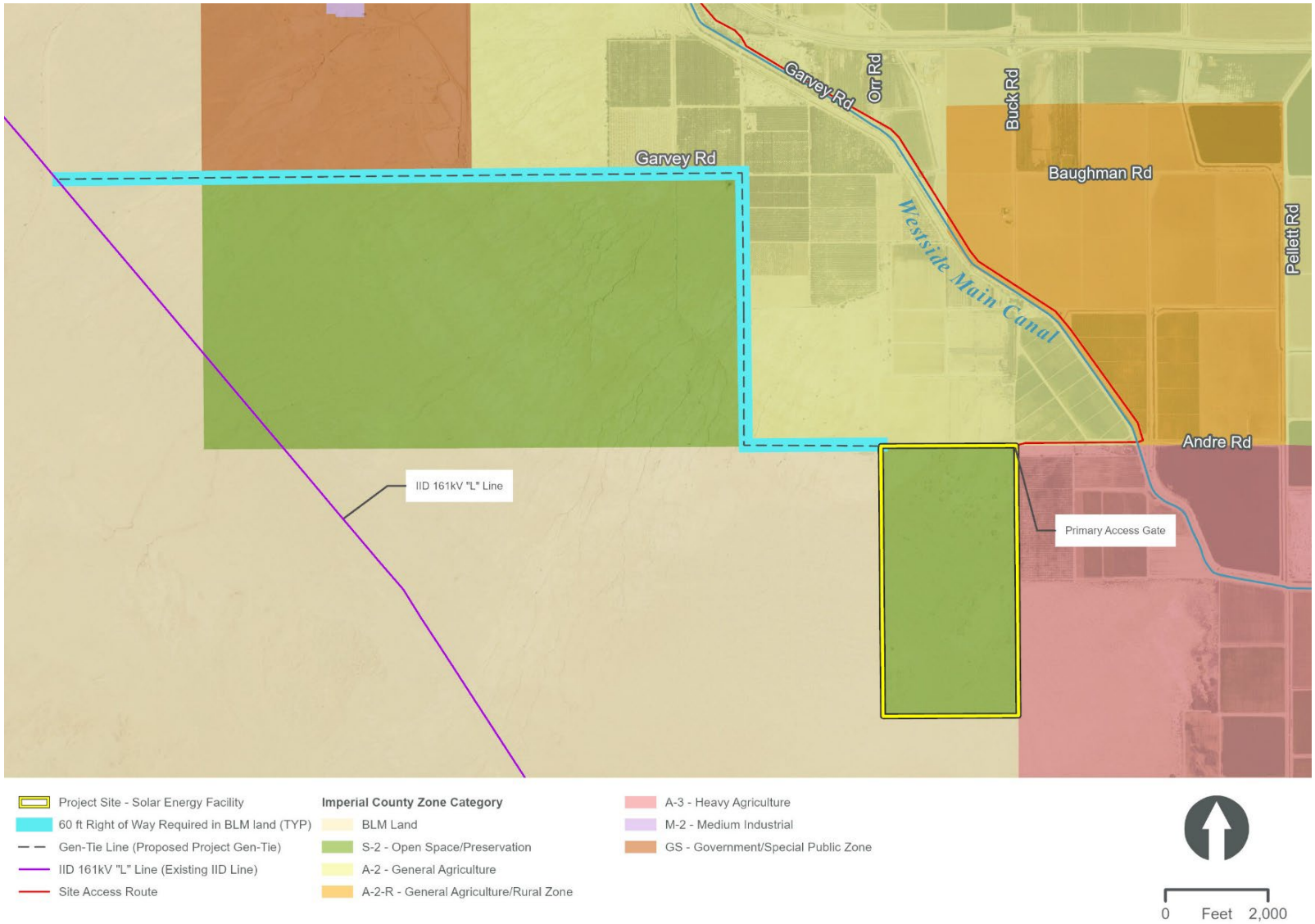
Figure 3.10-2. Zoning Designations



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Gen-Tie Line

The proposed project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the BLM within the California Desert Conservation Area (CDCA) planning area (Figure 3.10-3). The CDCA is a 25-million-acre expanse of land in Southern California designated by the Congress in 1976 through the Federal Land Policy and Management Act (FLPMA). Approximately 10 million acres of the CDCA are administered by BLM under its CDCA Plan.

The BLM prepared a Land Use Plan Amendment (LUPA) to the CDCA Plan as part of the Desert Renewable Energy Conservation Plan (DRECP). The DRECP was developed to facilitate the timely and streamlined permitting of renewable energy projects. The BLM designates Renewable Energy Development Focus Areas (DFA) which are on BLM-administered lands within which solar, wind, and geothermal renewable energy development and associated activities are allowable uses and that have been determined to be of low or lower resource conflict. The intent is to incentivize and streamline such development in these areas. Transmission development and operation will occur in previously designated corridors and other identified areas, both inside and outside the DFAs.

As shown in Figure 3.10-4, the western portion of the gen-tie line is located within a Renewable Energy DFA.

Ramon Substation Expansion

The existing Ramon Substation is located on a single parcel (APN 651-230-015) in unincorporated Riverside County, generally northeast of Cathedral City, north of the Interstate-10 Freeway. The existing substation currently occupies approximately 6.7 acres of the 11.26-acre parcel. As shown in Figure 3.10-3, the proposed upgrades would involve expansion of an approximately 4-acre area immediately adjacent to the existing substation. Immediately west of the existing Ramon Substation and proposed expansion area is the existing SCE Mirage Substation. The nearest residences to the proposed expansion area are located west of the existing SCE Mirage Substation along Via Las Palmas and the Tri Palm Estates development along Ramon Road to the southwest.

The Ramon Substation expansion area is located within the Western Coachella Valley Area Plan (WCVAP) and is designated Rural Residential (RR) in the Riverside County General Plan (County of Riverside 2021).

The Riverside County Zoning Ordinance, which is part of the County's Municipal Code, assigns a zoning designation to all properties within the County's boundaries. The Ramon Substation expansion area is zoned General Residential Zone (R-3). The Riverside County Zoning Ordinance does not identify public utilities as a permitted or conditional use in R-3. However, per Section 17.208.010, facilities for the storage or transmission of electrical energy is permitted with a Public Use Permit:

> *Facilities for the storage or transmission of electrical energy where the County is not preempted by law from exercising jurisdiction. This subsection shall take precedence over and supersede any conflicting provision in any zone classification. Facilities for the storage or transmission of electrical energy shall not be subject to the development standards of the zone classification in which they are located.*

The existing Ramon Substation is currently operating under an approved Public Use Permit.

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Figure 3.10-3. CDCA and DRECP Planning Areas

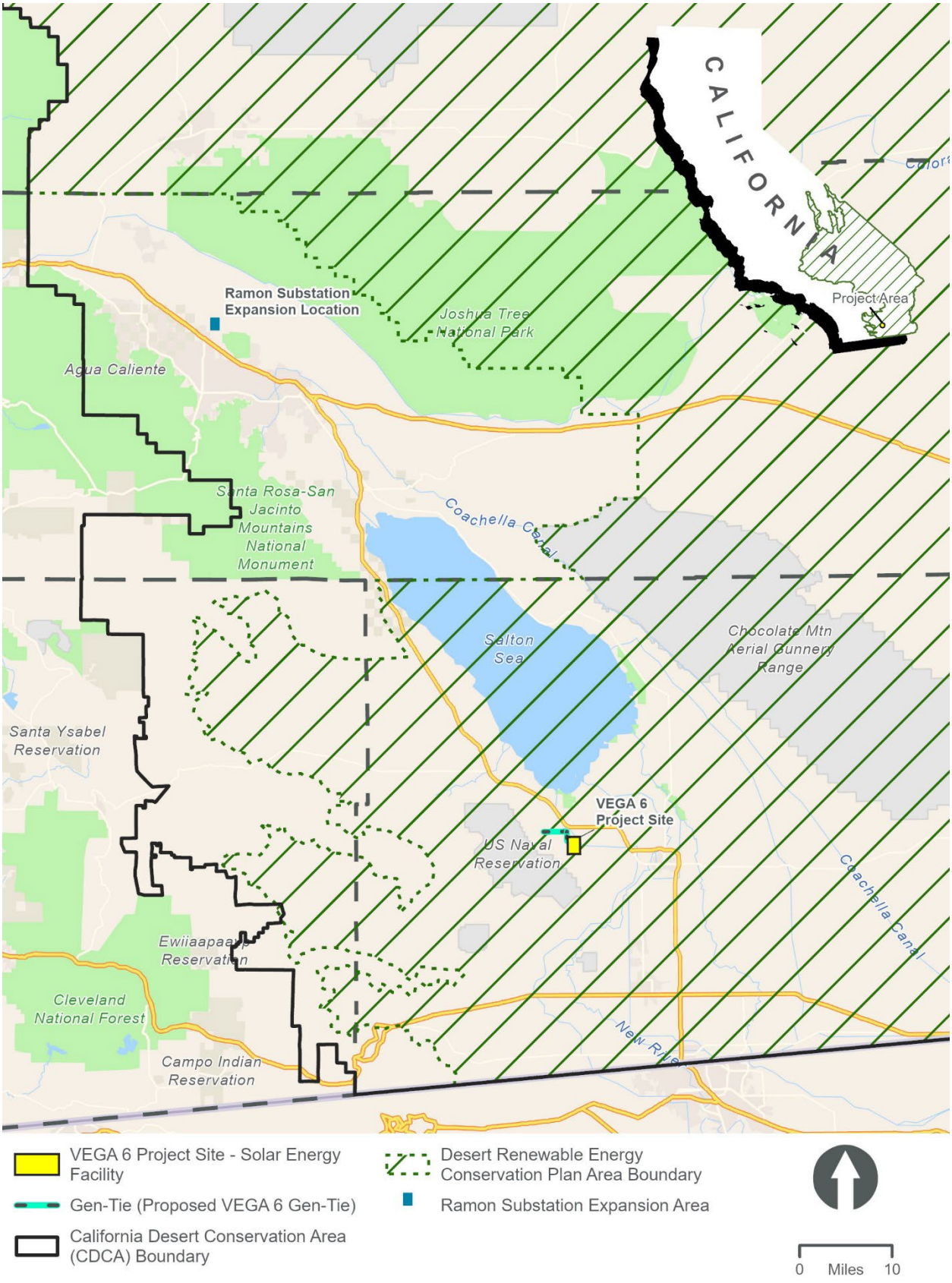

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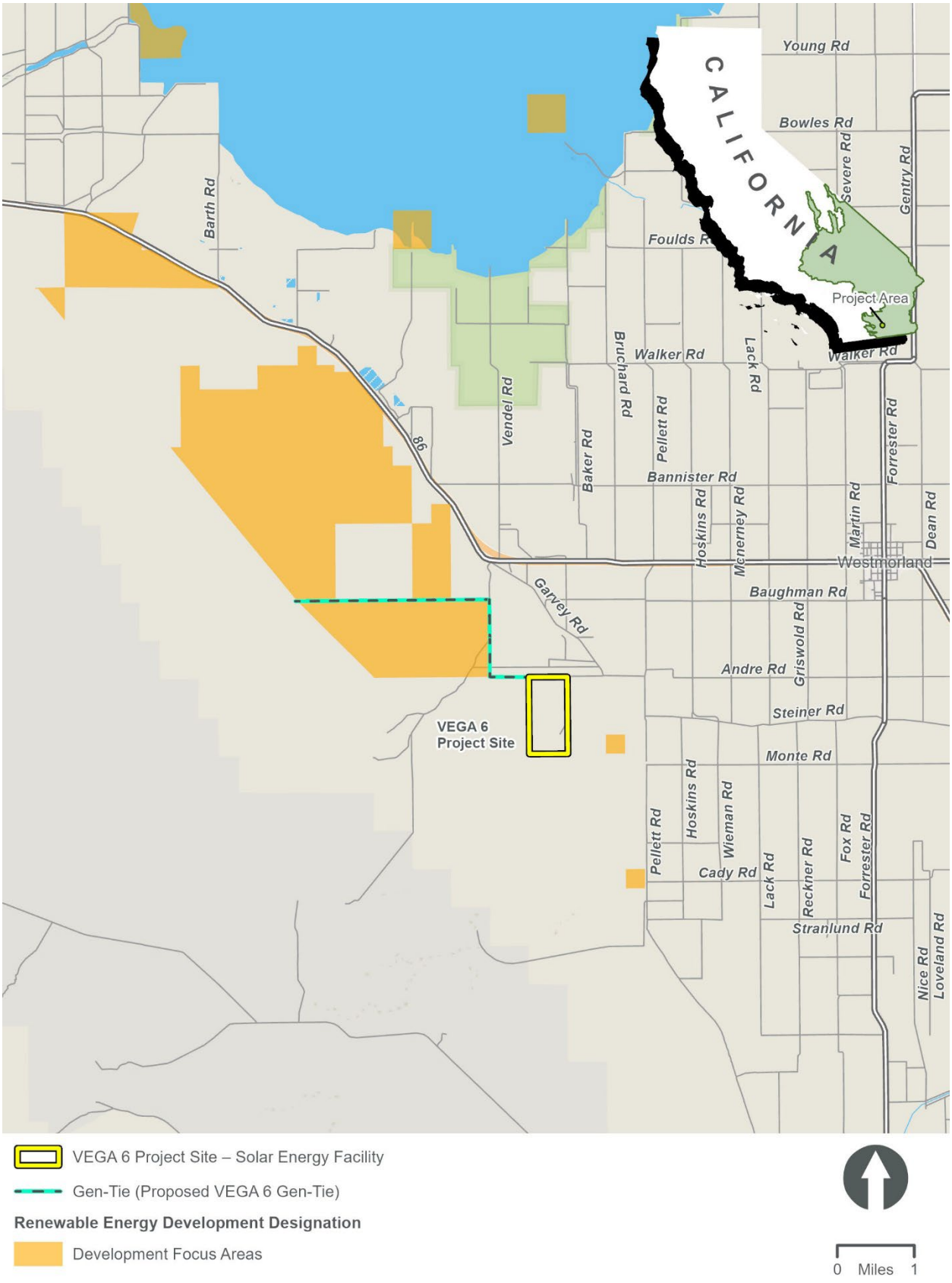
Figure 3.10-4. DRECP Renewable Energy DFA



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3.10.2 Regulatory Setting

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

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 request associated with the VEGA 6 project is 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 VEGA 6 project (the portion of the project [gen-tie line] not otherwise located on private lands).

Desert Renewable Energy Conservation Plan

The Desert Renewable Energy Conservation Plan (DRECP) is a collaborative, interagency landscape-scale planning effort covering 22.5 million acres of the Mojave and Colorado/Sonoran desert regions within seven California counties including Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego. The plan was developed through a collaborative effort by the Renewable Energy Action Team Agencies (REAT Agencies; also known as the DRECP partner agencies), which consists of the BLM, U.S. Fish and Wildlife Service (USFWS), California Energy Commission (CEC), and California Department of Fish and Wildlife (CDFW). The vision for the DRECP is to (US Bureau of Land Management 2016):

1. Advance federal and state natural resource conservation goals and other federal land management goals.
2. Meet the requirements of the federal Endangered Species Act (ESA) and Federal Land Policy and Management Act (FLPMA).
3. Facilitate the timely and streamlined permitting of renewable energy projects.

The DRECP Area contains both federal and non-federal California desert land. Some of these lands are designated as California Desert Conservation Areas. The federal portion of the plan area was released by the BLM as a Land Use Plan Amendment. The DRECP Land Use Plan Amendment supports the conservation goals of the DRECP and organizes land into ecoregions and subregions with specific management goals, objectives, allowable uses, and management actions for biological and cultural resources. The BLM designates Areas of Critical Environmental Concern where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources. The BLM also designates Renewable Energy Development Focus Areas which are on BLM-administered lands within which solar, wind, and geothermal renewable energy development and associated activities are allowable uses and that have been determined to be of low or lower resource conflict. The intent is to incentivize and streamline such development in these areas.

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 project:

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

Local

Imperial County General Plan

The purpose of the County's General Plan (as amended through 2008) is to direct growth, particularly urban development, to areas where public infrastructure exists or can be provided, where public health and safety hazards are limited, and where impacts on the County's abundant natural, cultural, and economic resources can be avoided. The following 10 elements comprise the County's General Plan: Land Use; Housing; Circulation and Scenic Highways; Noise; Seismic and Public Safety; Conservation and Open Space; Agricultural; Renewable Energy and Transmission Element; Water; and Parks and Recreation. Together, these elements satisfy the seven mandatory general plan elements as established in the California Government Code. Goals, objectives, and implementing policies and actions programs have been established for each of the elements.

Imperial County received funding from the CEC's Renewable Energy and Conservation Planning Grant to amend and update the County's General Plan in order to facilitate future development of renewable energy projects. The Geothermal/Alternative Energy and Transmission Element was last updated in 2006. Since then, there have been numerous renewable projects proposed, approved and constructed within Imperial County as a result of California's move to reduce greenhouse gas emissions, develop alternative fuel sources and implement its Renewable Portfolio Standard. The County has recently prepared an update to the Geothermal/Alternative Energy and Transmission Element of its General Plan, called the Renewable Energy and Transmission Element. This Element is designed to provide guidance and approaches with respect to the future siting of renewable energy projects and electrical transmission lines in the County. The County adopted this element in 2016.

The RE and Transmission Element includes a RE Zone (RE Overlay Map). The County Land Use Ordinance, Division 17, includes the RE Overlay Zone, which authorizes the development and operation of RE projects, with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of RE facilities while minimizing the impact to other established uses. As previously mentioned, the VEGA 6 project site is located outside of the RE Overlay Zone.

An analysis of the project's consistency with the General Plan goals and objectives relevant to the project is provided in Table 3.10-1. 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 VEGA 6 project's consistency with the General Plan.

Table 3.10-1. Project Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Land Use Element		
Public Facilities, Objective 8.7. Ensure the development, improvement, timing, and location of community sewer, water, and drainage facilities will meet the needs of existing communities and new developing areas.	Consistent	The project includes the necessary supporting infrastructure and would not require new community-based infrastructure. The project would be required to construct supporting drainage consistent with County requirements and mitigation measures prescribed in Section 3.9, Hydrology/Water Quality, of the EIR. Once the project is operational, water would be required for solar panel washing and fire protection. The project would receive water service from the IID. Water would be purchased from the IID and delivered to the project site by water trucks. The proposed project would not require an operations and maintenance building. Therefore, no septic or other wastewater disposal systems would be required for the project.
Public Facilities, Objective 8.8. Ensure that the siting of future facilities for the transmission of electricity, gas, and telecommunications is compatible with the environment and County regulation.	Consistent	The County Land Use Ordinance, Division 17, includes the Renewable Energy Overlay Zone, which authorizes the development and operation of renewable energy projects with an approved CUP. The RE Overlay Zone is concentrated in areas determined to be the most suitable for the development of renewable energy facilities while minimizing the impact on other established uses. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. The County's General Plan and Land Use Ordinance allows that for renewable energy projects proposed on land classified in a non-RE Overlay zone, that the land on which the project is located may be included/classified in the RE Overlay Zone if the renewable energy project: 1) would be located adjacent to an existing RE Overlay Zone; 2) is not located in a sensitive area; 3) is located in proximity to renewable energy infrastructure; and, 4) and would not result in any significant environmental impacts. The project site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify the site into the RE Overlay Zone. With the approval of a General Plan Amendment, CUP, and zone change, the proposed solar project can be implemented.
Public Facilities, Objective 8.9. Require necessary public utility rights-of-way when appropriate.	Consistent	The project would include the dedication of necessary ROW to facilitate the placement of electrical distribution and transmission infrastructure.

General Plan Policies	Consistency with General Plan	Analysis
Protection of Environmental Resources, Objective 9.6. Incorporate the strategies of the Imperial County AQAP in land use planning decisions and as amended.	Consistent	Because of the minimal grading of the site during construction and limited travel over the site during operations, local vegetation is anticipated to remain largely intact which will assist in dust suppression. Furthermore, dust suppression will be implemented including the use of water and soil binders during construction. Section 3.3, Air Quality, discusses the project's consistency with the AQAP in more detail.
Circulation and Scenic Highways 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	Once construction is completed, the project would be remotely operated, controlled and monitored and with no requirement for daily onsite employees. The project would include limited operational vehicle trips and would not be expected to reduce the current level of service at affected intersections, roadway segments, and highways. The project does not propose any forms for residential or commercial development and therefore would not require new forms of alternative transportation to minimize impacts on existing roadways.
Safe, Convenient, and Efficient Transportation System, Objective 1.2. Require a traffic analysis for any new development which may have a significant impact on County roads.	Consistent	As described in Section 3.13 Transportation/Circulation, project operations would have a less than significant impact on the circulation network.
Noise Element		
Noise Environment. Objective 1.3. Control noise levels at the source where feasible.	Consistent	Where construction-related and operational noise would occur in close proximity to noise sensitive land uses (e.g., less than 500 feet), the County would condition the project to maintain conformance with County noise standards.
Project/Land Use Planning. Goal 2: Review Proposed Actions for noise impacts and require design which will provide acceptable indoor and outdoor noise environments.	Consistent	The project would be required to comply with the County's noise standards during both construction and operation.
Conservation and Open Space Element		
Conservation of Environmental Resources for Future Generations Goal 1: Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.	Consistent	The project site would be converted from undeveloped land to a solar energy facility. The proposed project is a response to the state's need for renewable energy to meet its Renewable Portfolio Standard, and while it would increase the availability of renewable energy, it would also replace existing sources of non-renewable energy. The power generated by the proposed project would be added to the state's electricity grid with the intent that it would displace fossil fueled power plants and their associated environmental impacts (i.e., air quality and GHG emissions). The proposed project would ensure future generations have access to a broad array of renewable

General Plan Policies	Consistency with General Plan	Analysis
		energy sources, providing the public with alternative choices to fossil fuels.
Conservation of Biological Resources. Goal 2: The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability.	Consistent	A biological resources survey was conducted for the project site. As discussed in Section 3.4, Biological Resources, there are sensitive biological resources located within the project site. However, with the implementation of mitigation identified in Section 3.4, Biological Resources, these impacts would be reduced to a level less than significant.
Preservation of Cultural Resources. Objective 3.1: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Consistent	A cultural resource inventory was prepared for the project site. As discussed in Section 3.5, Cultural Resources, the proposed project has the potential to encounter undocumented archaeological resources and human remains. However, with the implementation of mitigation identified in Section 3.5, Cultural Resources, these potential impacts would be reduced 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 3.9, Hydrology/Water Quality, the project will prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources; as well as coordinate with the IID for water consumption during construction and operation of the project.
Protection of Air Quality and Addressing Climate Change. Goal 7: The County shall actively seek to improve the quality of air in the region.	Consistent	The proposed project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed project would improve air quality and reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from a fossil fuel burning facility. Therefore, the proposed project is consistent with this goal.
Protection of Air Quality and Addressing Climate Change. Objective 7.1: Ensure that all project and facilities comply with current Federal, State and local requirements for attainment of air quality objectives.	Consistent	The proposed project would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the proposed project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard Air Quality Measures. Therefore, the proposed project is consistent with this objective.
Protection of Air Quality and Addressing Climate Change. Objective 7.2: Develop management strategies to mitigate fugitive dust. Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Consistent	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard Air Quality Measures. Therefore, the proposed project is consistent with this objective.

General Plan Policies	Consistency with General Plan	Analysis
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 site is located outside of the RE Overlay Zone. The project applicant is requesting a General Plan Amendment and Zone Change to include/classify the project site into the RE Overlay Zone. With the approval of the General Plan Amendment, Zone Change, and CUP, the proposed solar project can be implemented.
Renewable Energy and Transmission 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 project, 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 renewable energy facilities.	Consistent	Please refer to Section 6.0, Effects Found Not to be Significant, for a description of existing agricultural resources within the project site and a discussion of potential impacts attributable to the project. A Biological Technical Report has been prepared for the project, which is summarized in Section 3.4, Biological Resources, along with potential impacts attributable to the project. With incorporation of mitigation identified in Section 3.4, Biological Resources, less than significant impacts would result.
Objective 1.6: Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.	Consistent	Water use during construction would be used primarily for dust control and obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. The project applicant will also coordinate with IID to purchase water needed for maintenance activities (i.e., PV module washing) to ensure efficient use of water resources.
Objective 1.7: Assure that development of renewable energy facilities and transmission lines comply with Imperial County Air Pollution Control District's regulations and mitigation measures.	Consistent	Because of the minimal grading of the site during construction and limited travel over the site during operations, local vegetation is anticipated to remain largely intact which will assist in dust suppression. Furthermore, dust suppression will be implemented including the use of water and soil binders during construction. Section 3.3, Air Quality, discusses the project's consistency with the ICAPCD in more detail.
Objective 2.1: To the extent practicable, maximize utilization of IID's transmission capacity in existing easements or rightsof-way. Encourage the location of all major transmission lines within designated corridors easements, and rights-of-way.	Consistent	The project involves the construction and operation of new renewable energy infrastructure that would interconnect with existing and approved IID transmission infrastructure thereby maximizing the use of existing facilities.
Seismic and Public Safety Element		
Land Use Planning and Public Safety. Goal 1: Include public health and safety considerations in land use planning.	Consistent	Division 5 of the County Land Use Ordinance has established procedures and standards for development within earthquake fault zones. Per

General Plan Policies	Consistency with General Plan	Analysis
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.		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 site is located in a seismically active area, the project is required to be designed in accordance with the CBC for near source factors derived from a design basis earthquake based on a peak ground acceleration of 0.48 gravity. It should be noted that, the project would be remotely operated and would not require any habitable structures on site. In considering these factors in conjunction with mitigation requirements outlined in the impact analysis, the risks associated with seismic hazards would be minimized. A preliminary geotechnical report has been prepared for the proposed project. The preliminary geotechnical report is summarized in Section 3.6 Geology and Soils.
Land Use Planning and Public Safety. Objective 1.3: Regulate development adjacent to or near all mineral deposits and geothermal operations.		
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.		
Land Use Planning and Public Safety. Objective 1.7: Require developers to provide information related to geologic and seismic hazards when siting a proposed project.		
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 project prepare a site-specific drainage plan and water quality management plan to minimize adverse effects to local water resources.

General Plan Policies	Consistency with General Plan	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 for Water Element above.
Housing Element		
Not Applicable. The proposed project is a solar energy project and does not include the development of housing.		

Source: ICPDS 2008

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

County of Imperial Land Use Ordinance

The County's Land Use Ordinance provides the physical land use planning criteria for development within the jurisdiction of the County. The Land Use Ordinance identifies the permitted and conditional uses within a zoning designation. Uses identified as conditionally permitted require a CUP, which is subject to the discretionary approval of the County Board of Supervisors per a recommendation by the County Planning Commission.

S-2 Zoning. As shown in Figure 3.10-2, the solar energy facility site is located on a privately-owned parcel zoned S-2. Pursuant to Title 9, Division 5, Chapter 19 (County of Imperial 2020), 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. Section 90519.07 of the Land Use Ordinance states that the "Maximum height limit in the S-2 zone shall be 40 feet, except for communication towers which are 100 feet." The height of the components on the solar energy facility site (solar panels, BESS, and substation) would be less than 40 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, includes the RE Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved CUP. Uses that are conditionally permitted require a CUP subject to the discretionary approval of the County Board of Supervisors (Board) per a recommendation by the County Planning Commission.

Imperial County Airport Land Use Compatibility Plan

The Imperial County Airport Land Use Compatibility Plan (ALUCP) provides the criteria and policies used by the Imperial County Airport Land Use Commission to assess compatibility between the principal airports in Imperial County and proposed land use development in the areas surrounding the airports. The ALUCP emphasizes review of local general and specific plans, zoning ordinances, and other land use documents covering broad geographic areas.

The nearest public airport is the Brawley Municipal Airport located approximately 9.8 miles southeast of the project site. The project site is outside of the airport compatibility zones of the Brawley Municipal Airport (County of Imperial 1996).

County of Riverside General Plan

The County of Riverside General Plan is a policy document that reflects the County's vision for the future of Riverside County. The General Plan was comprehensively revised in 2003 and most recently updated in 2021. The General Plan is organized into nine separate elements: Land Use, Circulation, Multipurpose Open Space, Safety, Noise, Housing, Air Quality, Healthy Communities, and Administration. Each General Plan Element is instrumental to achieving the County's long-term development goals. Each element contains a series of policies that guide the course of action the County must take to achieve the County's vision for future development (County of Riverside 2021).

In addition, the General Plan divides the County into 19 Area Plans. The purpose of these Area Plans is to provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas. The Ramon Substation expansion area is located within the WCVAP of the General Plan.

Western Coachella Valley Area Plan

As stated above, the project site is located within the WCVAP of the General Plan. The WCVAP is not a standalone document, but rather an extension of the County of Riverside General Plan. It provides a customized direction specifically for this planning area. The WCVAP provides a description of the location, physical characteristic, and special features, in addition to a land use plan, policies, and exhibits to better understand the physical, environmental, and regulatory characteristics that comprise the area.

Riverside County Airport Land Use Compatibility Plan

The Riverside County ALUCP was adopted in October 2004 and establishes policies applicable to land use compatibility planning in the vicinity of airports throughout the County containing compatibility criteria and maps for the influence areas of individual airports. The ALUCP establishes safety zones that limit building heights, restrict hazardous materials and fuel tanks, bird-attracting industries, etc., from close proximity to airport runways. The Ramon Substation expansion area is located outside of Palm Springs International Airport's airport influence area (County of Riverside 2005). Thus, the

Ramon Substation expansion would not require review by the Riverside County Airport Land Use Commission (ALUC).

Coachella Valley Multiple Species Habitat Conservation Plan

The Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) received its California state permit in September 2008 and its federal permit in October 2008. The CVMSHCP is a comprehensive habitat conservation-planning program focusing on preservation of species and their associated habitats within the Coachella Valley region of Riverside County. Signatories to the CVMSHCP include the cities of Cathedral City, Coachella, Desert Hot Springs (I-10 annexation area only), Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, Rancho Mirage as well as Coachella Valley Water District, Imperial Irrigation District, Coachella Valley Association of Governments, and Caltrans. The intent of the CVMSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the CVMSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the CVMSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach.

The CVMSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species. Through agreements with the USFWS and the CDFW, the CVMSHCP designates approximately 27 special-status animal and plant species that receive some level of coverage under the plan. Of the 27 covered species designated under the CVMSHCP, the majority of these species have no additional survey/ conservation requirements. In addition, the CVMSHCP provides mitigation for project-specific impacts to these species so that the impacts would be reduced to below a level of significance pursuant to CEQA. Beyond the fully covered species, there are species with additional survey/conservation requirements (Coachella Valley Conservation Commission 2016).

Each participating city or local jurisdiction within the Coachella Valley region will impose a development mitigation fee for new development projects within its jurisdiction. As of July 1, 2023, the current fees for development are:

- $1,625 for 0 to 8 residential units per acre
- $675 for 8.1 to 14 residential units per acre
- $300 for more than 14 residential units per acre
- $7,225 per acre for commercial/industrial

Please refer to Section 3.4, Biological Resources, for a more thorough discussion of the CVMSHCP.

County of Riverside Zoning Ordinance

The Riverside County Zoning Ordinance is intended to implement the Riverside County General Plan's Land Use Plan. The Zoning Ordinance identifies the permitted and conditional uses within each zoning designation.

3.10.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

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

Impact Analysis

Impact 3.10-1 Would the project physically divide an established community?

VEGA 6

The VEGA 6 project site is located in a sparsely populated portion of unincorporated Imperial County. The following residences are located in the VEGA 6 project vicinity:

- Residence located 2,725 feet from the northeastern corner of the solar energy facility site
- Residence located approximately 0.85 miles north of solar energy facility site, north of Buck Road/Garvey Road intersection
- Residence located approximately 1 mile north of solar energy facility site and approximately 0.66 mile from the gen-tie line, north of Baughman Road/Garvey Road intersection
- Residence located approximately 1.21 miles north of solar energy facility site, north of Orr Road/Garvey Road intersection and approximately 0.5 mile from the gen-tie line

However, there are no established residential communities located in the vicinity of the project site. The nearest established residential community is located approximately 4 miles northeast in the City of Westmorland. Therefore, implementation of the proposed project would not divide an established community and no impact would occur.

Ramon Substation Expansion

The Ramon Substation expansion area is on approximately 4 acres of vacant and undeveloped land, immediately north of the existing Ramon Substation. Immediately west of the existing Ramon Substation and proposed expansion area is the existing SCE Mirage Substation. The nearest residences to the proposed expansion area are located west of the existing SCE Mirage Substation along Via Las Palmas and the Tri Palm Estates development along Ramon Road to the southwest.

Generally, the physical division of an established community will occur as a result of the construction of a physical feature (such as a highway or railroad tracks), or the removal of a means of access (such as a local road or bridge) which will impair mobility within an existing community or between a community and outlying areas.

The proposed Ramon Substation expansion would not require closures of public roads, which could inhibit vehicular access. The proposed Ramon Substation expansion does not include the construction of a major highway, railroad track, or other linear physical feature that will divide an existing community. Therefore, implementation of the proposed Ramon Substation expansion would not divide an established community and no impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.10-2 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?

VEGA 6

SCAG 2010-2045 RTP/SCS (CONNECT SOCAL)

As noted above, the 2020-2045 RTP/SCS (Connect SoCal) (SCAG 2020) identifies two goals which include reducing GHG emissions to improve air quality (Goal 5), and to promote conservation of natural and agricultural lands (Goal 10).

The 2020-2045 RTP/SCS (Connect SoCal), identifies strategies to support the goal of reducing regional GHG and improve air quality. Strategies include leveraging technological innovations including incorporating solar energy, hydrogen fuel cell power storage, and power generation. Once in operation, the proposed project would contribute to SCAG's goal in reducing GHG emissions and improving air quality.

The 2020-2045 RTP/SCS (Connect SoCal) also discusses the decline of agricultural land as an issue for the economy. According to the farmland maps prepared by the California Department of Conservation, no portion of the VEGA 6 project site is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2021). Additionally, the gen-tie route would not result in the conversion of agricultural land. As such, no Prime Farmland, Farmland of Statewide Importance, and Unique Farmland would be converted to non-agricultural uses with project implementation. 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, battery storage system, gentie, and supporting infrastructure associated with the project. An analysis of the project's consistency with the General Plan goals and objectives relevant to the VEGA 6 project is provided in Table 3.10-1. As summarized in Table 3.10-1, the proposed VEGA 6 project would be consistent with the goals and objectives contained in the General Plan.

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

CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. An amendment to the overlay zone would only be approved by the County Board of Supervisors if a future renewable energy project met one of the following two conditions:

1) Adjacent to the Existing RE Overlay Zone: An amendment may be made to allow for development of a future renewable energy project located adjacent to the existing RE Overlay Zone if the project:
   i. Is not located in a sensitive area
   ii. Would not result in any significant impacts
2) "Island Overlay": An amendment may be made to allow for development of a future renewable energy project that is not located adjacent to the existing RE Overlay Zone if the project:
   i. Is located adjacent (sharing a common boundary) to an existing transmission source
   ii. Consists of the expansion of an existing renewable energy operation
   iii. Would not result in any significant environmental impacts

The solar energy facility site is located outside of the RE Overlay Zone. Therefore, the project applicant is seeking a Zone Change to include/classify the solar energy facility site into the RE Overlay Zone and approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility with an integrated battery storage system. The solar energy facility site is not located adjacent to an existing RE Overlay Zone; therefore, the VEGA 6 project will need to meet the criteria identified for the "Island Overlay" to obtain approval of an amendment to the RE Overlay Zone. Table 3.10-2 provides an analysis of the project's consistency with the "Island Overlay" criteria.

With approval of the General Plan Amendment and Zone Change, the project applicant will be able to request for approval of a CUP to allow the construction and operation of the proposed solar facility.

Table 3.10-2. Project Consistency with "Island Overlay" Criteria

Criteria	Criteria Met?
Is located adjacent (sharing a common boundary) to an existing transmission source?	As described in Chapter 2, the VEGA 6 project includes a gen-tie line that would connect to IID's existing 161 kV "L" Line. The gen-tie route would be approximately 4 miles long.
Consists of the expansion of an existing renewable energy operation?	As described in Chapter 2, the VEGA 6 project includes a gen-tie line that would connect to IID's existing 161 kV "L" Line. The gen-tie route would be approximately 4 miles long. The proposed VEGA 6 project would be capable of generating up to 80 MW of solar energy and include a 160 MW BESS, thereby expanding renewable energy generation in the area.

Criteria	Criteria Met?
Would not result in any significant environmental impacts?	As detailed in Sections 3.2 through 3.17 of this EIR, no unavoidable or unmitigable significant impacts were identified. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant. Therefore, the proposed VEGA 6 project would not result in a residual significant impact.

Note: EIR – environmental impact report; MW – megawatt; RE – renewable energy

COUNTY OF IMPERIAL LAND USE ORDINANCE

Development of the solar energy facility and supporting infrastructure is subject to the County's zoning ordinance. The solar energy facility site is located on privately-owned vacant land on a single parcel (APN 034-160-002) zoned S-2. Pursuant to Title 9, Division 5, Chapter 19 (County of Imperial 2020), 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)*

Therefore, with approval of a CUP, the proposed project would not conflict with the County's zoning ordinance.

IMPERIAL COUNTY AIRPORT LAND USE COMPATIBILITY

As previously discussed above, the nearest public airport is the Brawley Municipal Airport located approximately 9.8 miles southeast of the project site. According to Figure 3A (Compatibility Map – Brawley Municipal Airport) of the ALUCP, no portion of the VEGA 6 project site is located within the Brawley Municipal Airport land use compatibility zones (County of Imperial 1996). Therefore, the proposed VEGA 6 project would not conflict with the Imperial County ALUCP, and no significant impact would occur.

DESERT RENEWABLE ENERGY CONSERVATION PLAN

The DRECP was developed to facilitate the timely and streamlined permitting of renewable energy projects. The BLM designates Renewable Energy DFAs which are on BLM-administered lands within which solar, wind, and geothermal renewable energy development and associated activities are allowable uses and that have been determined to be of low or lower resource conflict. Transmission development and operation will occur in previously designated corridors and other identified areas, both inside and outside the DFAs.

As shown in Figure 3.10-4, the western portion of the gen-tie line is located within a Renewable Energy DFA. Therefore, the proposed gen-tie line would be an allowable use and would not conflict with the DRECP.

Ramon Substation Expansion

RIVERSIDE COUNTY ZONING ORDINANCE

The Ramon Substation expansion area is zoned General Residential Zone (R-3). The Riverside County Zoning Ordinance does not identify public utilities as a permitted or conditional use in R-3. However, per Section 17.208.010, facilities for the storage or transmission of electrical energy is permitted with a Public Use Permit:

> *Facilities for the storage or transmission of electrical energy where the County is not preempted by law from exercising jurisdiction. This subsection shall take precedence over and supersede any conflicting provision in any zone classification. Facilities for the storage or transmission of electrical energy shall not be subject to the development standards of the zone classification in which they are located.*

The existing Ramon Substation is currently operating under an approved Public Use Permit. IID would apply for an amendment to its Public Use Permit for the proposed Ramon Substation expansion. With approval of the Public Use Permit amendment, the proposed expansion would not conflict with the Riverside County Zoning Ordinance and no impact would occur.

RIVERSIDE COUNTY AIRPORT LAND USE COMPATIBILITY PLAN

The Ramon Substation expansion area is located outside of Palm Springs International Airport's airport influence area (County of Riverside 2005). Therefore, the proposed expansion would not conflict with the Riverside County ALUCP, and no impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

3.10.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. No impacts on land use and planning are anticipated to occur during decommissioning and restoration of the project site. Decommissioning and restoration would not physically divide an established community or conflict with any applicable land use plan, policy, or regulation. Therefore, no impact is identified and no mitigation is required.

Residual

With the approval of a CUP and reclamation plan to address post-project decommissioning, the project would generally be consistent with applicable federal, state, regional, and local plans and policies. Based on these circumstances, the project would not result in any residual significant and unmitigable land use impacts.

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3.11 Noise and Vibration

This section identifies the ambient noise environment for the VEGA 6 project area and Ramon Substation expansion 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 6 project and Ramon Substation expansion. Information contained in this section for the VEGA 6 project is summarized from the *Noise Impact Assessment for the VEGA SES 6 Solar and Battery Storage Project* prepared by ECORP Consulting, Inc. This report is included in Appendix I of this EIR.

3.11.1 Existing Conditions

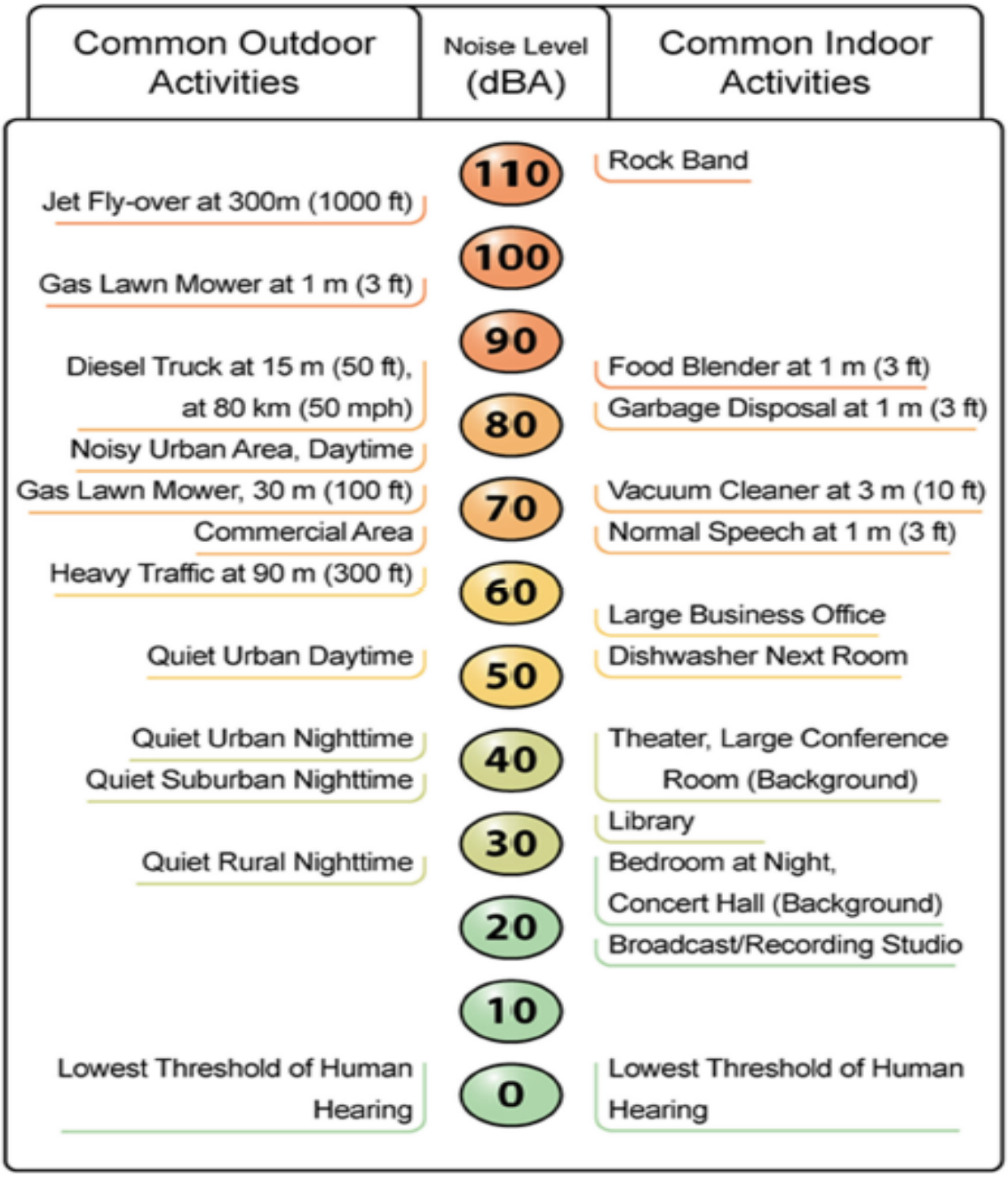
Noise is defined as unwanted sound. Pressure waves traveling through air exert a force registered by the human ear as sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level), which is measured in decibels (dB), with zero dB corresponding 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 and above 5,000 hertz 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 3.11-1.

Figure 3.11-1. Common Noise Levels



Source: Appendix I 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 I 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 I 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 I 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

VEGA 6

The most common noise in the VEGA 6 project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) traversing SR-78 and the various noises associated with agricultural equipment and vehicles traversing the various county paved and unpaved roadways. 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.

In order to quantify existing ambient noise levels in the VEGA 6 project area, ECORP Consulting, Inc. conducted four short-term noise measurements on July 14, 2021. The noise measurement sites were representative of typical existing noise exposure within the VEGA 6 project vicinity during the daytime. The 15-minute measurements were taken between 10 a.m. and 11:40 a.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. As shown in Table 3.11-1, the existing noise levels in the project vicinity range from 39.6 to 53.3 dBA L_{eq}.

Table 3.11-1. Existing (Baseline) Noise Measurements

Location No.	Location	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
1	Intersection of Garvey Road and Baughman Road	53.3	30.5	73.8	10:56 a.m. - 11:11 a.m.
2	North of Garvey Road and Orr Road Intersection	39.6	32.7	51.1	10:30 a.m. – 10:45 a.m.
3	Northwest Corner of Garvey Road and Buck Road Intersection	50.1	39.3	64.3	11:25 a.m. – 11:40 a.m.
4	West of Garvey Road on Shoulder, 0.5 Mile South of SR-78	45.4	30.6	58.4	10:00 a.m. – 10:15 a.m.

Source: Appendix I of this EIR

Ramon Substation Expansion

The most common noise in the vicinity of the Ramon Substation expansion area is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) traversing local roadways. Traffic moving along roadways produces a sound level that remains relatively constant and is part of the minimum ambient noise level in the vicinity.

Noise Sensitive Land Uses

VEGA 6

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 sensitive receptors to the VEGA 6 project site are depicted in Figure 3.11-2. The nearest existing noise-sensitive land use to the project site is a single-family residence located approximately 2,725 feet north of the northeastern corner of the solar energy facility site, just south of Garvey Road (labeled 1 in Figure 3.11-2). During construction occurring off-site along the gen-tie transmission line route, the nearest sensitive receptor would be 970 feet away from the gen-tie transmission line (labeled 2 in Figure 3.11-2) (Appendix I of this EIR).

Additional sensitive receptors near the project site include the following:

- Residence located approximately 0.85 mile north of the solar facility site, north of Buck Road/Garvey Road intersection
- Residence located approximately 1 mile north of solar facility site, north of Baughman Road/Garvey Road intersection
- Residence located approximately 1.21 miles north of solar facility site, north of Orr Road/Garvey Road intersection

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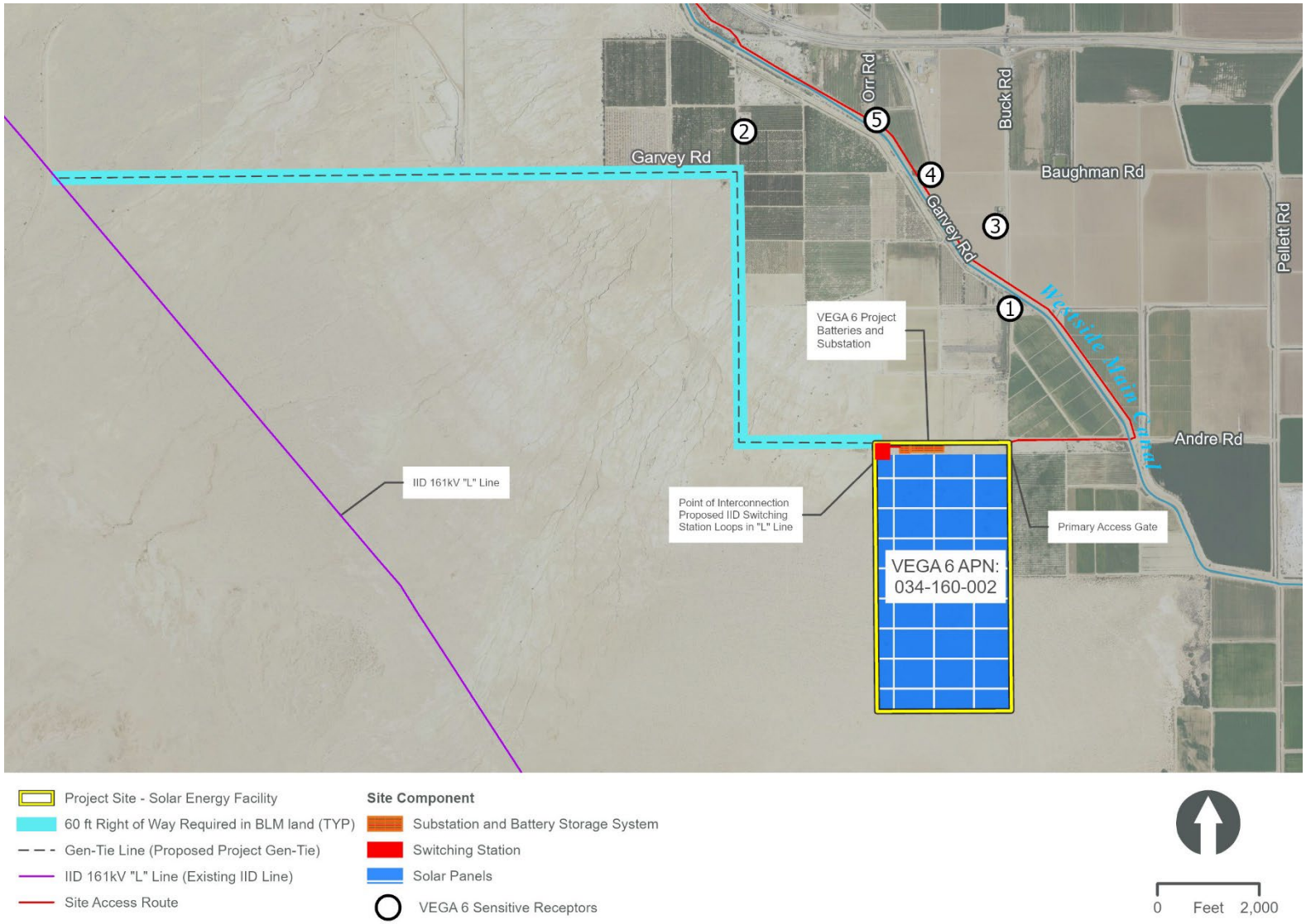
Figure 3.11-2. Nearest Sensitive Receptors to VEGA 6 Project Site



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Ramon Substation Expansion

Sensitive receptors in the vicinity of the proposed Ramon Substation expansion area are residences located west of the existing SCE Mirage Substation along Via Las Palmas and the Tri Palm Estates development along Ramon Road to the southwest. The nearest sensitive receptors to the expansion area are the single-family residences located approximately 0.2 miles to the west on Via Las Palmas.

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 I of this EIR).

Table 3.11-2 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 3.11-2 is considered very unlikely to cause damage to buildings of any type.

Table 3.11-2. 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	64 – 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 I 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 3.11-3.

Table 3.11-3. 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 I of this EIR

Proximity to Airports

VEGA 6

The VEGA 6 project site is not located within 2 miles of a public airport or a private airstrip. The nearest airport is the Brawley Municipal Airport located approximately 9.8 miles east of the VEGA 6 project site.

Ramon Substation Expansion

The nearest public airport is the Palm Springs International Airport located approximately 7 miles north of the Ramon Substation expansion area.

3.11.2 Regulatory Setting

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

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR, Part 205, Subpart B. The federal truck passersby noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers. In addition to noise standards for individual vehicles, under regulations established by the U.S. Department of Transportation's FHWA, noise abatement must be considered for certain federal or federally-funded projects. Abatement is an issue for new highways or significant modification of an existing freeway. The agency must determine if the project would create a substantial increase in noise or if the predicted noise levels approach or exceed the Noise Abatement Criteria.

State

The state has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (CCR, Title 24). The noise insulation standards set forth an interior standard of L_{dn} 45 dB for any habitable room. They also require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than Ldn 60 dB. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

The State of California General Plan Guidelines, published by the OPR in 1998, also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. The County of Imperial has utilized the adjustment factors provided and has modified the state's Land Use Compatibility standards for the purpose of implementing the Noise Element of its General Plan. Table 3.11-4 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.

Local

Imperial County General Plan

The County of Imperial General Plan Noise Element identifies and defines existing and future environmental noise levels from sources of noise within or adjacent to the County of Imperial;

establishes goals and objectives to address noise impacts, and provides Implementation Programs to implement adopted goals and objectives.

Table 3.11-5 summarizes the VEGA 6 project's consistency with the applicable General Plan noise policies. While this EIR analyzes the VEGA 6 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.

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 3.11-4. 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														

Land Use Category	Community Noise Exposure – L_{dn} or CNEL (dBA)													
	50		55		60		65		70		75		80	
Golf Courses, Riding Stables, Water Recreation, Cemeteries														
Office Buildings, Business, Commercial and Professional														
Industrial, Manufacturing, Utilities, Agriculture														

	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design.
	Normally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

Source: County of Imperial 2008

CNEL – community noise equivalent level; dBA – a-weighted decibel; L_{dn} – day-night average sound level

Table 3.11-5. Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Noise Element		
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 and off-site agricultural operations. Given that the VEGA 6 project is not characterized as a sensitive land use, project facilities would be unaffected by existing noise levels. The project facilities would be constructed within areas zoned for agricultural use with noise levels up to 70 dBA identified as normally acceptable. Project operations are expected to produce noise levels that would not exceed County standards and, hence impacts are expected to be less than significant. This EIR provides an analysis of the potential short- and long-term noise impacts of the project. As discussed, short-term and long-term noise levels were found to be less than significant.
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 S-2 zone. See Section 3.11.3 Existing Conditions 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 proposed VEGA 6 project. 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 S-2 zone.

General Plan Policies	Consistency with General Plan	Analysis
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	Please refer to above analysis for Interior Noise Environment for discussion.
6. Projects Which Generate Off-site Traffic Noise. The acoustical analysis shall identify and evaluate projects which will 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, Project Description, the project would involve a minimal number of operational related vehicle trips and therefore, is unlikely to substantially increase traffic noise levels on local roadways.

Source: County of Imperial 2015b
Note: dBA – a-weighted decibel

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 3.11-6).

Table 3.11-6. 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

Source: Imperial County Municipal Code Section 90702.00.
Note: dBA – a-weighted decibel; L_{eq} – equivalent sound level

Riverside County General Plan Noise Element

The County of Riverside has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of the County of Riverside from excessive exposure to noise. The Noise Element specifies the maximum allowable exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies several polices to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To protect County of Riverside residents from excessive noise, the Noise Element contains the following policies related to the proposed Ramon Substation expansion:

- **N 1.1:** Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.
- **N 1.3:** Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 CNEL:
    - Schools
    - Hospitals
    - Rest Homes
    - Long-Term Care Facilities
    - Mental Care Facilities
    - Residential Uses
    - Libraries
    - Passive Recreation Uses
    - Places of Worship
- **N 1.5:** Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.

- **N 4.1:** Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels:
    a. 45 dBA 10-minute L_{eq} between 10:00 p.m. and 7:00 a.m.;
    b. 65 dBA 10-minute L_{eq} between 7:00 a.m. and 10:00 p.m.
- **N 13.1:** Minimize the impacts of construction noise on adjacent uses within acceptable standards.
- **N 13.2:** Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse impacts on surrounding areas.
- **N 14.1:** Enforce the California Building Standards that sets standards for building construction to mitigate interior noise levels to the tolerable 45 CNEL limit. These standards are utilized in conjunction with the Uniform Building Code by the County's Building Department to ensure that noise protection is provided to the public. Some design features may include extra-dense insulation, double-paned windows, and dense construction materials.

Riverside County Construction Noise Standards

To control noise impacts associated with the construction of the proposed Ramon Substation expansion, the County of Riverside has established limits to the hours of operation. Section 9.52.020 of the County's Noise Regulation ordinance indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. Neither the County's General Plan nor Municipal Code establishes numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes. Therefore, a numerical construction threshold based on the FTA *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use.

Construction Vibration Standards

Construction activity can result in varying degrees of groundborne vibration, depending on the equipment and methods used, distance to the affected structures, and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. Occasionally large bulldozers and loaded trucks can cause perceptible vibration levels at close proximity.

The County of Riverside does not have vibration standards, but the County's General Plan Noise Element does contain the human reaction to typical vibration levels. Typical vibration levels between

10 and 30 Hertz with peak particle velocity of 0.0787 inches per second (in/sec) are considered readily perceptible and above 0.1968 in/sec are considered annoying to people in buildings. Further, County of Riverside General Plan Policy N 16.3 identifies a motion velocity perception threshold for vibration due to passing trains of 0.01 in/sec over the range of one to 100 Hz.

Riverside County Airport Land Use Compatibility Plan

The Riverside County ALUCP was adopted in October 2004 and establishes policies applicable to land use compatibility planning in the vicinity of airports throughout the County containing compatibility criteria and maps for the influence areas of individual airports. The ALUCP establishes safety zones that limit building heights, restrict hazardous materials and fuel tanks, bird-attracting industries, etc., from close proximity to airport runways. Chapter 2, Countywide Policies of the ALUCP, establishes Policy 4.1.4, which identifies the maximum CNEL considered normally acceptable for new residential land uses in the vicinity of an airport as 60 dBA CNEL. Further, Policy 4.1.6 of the ALUCP identifies an interior noise level limit of 45 dBA CNEL with windows closed for residential homes affected by aircraft-related noise.

3.11.3 Impacts and Mitigation Measures

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

Thresholds of Significance

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

- 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

VEGA 6

Noise generated by the proposed VEGA 6 project will consist of: (1) short duration noise resulting from construction activities and (2) noise during normal facility operations. Vibration from the proposed VEGA 6 project would only result during construction. Construction activities would take place only during daytime hours. An evaluation was performed of expected noise and vibration and compared to regulatory requirements.

Predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Noise Model (2006). Groundborne vibration levels associated with construction-related activities for the project have been 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 (Appendix I of this EIR).

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 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 SoundExpertLxT 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 Attachment D). 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.

Ramon Substation Expansion

Noise generated by the proposed Ramon Substation expansion will consist of: (1) short duration noise resulting from construction activities and (2) noise during normal facility operations. Vibration from the proposed VEGA 6 project would only result during construction. Construction activities would take place only during daytime hours. An evaluation was performed of expected noise and vibration and compared to regulatory requirements.

Impact Analysis

Impact 3.11-1 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?

VEGA 6

CONSTRUCTION

Onsite Solar and Battery Storage Facilities Construction Noise

Construction noise associated with the proposed VEGA 6 project would be temporary and would vary depending on the nature of the activities being performed. Noise generated from the proposed VEGA 6 project 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, pile drivers, 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 (Appendix I of this EIR).

The nearest sensitive receptor is located approximately 2,725 feet north of the northeastern corner of the solar energy facility site project site. 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 eight-hour period, and measured at the nearest sensitive receptor. This standard, established by the County to prevent physical and mental damage consistent with exposure to excessive noise, assumes a construction period, relative to an individual sensitive receptor of days or weeks.

The anticipated short-term construction noise levels generated for the necessary construction equipment during the onsite solar and battery storage facility component of the proposed VEGA 6 project are presented in Table 3.11-7. As shown in Table 3.11-7, 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. Therefore, the proposed VEGA 6 project would not generate a substantial temporary increase in ambient noise levels in the vicinity of the VEGA 6 project site 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.

Table 3.11-7. Construction Average Noise Levels at the Nearest Receptor – Solar/Battery Storage Facility

Combined Equipment	Construction Noise Level (dBA L_{eq}) at:		
	Estimated Exterior Construction Noise Level at Nearest Residence	Construction Noise Standards	Exceed Standards?
Site Preparation	52.9	75	No
Grading	53.5	75	No
Construction	53.4	75	No
Paving	51.8	75	No

Source: Appendix I of this EIR

Gen-Tie Transmission Line Construction Noise

Construction noise associated with the VEGA 6 project's gen-tie transmission line route 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 construction activities as well as construction vehicle traffic on area roadways.

Nearby noise-sensitive land uses consist of a scattering of single-family residential units located north and east of the gen-tie line route, with the closest residence located along Garvey Road, approximately 970 feet north of the gen-tie line route. 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 Leq, when averaged over an eight-hour period, and measured at the nearest sensitive receptor.

The anticipated short-term construction noise levels generated for the necessary construction equipment during the gen-tie line component of the proposed VEGA 6 project are presented in Table 3.11-8. As shown in Table 3.11-8, construction of the gen-tie line would not exceed the significance threshold of 75 dBA at the nearest sensitive receptor. Therefore, the proposed VEGA 6 project would not generate a substantial temporary 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 during construction. Impacts would be less than significant.

Table 3.11-8. Construction Noise Levels at Nearest Receptor – Gen-Tie Line

Combined Equipment	Estimated Exterior Noise Level at Nearest Sensitive Receptor (970 feet)	Construction Noise Standards (dBA L_{eq})	Exceed Standards?
Grading	55.1	75	No
Construction	65.4	75	No

Source: Appendix I of this EIR

OPERATION

Off-Site Traffic Noise

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 only be necessary infrequently. 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. According to the *Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 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) (Appendix I of this EIR). The proposed VEGA 6 project would not result in a doubling of traffic, therefore, its contribution to existing traffic noise would not be perceptible.

Project Operations Noise Sources

The main stationary operational noise associated with the VEGA 6 project would be from the proposed transformers, inverters, substation, and gen-tie line. The main stationary operational noise associated with the offsite gen-tie line would be Corona Discharge. Corona is the electrical breakdown of the air into charged particles, which may result in audible noise. During Corona activity, the transmission line sometimes generate a small amount of sound energy. Audible noise generated by Corona discharge is typically described as a crackling or humming sound. Audible Corona noise levels for a typical 230-kV line are approximately 25 dBA at locations within approximately 25 feet of the power line corridor, or 51.1 dBA at the source (Appendix I of this EIR). 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. The results of this model can be found in Appendix I of this EIR. Table 3.11-9 and Figure 3.11-3 shows the predicted project noise levels at the nearest noise-sensitive land uses in the project vicinity, as predicted by SoundPLAN. As shown in Table 3.11-9, the VEGA 6 project's operational noise would not exceed the County's daytime or nighttime standards. Therefore, impacts would be less than significant.

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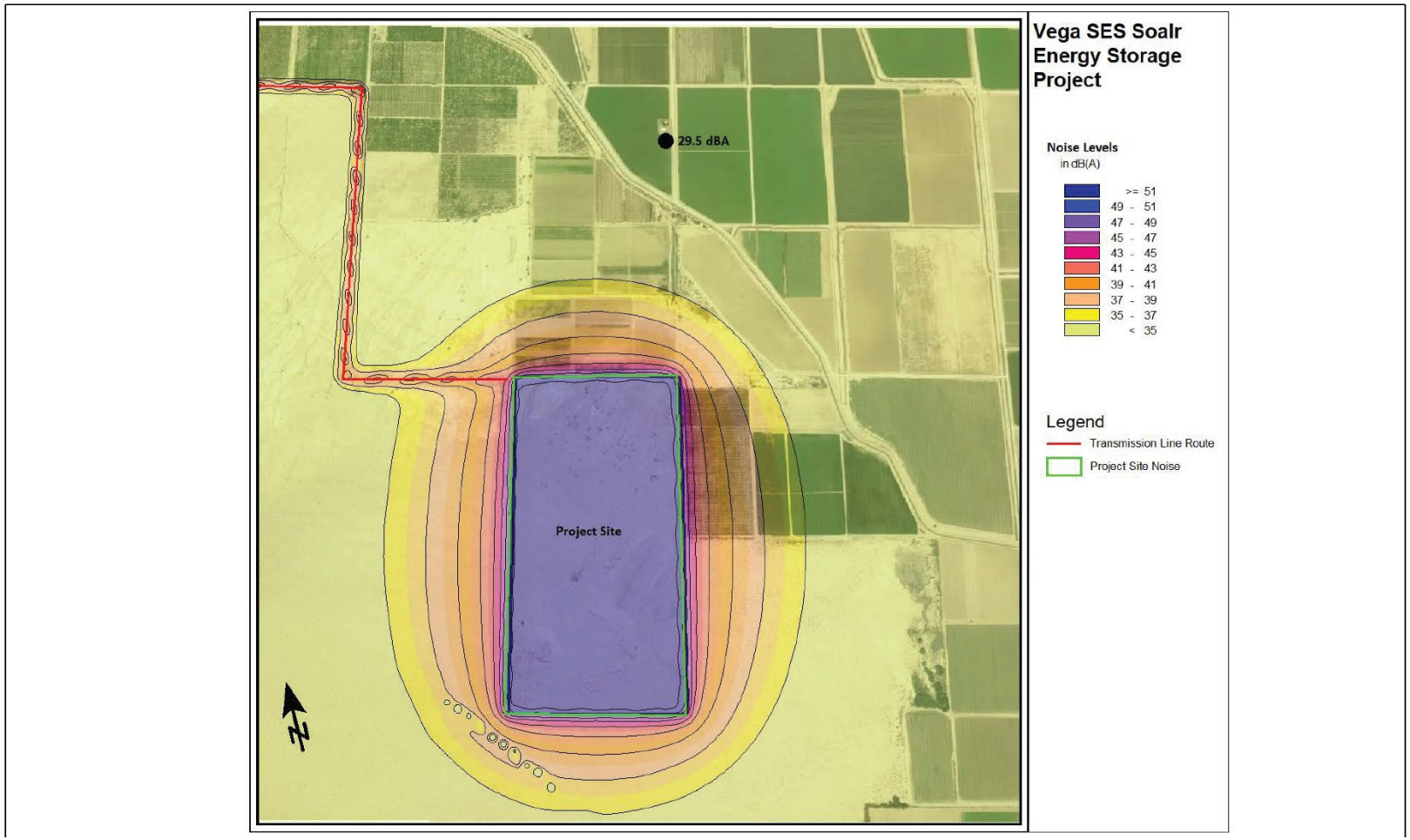
Figure 3.11-3. SoundPLAN Noise Map – Modeled Operational Noise Levels



Source: Appendix I of this EIR

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Table 3.11-9. Modeled Operational-Noise at Nearest Sensitive Receptor

Location	Modeled Noise Attributed to Project (L_{eq} dBA)	County Daytime Standard (L_{eq} dBA)	County Nighttime Standard (L_{eq} dBA)	Exceed Standard?
1) Residence located north of project site, across aqueduct from Buck Road/Garvey Road intersection	29.5	50.0	45.0	No

Source: Appendix I of this EIR

Ramon Substation Expansion

CONSTRUCTION

Construction noise, although temporary, can be a source of concern for sensitive receptors, such as nearby residences. The construction of the Ramon Substation expansion is estimated to take 180 working days and would begin in 2024. Construction of the proposed expansion will require the use of heavy equipment that may be periodically audible at off-site locations. Received sound levels will fluctuate, depending on the construction activity, equipment type, and distance between noise source and receiver. Additionally, sound from construction equipment will vary dependent on the construction phase and the number and class of equipment at a location at any given time.

The noisiest activities for the proposed expansion would be during the site clearing and grading phases when graders, loaders, and dozers would be used. The construction equipment associated with these activities would generate noise levels of up to 85 dBA Lmax at 50 feet. Although unlikely, two pieces of construction equipment could operate at their maximum noise level simultaneously. For every doubling of acoustic energy the noise level, measured in dBA, increases by 3. Therefore, two pieces of equipment, each operating at a noise level of 85 dBA, would generate a noise level of 88 dBA Lmax at 50 feet. 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. The nearest sensitive receptors to the expansion area are the single-family residences located approximately 0.2 miles (1,056 feet) to the west on Via Las Palmas. Due to the distance of the nearest sensitive receptor (1,056 feet) and sound level attenuation with distance, construction noise would not exceed FTA's daytime exterior construction noise level of 80 dBA L_{eq}. Furthermore, Section 9.52.020 of the Riverside County's Noise Regulation ordinance indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. The proposed Ramon Substation expansion's potential noise impacts during construction would be less than significant.

OPERATION

The proposed transformers at the substation will generate only minimal operational noise and anticipated to be similar to existing operations. Operation and cooling fans may emit noticeable noise within the enclosed substation. However, no sensitive noise receptors are located immediately adjacent to the substation site. Therefore, a less than significant impact is identified for this issue area.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.11-2 Would the project generate excessive groundborne vibration or groundborne noise levels?

VEGA 6

CONSTRUCTION

Construction on the VEGA 6 project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved.

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. Pile drivers would be necessary during project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the project site 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 3.11-3.

The County of Imperial does not regulate vibrations associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans recommended standard of 0.2 inch per second PPV with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings. Consistent with FTA recommendations for calculating construction vibration, construction vibration was measured from the center of the project site (Appendix I of this EIR). The nearest structure of concern to the construction site, with regard to groundborne vibrations, is an abandoned building located 1,282 feet from the VEGA 6 project site boundary.

Table 3.11-10 presents the expected project related vibration levels from the nearest structure (1,282 feet from VEGA 6 project site boundary). As shown in Table 3.11-10, vibration as a result of project construction activities would not exceed 0.2 PPV at the nearest structure. Therefore, project construction would not exceed the recommended Caltrans threshold, and impacts would be considered less than significant.

Table 3.11-10. Construction Vibration Levels at Nearest Structure

Receiver PPV Levels (in/sec)[1]					Peak Vibration	Threshold	Exceed Threshold?
Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jackhammer	Pile Driver	Vibratory Roller			
0.0002	0.0002	0.0001	0.0004	0.0006	0.0006	0.2	No

Source: Appendix I of this EIR

Notes: [1]Based on the Vibration Source Levels of Construction Equipment on Table 5-5 of Appendix I of EIR. Distance to the nearest structure of concern is approximately 1,282 feet measured from project site boundary.

OPERATION

Project operations would not include the use of any large-scale stationary equipment that would result in excessive vibration levels. Therefore, no groundborne vibration impacts would occur during operation of the VEGA 6 project.

Ramon Substation Expansion

CONSTRUCTION

The proposed Ramon Substation expansion's construction activities have the potential to generate low levels of groundborne vibration as the operation of heavy construction equipment (graders, dozers, etc.) generates vibrations that propagate though the ground and diminishes in intensity with distance from the source. As such, the existing sensitive uses (i.e., nearby residences) located near the expansion area could be exposed to excessive groundborne vibration or groundborne noise levels during the project's construction activities. Site ground vibrations from construction activities very rarely reach the levels that can damage structures, but they may be perceived in buildings very close to a construction site. No pile-driving or blasting activities would be required for construction of the proposed project components. The various PPV for several types of construction equipment, along with their corresponding root mean square (RMS) velocities (in vibration decibels [VdB]), that can generate perceptible vibration levels are identified in Table 3.11-11. Based on the information presented in Table 3.11-1, vibration velocities could reach as high as approximately 0.089 inch-per-second PPV at 25 feet from the source activity, depending on the type of construction equipment in use. This corresponds to an RMS velocity level of 87 VdB at 25 feet from the source activity. The construction equipment used for the Ramon Substation expansion would generally consist of off-road construction equipment such as dozers, graders, and scrapers. As shown in Table 3.11-1, even at 100 feet, the vibration from equipment such as a large bulldozer would be 0.011, which is considered to be barely perceptible under Caltrans' criteria. Therefore, because the nearest off-site sensitive receptor to the project site is 1,056 feet away, the vibration levels at this nearest receptor would be attenuated and would not exceed any of Caltrans' vibration criteria related to building damage or human perception/annoyance. As such, vibration impacts would be less than significant.

Table 3.11-11. Vibration Source Levels for Construction Equipment

	Approximate PPV (in/sec)					Approximate RMS (VdB)				
Equipment	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet
Large Bulldozer	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69
Caisson Drilling	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69
Loaded Trucks	0.076	0.027	0.020	0.015	0.010	86	77	75	72	68
Jackhammer	0.035	0.012	0.009	0.007	0.004	79	70	68	65	61
Small Bulldozer	0.003	0.001	0.0008	0.0006	0.0004	58	49	47	44	40

Source: FTA, 2018.

OPERATION

Long-term operation is not anticipated to result in perceptible levels of groundborne vibration or groundborne noise. Therefore, a less than significant impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.11-3 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?

VEGA 6

The VEGA 6 project site is not located within 2 miles of a public airport or a private airstrip. As previously mentioned, the nearest airport is Brawley Municipal Airport located approximately 9.8 miles east of the VEGA 6 project site. As identified in the Imperial County Airport Land Use Compatibility Maps, the VEGA 6 project site is located outside of the noise contours of the Brawley Municipal Airport. Therefore, the VEGA 6 project would not expose people to excessive airport noise levels and no impact is identified.

Ramon Substation Expansion

The nearest public airport is the Palm Springs International Airport located approximately 7 miles north of the Ramon Substation expansion area. According to the Noise Compatibility Contours for the Palm Springs International Airport, the Ramon Substation expansion area is located outside of the noise contours of the Palm Springs International Airport. Therefore, the proposed Ramon Substation expansion would not expose people to excessive airport noise levels and no impact is identified.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

3.11.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Decommissioning or restoration of the project site would use similar equipment to what was evaluated in the construction noise and vibration analysis. Adhering to the County's construction hours would reduce the noise and vibration impacts to below a level of significance.

Residual

Adhering to the County's construction hours would reduce the noise and vibration impacts to below a level of significance.

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3.12 Public Services

This section includes an evaluation of potential impacts for identified public services that could result from implementation of the proposed VEGA 6 project and Ramon Substation expansion. Public services typically include fire protection, law enforcement, schools, and other public facilities such as parks, libraries, and post offices. Each subsection includes descriptions of existing facilities, service standards, and potential environmental impacts resulting from implementation of the proposed VEGA 6 project and Ramon Substation expansion, and mitigation measures where appropriate. Section 3.15, Utilities/Service Systems, of this EIR evaluates impacts related to water supply, wastewater, and other utilities. The impact assessment provides an evaluation of potential adverse effects to public services based on criteria derived from the CEQA Guidelines in conjunction with actions proposed in Chapter 2, Project Description.

The IS/NOP prepared for this EIR determined that the VEGA 6 project would not result in impacts on schools, parks and other public facilities (libraries and post offices). Therefore, these issue areas will not be discussed further and are included in Chapter 6, Effects Found Not Significant, of this EIR. The IS/NOP is included in Appendix A of this EIR.

3.12.1 Existing Conditions

VEGA 6

The VEGA 6 project site is located in unincorporated County, approximately 10 miles west from the City of Brawley approximately 5 miles southwest of the community of Westmorland. The VEGA 6 project site is located within the Imperial County Fire Department (ICFD)/Office of Energy Services (OES) and the Imperial County Sheriff Department's areas of service.

Fire Protection Services

The project site is located within the ICFD/OES area of service. ICFD/OES currently has nine fire stations and six contracting agencies serving the entire 4,500 square miles of unincorporated Imperial County. The nine ICFD stations are located in the communities of Heber, Seeley, Ocotillo, Palo Verde, Niland, Winterhaven, Salton City, and the City of Imperial (ICFD 2019). Each of the county fire stations is staffed with a Captain, Firefighter, and Reserve Firefighter with the only exception being the Palo Verde station that is staffed with a Firefighter and Reserve Firefighter. Every fire station has a Type I engine as its primary apparatus. The City of Imperial and Heber stations also house a Ladder Truck along with the Type I engine. The Seeley and Heber stations also house Type III engines. The ICFD Emergency Units strive to respond immediately after receiving the initial tone for service. The actual response time would be determined by the area of response throughout the vast response area covered.

The closest fire station to the project is site is the Imperial station located at 2514 La Brucherie Road in Imperial, California. This station is located approximately 14 miles southeast of the project site.

Police Protection Services

Imperial County's Sheriff's Department is responsible for police protection services in the unincorporated areas of Imperial County and the City of Holtville. The patrol function is divided between North County Patrol, South County Patrol, East County Operations, and City of Holtville. Deputies assigned to the Patrol Divisions are the "first responders" to a call for law enforcement

service. The main patrol station is located in El Centro on Applestill Road. Sheriff substations are located in the communities of Brawley, Niland, Salton City, and Winterhaven with resident deputies located in the unincorporated community of Palo Verde. Under an existing mutual aid agreement, additional law enforcement services would be provided if and when required by all of the cities within the county, as well as with Border Patrol and the California Highway Patrol. The California Highway Patrol provides traffic regulation enforcement, emergency accident management, and service and assistance on state roadways and other major roadways in the unincorporated portions of Imperial County.

The closest sheriff's station to the project site is located at 220 Main St #207 in Brawley, California. This station is approximately 9 miles southeast of the project site.

Ramon Substation Expansion

Fire Protection Services

Fire protection services for the project site are provided by the Riverside County Fire Department (RCFD). Regionally, RCFD provides fire, emergency medical, and rescue services from 94 stations. RCFD serves over 2.5 million residents throughout 20 cities and all unincorporated portions of Riverside County. The Ramon Substation expansion area is located within the Battalion 10 response area. RCFD Station No. 35 located at 31920 Robert Road in Thousand Palms is the closest fire station and would provide initial response to the Ramon Substation expansion area. This station is approximately 1.7 miles west of the expansion area.

Police Protection Services

The Riverside County Sheriff's Department provides community policing for the Ramon Substation expansion area. The sheriff station serving the expansion area is the Palm Desert Station, located at 73705 Gerald Ford Drive, approximately 2.3 miles south of the expansion area. In addition to community policing, other services provided by the Sheriff's Department include, but are not limited to, operating of the emergency 911 system, operating correctional facilities, performing traffic control, and providing crime prevention education.

3.12.2 Regulatory Setting

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

State

Fire Codes and Guidelines

The California Fire Code (Title 24, Part 9 of the CCR) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such

as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

Local

Imperial County General Plan

The Imperial County General Plan Seismic and Public Safety Element contains goals and objectives that relate to fire protection and law enforcement pertinent to the proposed VEGA 6 project. An analysis of the project's consistency with the applicable goals and objectives of the Seismic and Public Safety Element is provided in Table 3.12-1.

Table 3.12-1. Project Consistency with Applicable General Plan Seismic and Public Safety Element

Applicable General Plan Policies	Consistency Determination	Analysis
Seismic and Public Safety		
Goal 1: Include public health and safety considerations in land use planning.	Consistent	The VEGA 6 project's CUP application and site plan will be reviewed by the Imperial County Fire Department to ensure that the facility complies with state and local fire codes and fire safety features are met.
Objective 1.8: Reduce fire hazards by the design of new developments		
Goal 2: Minimize potential hazards to public health, safety, and welfare and prevent the loss of life and damage to health and property resulting from both natural and human-related phenomena.	Consistent	See response above for a discussion on how the VEGA 6 project would implement all state and local fire codes to reduce the potential for fire hazards. With regards to public safety and security, the VEGA 6 project would include 6-foot tall perimeter security fencing with barbed wire and a motion detection system and closed-circuit camera system. In addition, the points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders.
Objective 2.5: Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.		

Source: ICPDS 1997
CUP = conditional use permit

Imperial County Office of Emergency Services – Multi-Hazard Mitigation Plan

The ICFD is the local Office of Emergency services in Imperial County. Imperial County has developed the multi-jurisdictional hazard mitigation plan (MHMP) to create a safer community. The purpose of

the MHMP is to significantly reduce deaths, injuries, and other disaster losses caused by natural and human-caused hazards in Imperial County. The MHMP describes past and current hazard mitigation activities and outlines goals, strategies, and actions for reducing future disaster losses. The Imperial County MHMP is the representation of the County's commitment to reduce risks from natural and other hazards and serves as a guide for decision-makers as they commit resources to reducing the effects of natural and other hazards. The jurisdictions included in the MHMP include the cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmoreland, the IID and the Imperial County Office of Education. The MHMP complies with all federal, state, and local laws guiding disaster management.

Imperial County Emergency Operations Plan

The Imperial County Emergency Operations Plan (EOP) provides guidance and procedures for the County to prepare for and respond to emergencies. The EOP designates the Sheriff's Department as having jurisdiction in an emergency involving evacuation within the unincorporated areas of the county and within contract cities.

Riverside County General Plan

The Riverside County General Plan includes several policies related to public services that are enforced to minimize the potential impacts on the County's citizens, property, and economy.

LAND USE ELEMENT

- **LU 5.1** Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers transportation systems, and fire/police/medical services.
- **LU 5.2** Monitor the capacities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of service.
- **LU 10.1** Require that new development contribute their fair share to fund infrastructure and public facilities such as police and fire facilities.

Riverside County Ordinance No. 787 – Fire Code Standards

Ordinance No. 787 is also known as the County's Uniform Fire Code adopts the most recent 2019 California Fire Code, California Code Regulations, Title 24, Part 9 to govern the safeguarding of life and property from fire, explosion hazards, and hazardous conditions and to regulate the issuance of permits and collection of fees.

3.12.3 Impacts and Mitigation Measures

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

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to public services are considered significant if the project would result in the provision of new or physically altered governmental facilities,

need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire protection
- Police protection
- Schools
- Parks
- Other Public Facilities

As mentioned previously, it was determined through the preparation of an IS/NOP that the VEGA 6 project would not result in impacts on schools, parks, or other public facilities. Therefore, those issue areas will not be discussed further and are included in Chapter 6, Effects Found Not Significant, of this EIR.

Methodology

Evaluation of potential fire and police service impacts of the proposed VEGA 6 project was based on consultation with the ICFD, Sheriff's Department and review of other development projects in the area. Evaluation of potential fire and police service impacts of the proposed Ramon Substation expansion was based on consultation with the RCFD and Sheriff's Department.

Impact Analysis

Impact 3.12-1 Would the project result in the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?

VEGA 6

The VEGA 6 project would result in a minor increase in demand for fire protection services over existing levels. No operation and maintenance (O&M) buildings are being proposed. Additional auxiliary facilities would include lighting, grounding, , fire and hazardous materials safety systems, security systems, chemical safety systems, and emergency response facilities. The VEGA 6 project also includes a BESS, located near the proposed substation. The BESS would consist of either lithium ion or flow batteries, capable of storing up to 160 MW. The batteries will either be housed in storage containers or buildings fitted with heating, ventilation, and air conditioning and fire suppression systems.

The VEGA 6 project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low. As discussed in Chapter 2, Project Description, primary access to the VEGA 6 project site would be located off SR 78, across the Westside Main Canal via county roadways (Garvey Road and Andre Road). Internal to the solar energy facility site, up to 30-foot-wide roads would be provided between the PV arrays, as well as around the perimeter of the solar energy facility site yet inside the perimeter security fence to provide access to all areas of the site for maintenance and emergency vehicles. Points of ingress/egress would

be accessed via locked gates that can be opened by any emergency responders. Although the proposed VEGA 6 project would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements (e.g., CPUC safety standards), the project applicant will be required to consult and coordinate with the Fire Department to address any fire safety and service concerns (i.e, BESS) so that adequate service is maintained. While the VEGA 6 proposed project may result in an increase in demand for fire protection service, with installation of internal fire prevention systems and ICFD consultation, the VEGA 6 project would not result in an increase in demand that would, in turn, result in a substantial adverse physical impact associated with the provision of new or physically altered fire protection facilities; the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services. Based on these considerations, the VEGA 6 project would not result in a need for fire facility expansion and a less than significant impact would occur.

Imperial County requires payment of impact fees for new development projects. Fire Impact Fees are imposed pursuant to Ordinance 1418 §2 (2006), which was drafted in accordance with the County's TischlerBise Impact Fee Study. The ordinance has provisions for non-residential industrial projects based on square footage. The project applicant will be required to pay the fire protection services' impact fees. These fees would be included in the Conditions of Approval for the CUP. No new fire stations or facilities would be required to serve the project. Impacts would therefore be less than significant.

Ramon Substation Expansion

The proposed Ramon Substation expansion would not require fire protection services during construction or operation and maintenance beyond response. The Ramon Substation expansion area would continue to be adequately supported by the existing fire protection services since the construction and operation of the substation expansion would not induce growth in the project area and the fire risk would not create the need for new or physically altered fire protection facilities. Operation and maintenance would not affect the ability of fire personnel to respond to fires. The proposed Ramon Substation expansion is not anticipated to result in the need for fire protection facilities, such as a new fire station or the expansion of existing facilities, and thus impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

Impact 3.12-2 Would the project result in the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

VEGA 6

The VEGA 6 project does not include a residential component; therefore, it would not result in a substantial addition of residents to the Sheriff Department's service area. Although the potential is low, the proposed VEGA 6 project may attract vandals or other security risks and the increase in construction related traffic could increase demand on law enforcement services. Six-foot high chain link fencing topped with barbed wire would be installed around the perimeter of the solar facility site

at the commencement of construction and site access would be limited to authorized site workers. Points of ingress/egress would be accessed via locked gates. In addition, a motion detection system and closed-circuit camera system may also be installed. The site would be remotely monitored 24 hours per day, 7 days per week. In addition, periodic on-site personnel visitations for security would occur during operations and maintenance of the proposed VEGA 6 project, thereby minimizing the need for police surveillance.

The proposed VEGA 6 project may result in a temporary increase in demand for law enforcement service due to the presence of construction equipment and material being stored on-site. With installation of the proposed security features on the project site, the proposed project would not result in an increase in demand that would, in turn, result in a substantial adverse physical impact associated with the provision of new or physically altered sheriff facilities; the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services. As conditions of approval of the project, the project applicant will be required to participate in the Imperial County Public Benefit Program for the life of this CUP and shall at all times be a party to a public benefit agreement in a form acceptable to County Counsel in order to pay for all costs, benefits, and fees associated with the approved project, and the applicant will be required to reimburse the Sheriff's Department for any investigations regarding theft on the project site and related law enforcement. Approval of this public benefit agreement will be by the Board of Supervisors prior to the issuance of the first building permit. These potential impacts are less than significant.

Ramon Substation Expansion

The proposed Ramon Substation expansion would not require police services during construction or operation and maintenance beyond routine patrols and response. The proposed Ramon Substation expansion does not include a residential component; therefore, it would not result in a substantial addition of residents to the Riverside County Sheriff Department's service area. Construction and operation of the Ramon Substation expansion would not induce growth in the project area that would result in the permanent, and increased need of police protection services. The proposed Ramon Substation expansion is not anticipated to result in the need for law enforcement facilities, such as a new sheriff station or the expansion of existing facilities, and thus impacts would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.12.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Decommissioning and restoration of the project site would occur and would not result in an increased need for fire and police protection services. Decommissioning of the project would occur through implementation of a required Reclamation Plan. These activities would be in the form of disassembling project components, including the BESS, and then restoring the site to pre-project conditions, both of which would not create an increase in demand for police or fire service beyond the

level required for the proposed solar operations. Therefore, no impact is identified and no mitigation is required for this phase.

Residual

With payment of the development impact fees for fire and police protection services, project impacts would be less than significant. No mitigation is required, and no residual significant and unmitigated impacts would result.

3.13 Transportation

This section addresses the potential impacts on traffic and the surrounding roadway network associated with construction and operation of the proposed VEGA 6 project and Ramon Substation expansion. 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 VEGA 6 project and Ramon Substation expansion. Information contained in this section for the VEGA 6 project is summarized from the *VEGA SES 6 Solar Energy Storage Project Traffic Impact Study* prepared by KOA. This report is included in Appendix J of this EIR. The information provided in this section for the Ramon Substation expansion is summarized from review of publicly available data including the Riverside County General Plan and County of Riverside Transportation Analysis Guidelines.

3.13.1 Existing Conditions

VEGA 6

Existing Circulation Network

The following is a description of the nearby roadway network:

State Route (SR) 78/86 south of Westmorland is a four-lane divided highway. It has recently been widened to provide two lanes in each direction with left turn bays provided. Within the City of Westmorland, the route transitions to a four-lane roadway (named Main Street) with a center two-way left turn lane provided. The intersection of Main Street and Center Street is signalized. West of Martin Road, SR 78/86 transitions back to a four-lane divided highway.

Center Street is a two-lane street in the City of Westmorland. Diagonal parking is provided on the two blocks south of Main Street. Outside the City, this roadway is Forrester Road a two-lane rural county highway.

Baughman Road/Martin Road are two lane roads that are partly in the County and partly in the City of Westmorland. These roads are paved, and they are used by heavy vehicles and other vehicles connecting between SR 78/86 and Forrester Road.

Traffic Study Area

The traffic study area for the proposed VEGA 6 project was based on the County of Imperial Department of Public Works Traffic Study and Report Policy approved by the Board of Supervisors

INTERSECTIONS

The traffic study area for the proposed VEGA 6 project includes the following intersections:

1. Buck Road and SR/78/86 (located west of Westmorland)
2. Martin Road and SR-78/86 (located on the west edge of Westmorland)
3. Center Street and SR-78/86 (located midway in Westmorland)
4. Boarts Road (CR-26) and SR-78/86 (located on the eastside of Westmorland)
5. SR-86 and SR-78 (Brawley Bypass)

ROADWAY SEGMENTS

The traffic study area for the proposed VEGA 6 project includes the following roadway segments:

1. SR-78/86 from SR-78/86 from the Buck Road to the north
2. SR-78/86 from Buck Road to Martin Road
3. SR-78/86 from Martin Road to Center Street
4. SR-78/86 SR-7 from Center Street to Boarts Road (CR-26)
5. SR-78/86 SR-7 from Boarts Road (CR-26) to Brawley Bypass
6. Center Street from Baughman Road to SR 78/86

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 C or better during the AM and PM peak hours under existing conditions.

ROADWAY SEGMENTS

All of the study area 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, Ocotillo and the east side of the Salton Sea.
- **Remote Zone Routes.** Remote zone route operates once a week. These routes are "lifeline" in nature in that they provide connections from some of the more distant communities in the Imperial County area (IVT 2021).

The VEGA 6 project site is not within the Fixed Route Transportation system and, therefore, would not receive regular bus service to the VEGA 6 project site or within the vicinity of the VEGA 6 project site. The nearest IVT bus stop is located in the City of Westmorland at Main Street and Center Street, approximately 4.4 miles northeast of the VEGA 6 project site.

BICYCLE FACILITIES

The VEGA 6 project site is located within a rural portion of Imperial County. There are no bicycle facilities in the immediate proximity of the VEGA 6 project site.

Project Site Access

Access to and from the VEGA 6 project site will be provided from the intersection of SR-78/86 at Buck Road. The access route will include Buck Road between SR 78/86 and Garvey Road, and Garvey Road between Buck Road to Andres Road. Vehicles will cross over the Westside Main Canal on Andre Road.

Ramon Substation Expansion

Existing Circulation Network

The following is a description of the nearby roadway network:

Ramon Road is identified as an arterial (128-foot ROW) in the Riverside County General Plan. Ramon Road is a two-lane arterial in Thousand Palms, California. The Thousand Palms area is located along Interstate 10 at the intersection of Ramon Road. This unincorporated area is characterized by mobile home subdivisions, single-family residential neighborhoods, and rural residential development. Commercial and industrial developments are located along Ramon Road and Varner Road. Tourist-oriented commercial uses such as truck stops, motels, and fast-food restaurants are located at the interchanges of Interstate 10 with Ramon Road and, to a lesser extent, Monterey Avenue.

Interstate 10 is a six-lane divided highway with three lanes provided in each direction within proximity of the Ramon Substation Expansion project.

Alternative/Public Transportation

FIXED ROUTE TRANSPORTATION

The public transit system alternatives for Riverside County include fixed route public transit systems, common bus carriers, AMTRAK (intercity rail service), Metrolink (commuter rail service), and other local agency transit and paratransit services.

The Riverside Transit Agency (RTA) operates fixed bus routes providing public transit service throughout a 2,500- square-mile area of western Riverside County. RTA's fixed routes have been designed to establish transportation connections between all cities and unincorporated communities in western Riverside County. RTA currently operates full-size buses, mini-buses, vans, and trolleys.

SunLine Transit Agency (SunLine) provides public interest transit services for the Coachella Valley and Yucca Valley areas of Riverside County. RTA 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, RTA 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 Riverside County.

The Ramon Substation expansion area is not within the Fixed Route Transportation system and, therefore, would not receive regular bus service to the Ramon Substation expansion area or within the vicinity of the Ramon Substation expansion area.

BICYCLE FACILITIES

The Ramon Substation expansion area is located within a rural portion of Riverside County. There are no bicycle facilities in the immediate proximity of the Ramon Substation expansion area.

Project Site Access

Access to and from the Ramon Substation expansion area will be provided via Ramon Road.

3.13.2 Regulatory Setting

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

State

Senate Bill 743

In September 2013, the Governor's Office signed Senate Bill 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. Within the State's CEQA Guidelines, these changes include the elimination of Auto Delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. The guidance identifies vehicle miles traveled (VMT) as the most appropriate CEQA transportation metric, along with the elimination of Auto Delay/LOS for CEQA purposes statewide. The justification for this paradigm shift is that Auto Delay/LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

California Department of Transportation

Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Specifically, Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System.

As it relates to the proposed VEGA 6 project and potential construction access routes within Imperial County, Caltrans District 11 is responsible for maintaining and managing I-8 and SR-78/86.

Regional

Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (ConnectSoCal)

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

Imperial County General Plan

The Circulation and Scenic Highways Element identifies the location and extent of transportation routes and facilities. It is intended to meet the transportation needs of local residents and businesses and as a source for regional coordination. The inclusion of Scenic Highways provides a means of protecting and enhancing scenic resources within highway corridors in Imperial County. The purpose of the Circulation and Scenic Highways Element is to provide a comprehensive document which contains the latest knowledge about the transportation needs of the County and the various modes available to meet these needs. Additionally, the purpose of this Element is to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

Coordination across jurisdictional standards for road classification and design standards was identified as a crucial component to the 2008 update of the Circulation and Scenic Highways Element. The intent of this element is to provide a system of roads and streets that operate at a LOS "C" or better (County of Imperial 2008).

County of Imperial Bicycle Master Plan Update: Final Plan

In 2012, the County of Imperial adopted an updated Bicycle Master Plan to serve as the guiding document for the development of an integrated network of bicycle facilities and supporting programs designed to link the unincorporated areas and attractive land uses throughout the County. This document is an update to the previously adopted Countywide Bicycle Master Plan; and was prepared to accomplish the following goals:

1. To promote bicycling as a viable travel choice for users of all abilities in the County
2. To provide a safe and comprehensive regional connected bikeway network
3. To enhance environmental quality, public health, recreation and mobility benefits for the County through increased bicycling

The County of Imperial's General Plan, Circulation and Scenic Highways Element, and Conservation and Open Space Element, provide a solid planning basis for the Bicycle Master Plan. In spite of the fact that there are a limited number of bicycle facilities in Imperial County and no comprehensive bicycle system, there is a growing interest in cycling and numerous cyclists bike on a regular basis for both recreation and commuting to work and school.

County of Riverside Transportation Analysis Guidelines

The purpose of the Transportation Analysis Guidelines is to provide instructions for analyzing projects in compliance with (1) the Riverside County's General Plan policies and (2) transportation related Vehicle Miles Traveled analysis as required under CEQA. All projects, whether public or private, requiring a discretionary approval trigger the CEQA review process. The objective of this process, in part, is to identify significant environmental impacts, including those from transportation impacts.

Certain types of projects, because of their size, nature, or location, are exempt from the requirement of preparing a LOS analysis. The following types of projects are generally exempt from preparing a LOS analysis:

1. All Residential Parcel Maps.
2. Single Family Residential Tracts of less than 100 lots.
3. Apartments and other Multiple Family projects of less than 150 units.
4. Plot Plan and Uses Cases for projects of one acre or less.
5. Preschools, Elementary Schools and Middle Schools.
6. Churches, Lodges, Community Centers, Neighborhood Parks and Community Parks.
7. Mini Storage Yards
8. Congregate Care Facilities that contain significant special services, such as medical facilities, dining facilities, recreation facilities and support retail facilities.
9. Level 1 projects (100-200 peak hour trips) in areas where a comprehensive traffic analysis has been performed and road improvement infrastructure funding mechanisms are in place. The Transportation Department may, however, require a traffic analysis for projects that are anticipated to exhibit potential adverse deficiencies on the circulation system.
10. Any use which can demonstrate, based on the most recent edition of the Trip Generation Report published by the Institute of Transportation Engineers (ITE) or other approved trip generation data, trip generation of less than 100 vehicle trips during the peak hours.

3.13.3 Impacts and Mitigation Measures

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

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to transportation 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

VEGA 6

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. Furthermore, a project may result in a significant impact on Caltrans facilities if the new project traffic has decreased the operations of surrounding roadways and intersections by a defined threshold.

PEAK HOUR INTERSECTION LEVEL OF SERVICE STANDARDS

A project is considered to have a significant impact on Caltrans facilities if the project traffic has decreased the operations of surrounding roadways by a defined threshold. The Traffic Impact Study (Appendix J of this EIR) used principles of the specific analysis methods contained in the 2010 Highway Capacity Manual to analyze traffic conditions on roadway facilities. The analysis of peak hour intersection conditions was conducted using the Synchro 10 software program developed by Trafficware. Table 3.13-1 summarizes the LOS criteria for signalized and unsignalized intersections.

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 project exceeds the County's LOS C threshold for surrounding roadways intersections, then the proposed project may have a significant project impact.

Table 3.13-1. HCM Level of Service Thresholds for Intersections

LOS	Signalized Intersection Delay (Seconds/Vehicle)	Unsignalized Intersection Average Stop Delay (Seconds/Vehicle)
A	0.0 ≤ 10.0	0.0 ≤ 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.0	≥ 50.0

Source: Appendix J of this EIR
LOS – level of service

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 v /c of greater than 0.01 is considered to be a significant impact.

PROJECT TRIP GENERATION

The project trip generation consists of a construction phase and operations phase. Once constructed, the VEGA 6 project will not require personnel to be present on-site and will not result in daily trip generation.

The construction of the VEGA 6 project is estimated to take 12-18 months and would begin in 2023. The number of on–site construction workers for the solar project facilities is not expected to exceed 100 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 50 workers at any one time. The trip generation was estimated if the construction phases were to overlap, so both are included. 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.

According to KOA, a maximum of 320 average daily trips (ADT) would be generated during project construction, accounting for construction worker commutes and equipment deliveries.

Ramon Substation Expansion

COUNTY OF RIVERSIDE TRANSPORTATION ANALYSIS GUIDELINES

As previously mentioned above, the County of Riverside Transportation Analysis Guidelines identifies certain types of projects, because of their size, nature, or location, which are exempt from the requirement of preparing a LOS analysis. The proposed Ramon Substation expansion would be exempt because anticipated trip generation rates would be less than 100 vehicle trips during the peak hours.

The construction of the Ramon Substation expansion is estimated to take 180 working days and would begin in 2024. The number of on–site construction workers is not expected to exceed 20 workers at any one time (40 ADT). Vendor trips is not expected to exceed 29 ADT during peak of construction. A maximum of 69 ADT would be generated during construction. Once constructed, the proposed Ramon Substation expansion will not require personnel to be present on-site and will not result in daily trip generation. Because the proposed Ramon Substation expansion is estimated to generate less than 100 vehicle trips during peak hours, it would be considered exempt from the requirement of preparing a LOS analysis.

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?

VEGA 6

During the construction phase of the proposed VEGA 6 project, the maximum number of trips generated on a daily basis would be approximately 320 trips. Under construction year conditions with and without the proposed project, all roadway segments analyzed would operate at LOS B or better and all intersections would operate at a LOS C or better during both AM and PM peak hours.

Implementation of the proposed VEGA 6 project would not require any public road widening to accommodate vehicular trips associated with the proposed VEGA 6 project (construction phase and operational phase), while maintaining adequate LOS. Additionally, future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. 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 VEGA 6 project would not interfere with bicycle facilities because the proposed VEGA 6 project is located in a rural portion of the County with no existing or potential future designated bike routes in the area. Therefore, the proposed VEGA 6 project would not result in any significant impacts to any roadway segments or transportation related facilities/infrastructure within the project area during construction and operation; and would not conflict with a program plan, ordinance, or policy as it relates to traffic and transportation. Impacts are considered less than significant.

Ramon Substation Expansion

During the construction phase of the Ramon Substation expansion, the maximum number of trips generated on a daily basis would be approximately 69 trips. Because the proposed Ramon Substation expansion is estimated to generate less than 100 vehicle trips during peak hours, it would be considered exempt from the County of Riverside’s requirement of preparing a LOS analysis.

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 Ramon Substation expansion would not interfere with bicycle facilities because the proposed expansion area is located in a rural portion of the County with no existing or potential future designated bike routes in the area. Therefore, the proposed expansion would not result in any significant impacts to any roadway segments or transportation related facilities/infrastructure within the project area during construction and operation; and would not conflict with a program plan, ordinance, or policy as it relates to traffic and transportation. Impacts are considered less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

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)?

VEGA 6

Section 15064.3(b) of the CEQA Guidelines provides guidance on determining the significance of transportation impacts and focuses on the use of vehicle miles traveled (VMT), which is defined as the amount and distance of automobile travel associated with a project.

Although the proposed VEGA 6 project would increase VMT during the construction phase as a result of trips made by construction workers and transportation of construction material and equipment, these increases are temporary in nature. Further, as discussed above, operation of the proposed VEGA 6 project would only require intermittent maintenance (including inspection, panel washing, and vegetation removal), which would be a nominal amount of vehicle trips generated (12 trips annually). Therefore, the proposed VEGA 6 project would not conflict or be inconsistent with Section 15064.3(b) of the CEQA Guidelines and this impact is considered less than significant.

Ramon Substation Expansion

Although the proposed Ramon Substation expansion 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, the proposed Ramon Substation expansion will not require personnel to be present on-site and will not result in daily trip generation. Therefore, the proposed VEGA 6 project would not conflict or be inconsistent with Section 15064.3(b) of the CEQA Guidelines and this impact is considered less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

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)?

VEGA 6

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 VEGA 6 project 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.

Ramon Substation Expansion

No public roadways would be constructed as a part of the proposed Ramon Substation expansion. Incompatible uses associated with the proposed expansion, such as use by construction equipment and transport of materials would be short-term and minor and impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

Impact 3.13-4 Would the project result in inadequate emergency access?

VEGA 6

Access to and from the VEGA 6 project site will be provided from the intersection of SR-78/86 at Buck Road. The access route will include Buck Road between SR 78/86 and Garvey Road, and Garvey Road between Buck Road to Andres Road. Vehicles will cross over the Westside Main Canal on Andre Road. 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 roads would also have turnaround areas at any dead-end to allow clearance for fire trucks per fire department standards. Therefore, the VEGA 6 project would not result in inadequate emergency access and impacts are considered less than significant.

Ramon Substation Expansion

Similar to existing conditions, access to and from the Ramon Substation expansion area will be provided via Ramon Road. The County of Riverside will review the proposed site plan to ensure that adequate emergency access would be available at the site. Accordingly, the proposed Ramon Substation expansion would not result in inadequate emergency access during long-term operation of the project and impacts would be less than significant.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

3.13.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. As presented above, construction traffic would not result in a significant impact on any of the project area roadway segments, intersections, and freeway segments because of the low volume of traffic. A similar scenario would occur during the decommissioning and site restoration stage for the proposed project. ADT would be similar to or less than the ADT required for construction. Similarly, the decommissioning activities would not result in a significant impact related to possible safety hazards, or possible conflicts with adopted policies, plans, or programs as the decommissioning and subsequent restoration would revert the project site to pre-project conditions. Therefore, decommissioning and restoration of the project site would not generate traffic resulting in a significant impact on the circulation network. A less than significant impact is identified, and no mitigation is required.

Residual

The construction and operation of the proposed project would not result in direct impacts on intersections 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 project.

3.14 Tribal Cultural Resources

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

[Insert text here].

3.14.1 Existing Conditions

Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR); or included in a local register of historical resources; or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant. Historical resources, unique archaeological resources, or non-unique archaeological resources may also be tribal cultural resources if they meet these criteria (PRC Section 21074).

Tribal Cultural Setting

See Section 3.5, Cultural Resources of this EIR, for description of the regional ethnohistory. Sacred Lands File Results

VEGA 6

ECORP contacted the California Native American Heritage Commission (NAHC) on September 15, 2020, to request a search of the Sacred Lands File for the VEGA 6 project area (Appendix F1 of this EIR). A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the VEGA 6 Survey Area. A record of all correspondence is provided in the *Cultural Resources Inventory Report* (Appendix F1 of this EIR).

Ramon Substation Expansion

On June 12, 2023, HDR submitted to the NAHC a request for a search of the Sacred Lands File in correspondence with the Ramon Substation expansion area. The NAHC responded on July 10, 2023, stating that the results of the Sacred Lands File search were negative and provided a contact list for twelve Native American tribes who may also have knowledge of cultural resources in the vicinity of the Ramon Substation expansion area. A record of all correspondence is provided in the *Ramon Substation Expansion – Cultural Resource Technical Study* (Appendix F2 of this EIR).

Tribal Notification

In accordance with Assembly Bill (AB) 52 and Senate Bill (SB) 18, 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 certified mail on July 1, 2022 to the following Native American tribes and groups:

- Torres-Martinez Desert Cahuilla Indians
- Kumeyaay Cultural Reparation Committee

- Manzanita Band of Kumeyaay Nation
- La Posta Band of Mission Indians
- Fort Yuma - Quechan Indian Tribe
- Ewiiaapaayp Band of Kumeyaay Indians
- Colorado River Indian Tribes
- Inter-Tribal Cultural Resource Protection Council
- Cocopah Indian Tribe
- Campo Band of Mission Indians
- Chemehuevi Reservation
- Augustine Band of Cahuilla Mission Indians.

3.14.2 Regulatory Setting

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

Federal

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

The Native American Graves Protection and Repatriation Act defines “cultural items,” “sacred objects,” and “objects of cultural patrimony;” establishes an ownership hierarchy; provides for review; allows excavation of human remains but stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for the return of specified cultural items.

State

Assembly Bill 52

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

Senate Bill 18

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to approvals and amendments of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

Prior to the approval or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts on, cultural places on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code §65352.3).

Public Resources Code Section 21074

PRC Section 21074 defines a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, and any object with cultural value to a California Native American Tribe. A tribal cultural resource must be on or eligible for the CRHR or must be included in a local register of historical resources. The lead agency can determine if a tribal cultural resource is significant even if it has not been evaluated for the CRHR or is not included on a local register.

Assembly Bill 4239

AB 4239, passed in 1976, established the NAHC as the primary government agency responsible for identifying and cataloging Native American cultural resources. The bill authorized the Commission to act in order to prevent damage to and insure Native American access to sacred sites and authorized the Commission to prepare an inventory of Native American sacred sites located on public lands.

Public Resources Code 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 5097.97 (b) and (e)

PRC 5097.98 (b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified most likely descendants (MLD) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reenter the remains elsewhere on the property in a location not subject to further disturbance.

California Health and Safety Code, Section 7050.5

California HSC 7050.5 makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the County Coroner.

3.14.3 Impacts and Mitigation Measures

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

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to tribal cultural resources are considered significant if the project causes a substantial adverse change in the significance of a tribal cultural resource defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC section 5020.1(k)
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

Impact Analysis

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. As previously mentioned in Section 3.14.1 above, the NAHC responded that no previously identified cultural resources were known to be in the vicinity of the VEGA 6 project area and Ramon Substation expansion area.

AB 52 was passed in 2014 and took effect on July 1, 2015. It establishes a new category of environmental resources that must be considered under CEQA called tribal cultural resources (PRC 1074) and establishes a process for consulting with Native American tribes and groups regarding those resources. AB 52 requires a lead agency to begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic areas of the proposed project. In accordance with AB 52 and SB 18, 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 certified mail on July 1, 2022, to the following Native American tribes and groups:

- Torres-Martinez Desert Cahuilla Indians
- Kumeyaay Cultural Reparation Committee

- Manzanita Band of Kumeyaay Nation
- La Posta Band of Mission Indians
- Fort Yuma - Quechan Indian Tribe
- Ewiiaapaayp Band of Kumeyaay Indians
- Colorado River Indian Tribes
- Inter-Tribal Cultural Resource Protection Council
- Cocopah Indian Tribe
- Campo Band of Mission Indians
- Chemehuevi Reservation
- Augustine Band of Cahuilla Mission Indians.

The County requested for tribes to provide any information regarding any Traditional Cultural Properties, Sacred Sites, resource collecting areas, or any other areas of concern known to occur in the project area.

To date, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites. Therefore, the project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1, and, per the criteria set forth in Section 5024.1, considering the significance of the resource to a California Native American tribe. As stated in Section 3.5 Cultural Resources, potential impacts to archaeological resources and human remains would be less than significant with implementation of Mitigation Measures CUL-3, CUL-4, RS-CUL-1 and RS-CUL-2. Impacts specifically related to tribal cultural resources would be less than significant.

Mitigation Measure(s)

No mitigation measures are required.

3.14.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. No grading or significant landform modifications would be required during decommissioning activities upon site restoration in the future. No impact on tribal cultural resources would occur.

Residual

As described above, impacts specifically related to tribal cultural resources would be less than significant. No mitigation is required, and no residual unmitigated impacts would occur with implementation of the proposed project.

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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 VEGA 6 project and Ramon Substation expansion. 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. Information contained in this section for the VEGA 6 project is summarized from the *Water Supply Assessment* (WSA) *for the ZGlobal Vega 6, LLC Solar Energy and Battery Storage Project* prepared by EMKO Environmental, Inc. as a subconsultant for ECORP Consulting, Inc. This report is included in Appendix K of this EIR. The information provided in this section for the Ramon Substation expansion area is summarized from review of publicly available data including the Department of Water Resources' Groundwater Bulletin and the 2022 Indio Subbasin Water Management Plan Update: Sustainable Groundwater Management Act Alternative Plan.

Potential 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

VEGA 6

Section 10912(c) of the Water Code identifies a public water system as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. The VEGA 6 project site is approximately five to 10 miles away from the nearest municipal water systems (i.e., the community of Westmorland and the City of Brawley, respectively). The VEGA 6 project site is located outside of the IID Imperial Unit and therefore, does not have water service from IID. There is not a public water system that will serve the VEGA 6 project (Appendix K of this EIR). Water supply for the VEGA 6 project would be provided by a new on-site groundwater supply well(s) that would be installed as part of the project.

Imperial Valley Groundwater Basin

The VEGA 6 project site is located within the northwestern part of the Imperial Valley Groundwater Basin. The Imperial Valley Groundwater Basin is bounded on the east by the Sand Hills and on the west by the igneous and metamorphic rocks of the Fish Creek and Coyote Mountains. The northern boundary is the Salton Sea while the southern boundary is the international border with Mexico. The groundwater basin has an area of approximately 1,200,000 acres, or 1,870 square miles. The Basin has not been adjudicated (Appendix K of this EIR).

Groundwater occurs within 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 aquifers consist mostly of alluvial deposits of late Tertiary and Quaternary age that have eroded from the adjacent mountains and filled the valley. The upper aquifer has an average thickness of approximately 200 feet with a maximum thickness of 450 feet. The lower aquifer averages approximately 380 feet thick with a maximum thickness of 1,500 feet (Appendix K of this EIR).

GROUNDWATER SUPPLY AND RECHARGE

The majority of the Imperial Valley Groundwater Basin area consists of irrigated agriculture (refer to Figure 4 in Appendix K of this EIR). Surface water from the Colorado River provides almost all of the irrigation and municipal water supply, through IID. Ninety-seven percent of IID's 3.1-million-acre-foot entitlement is used to irrigate almost 500,000 acres of farmland (Appendix K of this EIR). The remaining three percent of IID's allocation supplies municipal, commercial, industrial, and rural domestic needs.

The total groundwater storage capacity of the Imperial Valley Groundwater Basin is estimated to be as much as 14,000,000 acre-feet (Appendix K of this EIR). Much of the groundwater is not usable for agricultural and municipal purposes due to high levels of dissolved solids. As a result, there are only seven public water supply wells and 57 total wells present within the 1,200,000-acre Basin (Appendix K 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 deep percolation of applied irrigation water and lateral inflow from adjacent groundwater basins. The average annual increase in groundwater storage in the Basin is estimated to be 17,000 acre-feet per year (Appendix K of this EIR).

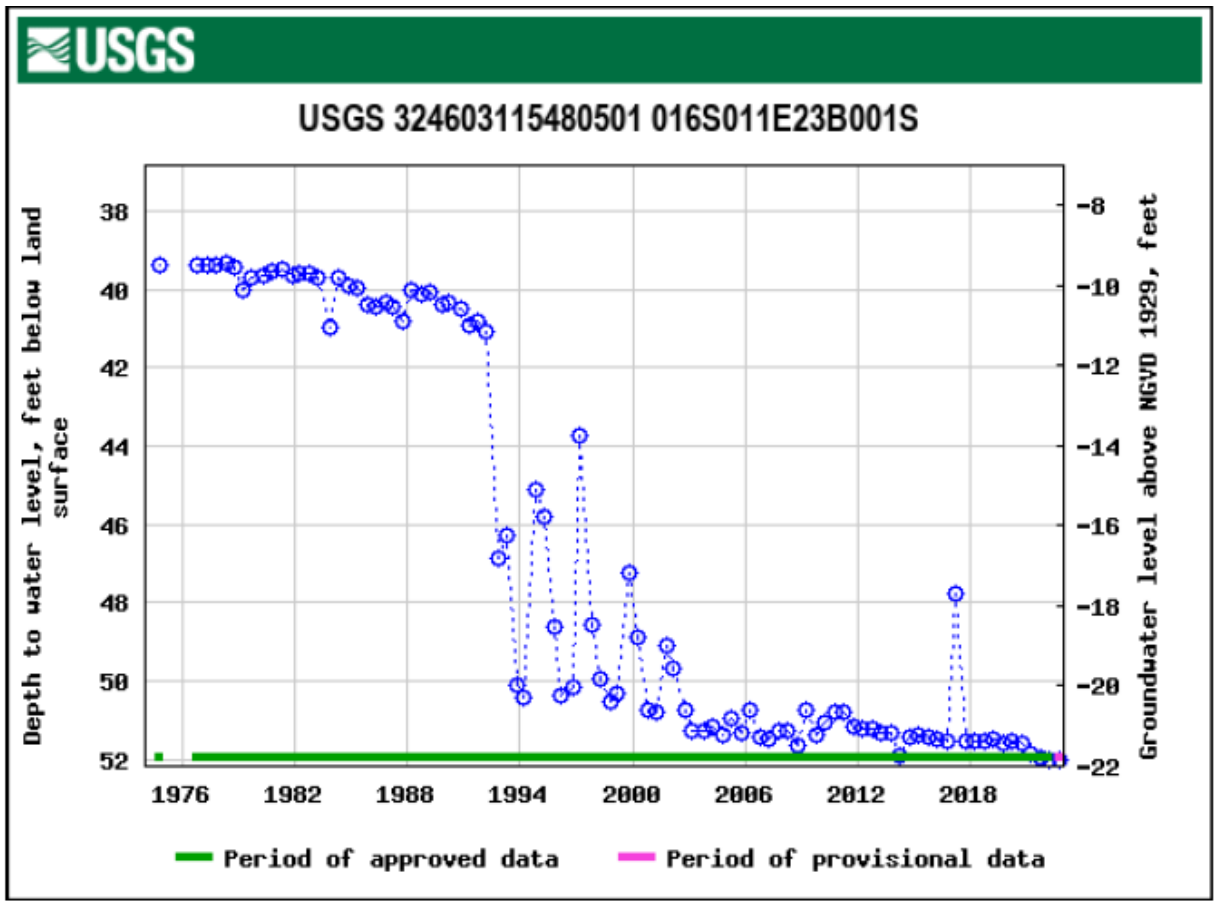
GROUNDWATER LEVELS

The nearest active monitoring well to the VEGA 6 project site is approximately 18 miles to the southwest of the VEGA 6 project site (USGS identification number 324603115480501 and California state well number 016S011E23B001). The ground surface elevation at the well location is reported to be 30 feet above mean sea level (ft msl) while the well depth is reported to be 114.7 feet below ground surface (bgs) (Appendix K of this EIR).

Figure 3.15-1 is a hydrograph from USGS (2023) showing the groundwater level and groundwater elevation measured since 1974 at Well 324603115480501. Data has been measured from October 1974 to October 2022. As indicated on Figure 3.15-1, from 1974 to 1992, the depth to groundwater changed from approximately 39.5 ft bgs to 41 ft bgs. Between 1992 and 1994, the groundwater level decreased relatively rapidly from 41 ft bgs to about 50 ft bgs. Since 1992, the groundwater level has decreased from 50 ft bgs to 52 ft bgs. From 1974 to 1992, the rate of change in the groundwater level was approximately 0.08 foot per year, while from 1994 to 2022 the rate of change in the groundwater level was approximately 0.7 foot per year. Between 1993 and 2002, the data indicate that fluctuations occurred seasonally, potentially as a result of pumping. The overall decline of 12.5 feet from 1974 to 2022 represents a reduction in the available water column in the well of approximately 17 percent (Appendix K of this EIR).

The water quality reported from Well 324603115480501 is much more saline than in many other parts of the Basin, based on the information reported by DWR (2003) and renders the groundwater unusable for potable or agricultural uses (Appendix K of this EIR).

Figure 3.15-1. USGS Groundwater Level Hydrograph



Source: Appendix K of this EIR

GROUNDWATER SUSTAINABILITY

A series of three bills passed by the California legislature 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 Basin is a very low priority basin (Appendix K of this EIR). DWR has not identified the Basin as overdrafted nor has it projected that the basin will become overdrafted if present management conditions continue. Thus, the Basin is not subject to the current requirements of SGMA, including the formation of a groundwater sustainability agency (GSA) and preparation of a groundwater sustainability plan (GSP).

Ramon Substation Expansion

Coachella Valley Groundwater Basin

The Ramon Substation expansion area is located within the Coachella Valley Groundwater Basin – Indio Subbasin. Indio Subbasin is located northwest of the Salton Sea and receives low precipitation, averaging about 6 inches per year, and a wide range of temperatures. The Banning fault bounds the

subbasin on the north and the semi-permeable rocks of the Indio Hills mark the northeast boundary. Impermeable rocks of the San Jacinto and Santa Rosa Mountains bound the subbasin on the south. A bedrock constriction separates the Indio Subbasin from the San Gorgonio Pass Subbasin on the northwest. The Salton Sea is the eastern boundary and the subbasin's primary discharge area. A low drainage divide forms a short boundary with the West Salton Sea Groundwater Basin in the southeast. The Indio Subbasin is drained by the Whitewater River and its tributaries. The Whitewater River rarely flows throughout the year and flow in tributaries such as San Gorgonio River is intermittent. Surface flow is southeastward to the Salton Sea. The Colorado River Aqueduct and the Coachella Branch of the All-American Canal convey imported surface water into the Coachella Valley which overlies the subbasin (DWR 2004).

Primary water-bearing materials in the subbasin are unconsolidated late Pleistocene and Holocene alluvial deposits. These deposits consist of older alluvium and the Ocotillo Conglomerate Formation, a thick sequence of poorly bedded coarse sand and gravel. The Ocotillo Conglomerate is greater than 1,000 feet thick in many places and is the primary water-bearing unit in the subbasin. In the upper part of the subbasin, groundwater is unconfined, whereas to the south and southeast groundwater is mostly confined except on the edges of the subbasin where unconfined conditions are found. Depth to groundwater varies widely in the southeast part of the subbasin and some wells historically delivered artesian flow. Confinement begins near Point Happy and continues south to the Salton Sea (DWR 2004).

GROUNDWATER LEVEL TRENDS

Prior to 1949, water levels steadily declined because of pumping. After 1949 and into the early 1980s, water levels in the central and southern subbasin area rose as imported Colorado River water begin to recharge parts of the subbasin. Elsewhere in the subbasin during this time water levels continued to decline. Since the 1980s, water levels in the central and southern areas have declined despite Colorado River imports. These declines are largely due to increasing urbanization and groundwater pumping (DWR 2004).

GROUNDWATER SUSTAINABILITY

According to DWR, the Coachella Valley Groundwater Basin – Indio Subbasin is designated as a medium-priority basin. The SGMA requires GSAs in medium- or high-priority groundwater basins to have an approved GSP or Alternative Plan to manage the basin. The Indio Subbasin is unique in that it is one of only nine subbasins throughout the State with an approved Alternative Plan. SGMA also requires that a GSA or Agencies be established to develop and implement the plan. In the Indio Subbasin, Coachella Valley Water District (CVWD), Desert Water Agency (DWA), Coachella Water Authority (CWA), and Indio Water Authority (IWA) worked together as the Indio GSAs and updated their approved Alternative Plan to manage basin. The Alternative Plan Update was adopted and submitted to DWR in December 2021.

Coachella Valley Water District

The existing Ramon Substation and proposed expansion area are located within CVWD's water service area. The Coachella Valley Water District (CVWD) relies on four sources of water to provide service to its customers: groundwater, recycled water, imported water from the State Water Project and the Colorado River via the Coachella Canal, a branch of the All-American Canal (CVWD 2023).

3.15.2 Regulatory Setting

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

State

Senate Bill 610

With the introduction of SB 610, any project under CEQA shall provide a WSA if:

- The project meets the definition of the Water Code Section 10912:

  For the purposes of this part, the following terms have the following meanings:

  (a) "Project" means any of the following:

  1) A proposed residential development of more than 500 dwelling units.

  2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

  3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

  4) A proposed hotel or motel, or both, having more than 500 rooms.

  5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

  6) A mixed-use project that includes one or more of the projects specified in this subdivision.

  7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

  (b) If a public water system has fewer than 5,000 service connections, then ''project'' means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

After review of Water Code Section 10912, the proposed VEGA 6 project is deemed a "project" because it is a proposed industrial use occupying more than 40 acres of land per criterion 5 above.

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 Code Section 10910(f) paragraphs 1 through 5, as modified by SB 1262, state:

> (f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.
>
> (2) (A) A description of any groundwater basin or basins from which the proposed project will be supplied. (B) For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. (C) For a basin that has not been adjudicated that is a basin designated as high- or medium priority pursuant to Section 10722.4, information regarding the following: (i) Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924; and (ii) If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan. (D) For a basin that has not been adjudicated that is a basin designated as low- or very-low priority pursuant to Section 10722.4, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.
>
> (3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
>
> (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
>
> (5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

The WSA prepared for the VEGA 6 project (Appendix K of this EIR) contains the additional information required pursuant to Water Code Section 10910(f).

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) is comprised of a three-bill legislative package, including AB 1739, SB 1168, and SB 1319. SGMA requires local agencies to form groundwater sustainability agencies (GSAs) for the high and medium priority basins. GSAs develop and implement groundwater sustainability plans (GSPs) to avoid undesirable results and mitigate overdraft within 20 years (DWR 2023).

2022 Indio Subbasin Water Management Plan Update: Sustainable Groundwater Management Act Alternative Plan

To implement SGMA in the Indio Subbasin, four local water agencies formed GSAs: CVWD, CWA, DWA, and IWA. In 2016, the Indio Subbasin GSAs entered into a Memorandum of Understanding for collaborative management of the Indio Subbasin under SGMA. On December 29, 2016, the Indio Subbasin GSAs submitted to the DWR the 2010 CVWMP, accompanied by a Bridge Document, as an Alternative Plan to a GSP for the Indio Subbasin. On July 17, 2019, DWR approved the 2010 CVWMP Update as an Alternative Plan. In compliance with SGMA, the GSAs have prepared Annual Reports which can be found on the program website (www.IndioSubbasinSGMA.org). SGMA also requires plan updates every 5 years. The Indio Subbasin Water Management Plan Update (Alternative Plan Update) fulfills that requirement (Indio Subbasin Groundwater Sustainability Agencies 2021).

The Alternative Plan Update incorporates a goal specifically for groundwater sustainability, which is to maintain a locally managed, economically viable, sustainable groundwater resource for existing and future beneficial uses in the Indio Subbasin by managing groundwater to avoid the occurrence of undesirable results. The planning process has demonstrated that with the proposed projects identified in the Alternative Plan Update, and despite anticipated climate changes, the Indio Subbasin GSAs are able to meet forecasted demands under a variety of conditions and maintain the Indio Subbasin in balance, even increasing groundwater storage over time (Indio Subbasin Groundwater Sustainability Agencies 2021).

Local

County of Imperial General Plan

The Imperial County General Plan provides goals, objectives, policies, and programs regarding the preservation and use of water. Table 3.15-2 provides a consistency analysis of the applicable Imperial County General Plan goals and objectives from the Conservation and Open Space Element, and Renewable Energy and Transmission Element, as they relate to the proposed VEGA 6 project. While the EIR analyzes the VEGA 6 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 3.15-1. Consistency with Applicable General Plan Policies

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
Preservation of Water Resources, Goal 6: The County will conserve, protect, and enhance water resources in the County.	Consistent	Water use for the VEGA 6 project site would be provided by a new well or wells that would be drilled and installed as part of the VEGA 6 project. Water would only be used during construction, periodically only as needed during operation, and decommissioning/restoration for non-drinking non-potable water needs.
Preservation of Water Resources, Objective 6.4: Eliminate potential surface and groundwater pollution through regulations as well as educational programs.	Consistent	Currently, groundwater quality in the region is poor. The VEGA 6 project would be required to comply with NPDES permits and regulations to address pollutants from run-off that may result during construction and operation of the VEGA 6 project.
Renewable Energy and Transmission Element		
Objective 1.6: Encourage the efficient use of water resources required in the operation of renewable energy generation facilities.	Consistent	Water use for the VEGA 6 project site would be provided by a new well or wells that would be drilled and installed as part of the VEGA 6 project. Water would only be used during construction, periodically only as needed during operation, and decommissioning/restoration for non-drinking non-potable water needs.

Source: ICPDS 1993
IID = Imperial Irrigation District

3.15.3 Impacts and Mitigation Measures

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

Thresholds of Significance

Based on CEQA Guidelines Appendix G, project impacts related to utilities and service systems are considered significant if 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

VEGA 6

The WSA (Appendix K of this EIR) was prepared using project-specific data to calculate the VEGA 6 project's water consumption during construction and at build-out collectively ("operational").

Ramon Substation Expansion

The analysis is based on a review of publicly available data including the Department of Water Resources' Groundwater Bulletin and the 2022 Indio Subbasin Water Management Plan Update: Sustainable Groundwater Management Act Alternative Plan.

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 6

As previously noted, the proposed VEGA 6 project is located outside of IID's Imperial Unit and therefore, the VEGA 6 project does not receive water service from IID. Furthermore, there is not a public water system that would serve the VEGA 6 project. Water for the VEGA 6 project will be provided by a new on-site groundwater supply well or wells that would be drilled and installed as part of the VEGA 6 project.

CONSTRUCTION

The proposed VEGA 6 project is anticipated to take approximately 12-18 months from the commencement of the construction process to complete. During construction, water is required for dust control and soil conditioning during installation of the PV panels, battery storage units, and related infrastructure. 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. The construction water demand of the VEGA 6 project is estimated to be 160 AF, with an additional 10 AF required for dust control on offsite access roads that are not paved. Thus, as indicated in Table 3.15-2, the full construction water requirements are 170 acre-feet. Thus, the monthly water demand during that period may range from 9.4 AF to 14.2 AF, on average (Appendix K of this EIR).

Table 3.15-2. VEGA 6 Project Water Demand

Site	Area (acres)	Output (megawatts)	Construction Water (AF)	Operational Water (AF per year)
VEGA 6	320	80	170	8

Source: Appendix K of this EIR
AF = Acre-feet

The construction water demand represents 1.0 percent of the average annual increase in groundwater storage of 17,000 AF per year and 0.0015 percent of the volume of groundwater in storage in the Basin (accounting for the groundwater level decline from 1974 to 2022). Furthermore, 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.

OPERATIONS AND MAINTENANCE

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. As shown in Table 3.15-2, the operational water demand is anticipated to be 8 acre-feet per year. Maintenance activities 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 VEGA 6 project which is anticipated to be 25 to 30 years.

The annual operational water needs are equivalent to 0.05 percent of the average annual increase in groundwater storage of 17,000 AF per year and 0.00008 percent of the volume of groundwater in storage in the Basin (accounting for the groundwater level decline from 1974 to 2022). Therefore, the long-term operation and maintenance of the VEGA 6 project would not have any measurable effect or impact on groundwater resources in the Basin.

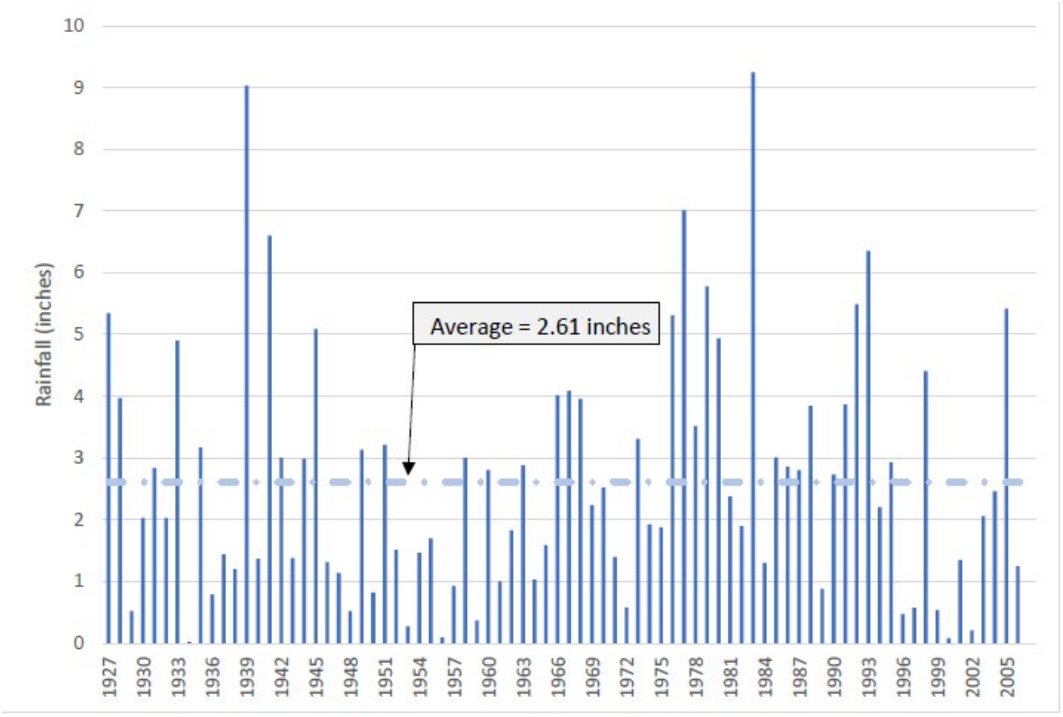
DRY YEAR SUPPLY

Local rainfall data were obtained from the Western Region Climate Center for the Brawley 2 SW meteorological station in Brawley, California, located approximately 15 miles east of the VEGA 6 project site. Figure 3.15-2 shows the annual water year rainfall for the Brawley 2 SW station from 1927 through 2007. The average water year rainfall during this period is 2.61 inches. The driest year was 2007, when no precipitation was recorded. The driest year with recorded rainfall was 1934, with only 0.2 inch of rainfall reported. The wettest year was 1983, when 9.25 inches of rain were measured. As indicated on Figure 3.15-2, a relatively wet period occurred from 1976 to 1986, with 14 of 18 water years exceeding the average annual rainfall. In comparison, the period from 1996 to 2012 was relatively dry, with 10 of 12 water years having below normal rainfall (Appendix K of this EIR).

The historic rainfall data on Figure 3.15-2 can be compared with the groundwater levels shown on Figure 3.15-1 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 consistently declining. During the dry period from 1996 to 2016, groundwater levels were also declining, but at a rate that was slightly less than during the wet period from 1976 to 1986. The relatively large decrease in groundwater levels between 1992 and 1994 corresponds to a period with above-normal rainfall. 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. This is due to the recharge of groundwater primarily occurring through deep percolation of applied irrigation water and lateral inflow from adjacent groundwater basins.

The total groundwater storage capacity of the Basin is estimated to be 14,000,000 AF and the average annual increase in groundwater storage is estimated to be 17,000 AF per year. While the groundwater elevation data shown on Figure 3.15-1 indicates that there may have been a loss of groundwater in storage of up to 17 percent, the construction water demand of 170 AF and the annual operational water needs of 8 AF are miniscule (0.0015 percent and 0.00008 percent, respectively) compared to the available groundwater in storage after accounting for the potential 17 percent reduction indicated from Figure 3.15-1. Overall, there is adequate water available to supply the VEGA 6 project water needs during single dry year and multiple dry year periods (Appendix K of this EIR).

Figure 3.15-2. Water Year Rainfall at Brawley 2 SW



Source: Appendix K of this EIR

Based on the analysis above, there is sufficient water available for anticipated future water demands in the Basin to accommodate the proposed VEGA 6 project during normal, single dry year, and multiple dry year periods for the lifetime of the VEGA 6 project. As such, impacts would be less than significant.

Ramon Substation Expansion

CONSTRUCTION

The proposed Ramon Substation expansion is anticipated to take approximately 180 working days from the commencement of the construction process to complete. During construction, water is required for dust control and soil conditioning. The construction water demand is primarily for dust control. No groundwater use is proposed, water would be obtained from a municipal source. Therefore, no significant impact would occur.

OPERATIONS AND MAINTENANCE

The proposed Ramon Substation expansion would not induce population growth as no new residential uses are proposed. Therefore, the proposed expansion would not require new and expanded entitlements. The proposed expansion area would tie into an existing water line at the existing Ramon Substation. No additional operations and maintenance building or restroom would be required necessitating additional water demand. Therefore, no significant impact would occur.

Mitigation Measure(s)

VEGA 6

No mitigation measures are required.

Ramon Substation Expansion

No mitigation measures are required.

3.15.4 Decommissioning/Restoration and Residual Impacts

Decommissioning/Restoration

If at the end of the PPA term, no contract extension is available for a power purchaser, no other buyer of the energy emerges, or there is no further funding of the project, the project will be decommissioned and dismantled. Total water demand during decommissioning would be similar during construction. Therefore, it is assumed that the water demand during decommissioning would be 170 AF. As described above, there will be sufficient water available for existing water uses in the Basin, along with the project's water demands during normal, single dry year, and multiple dry year periods for the anticipated life of the project. The proposed VEGA 6 project would have sufficient water supplies available to serve the project from existing entitlements and resources, and impacts would be less than significant.

Residual

The proposed project would not result in significant impacts on the water supply of Imperial County; therefore, no mitigation is required. The proposed project will not result in residual impacts.

4 Analysis of Long-Term Effects

4.1 Growth-Inducing Impacts

In accordance with Section 15126.2(e) of CEQA Guidelines, an EIR must:

> *"discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth ... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*

Projects promoting direct growth will impose burdens on a community by directly inducing an increase in population or resulting in the construction of additional developments in the same area. For example, projects involving expansions, modifications, or additions to infrastructure, such as sewer, water, and roads, could have the potential to directly promote growth by removing existing physical barriers or allowing for additional development through capacity increases. New roadways leading into a previously undeveloped area directly promote growth by removing previously existing physical barriers to development and a new wastewater treatment plant would allow for further development within a community by increasing infrastructure capacity. Because these types of infrastructure projects directly serve related projects and result in an overall impact to the local community, associated impacts cannot be considered isolated. Indirect growth typically includes substantial new permanent employment opportunities and can result from these aforementioned modifications.

4.1.1 VEGA 6

The proposed VEGA 6 project is located within the unincorporated area of Imperial County and it does not involve the development of permanent residences that would directly result in population growth in the area. The unemployment rate in Imperial County as of December 2023 was 18.3 percent (State of California Employment Development Department 2024a). 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 VEGA 6 project would not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services.

Once construction is completed, the proposed solar facility would be remotely operated, controlled and monitored and with no requirement for daily on-site employees. Security personnel may conduct unscheduled security rounds and would be dispatched to the project site in response to a fence breach or other alarm. It is anticipated that maintenance of the facility 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 VEGA 6 project would not result in

substantial population growth, as the number of employees required to operate and maintain the facility is minimal.

While the proposed VEGA 6 project would contribute to energy supply, which indirectly supports population growth, the proposed VEGA 6 project is a response to the state's need for renewable energy to meet its Renewable Portfolio Standard, and while it would increase the availability of renewable energy, it would also replace existing sources of non-renewable energy. Unlike a gas-fired power plant, the proposed VEGA 6 project is not being developed as a source of base-load power in response to growth in demand for electricity. The power generated would be added to the state's electricity grid with the intent that it would displace fossil fueled power plants and their associated environmental impacts, consistent with the findings and declarations in SB X1-2 that a benefit of the Renewable Portfolio Standard is displacing fossil fuel consumption within the state. The VEGA 6 project is being proposed in response to state policy and legislation promoting development of renewable energy.

The proposed VEGA 6 project would supply energy to accommodate and support existing demand and projected growth, but the energy provided by the project would not foster any new growth because (1) the additional energy would be used to ease the burdens of meeting existing statewide energy demands within and beyond the area of the VEGA 6 project site; (2) the energy would be used to support already-projected growth; or, (3) the factors affecting growth are so diverse that any potential connection between additional energy production and growth would necessarily be too speculative and uncertain to merit further analysis.

Under CEQA, an EIR should consider potentially significant energy implications of a project (CEQA Guidelines Appendix F(II); PRC Section 21100(b)(3)). However, the relationship between the proposed project's increased electrical capacity and the growth-inducing impacts outside the surrounding area is too speculative and uncertain to warrant further analysis. When a project's growth-inducing impacts are speculative, the lead agency should consider 14 CCR Section 15145, which provides that, if an impact is too speculative for evaluation, the agency should note this conclusion and terminate discussion of the impact. As the court explained in Napa Citizens for Honest Gov't v. Napa County Board of Supervisors, 91 Cal. App.4th 342, 368: "Nothing in the Guidelines, or in the cases, requires more than a general analysis of projected growth" Napa Citizens, 91 CA4th at 369. The problem of uncertainty of the proposed project's growth-inducing effects cannot be resolved by collection of further data because of the diversity of factors affecting growth.

While this document has considered that the proposed VEGA 6 project, as an energy project, might foster regional growth, the particular growth that could be attributed to the proposed project is unpredictable, given the multitude of variables at play, including uncertainty about the nature, extent, and location of growth and the effect of other contributors to growth besides the proposed project. No accurate and reliable data is available that could be used to predict the amount of growth outside the area that would result from the proposed project's contribution of additional electrical capacity. The County of Imperial has not adopted a threshold of significance for determining when an energy project is growth-inducing. Further evaluation of this impact is not required under CEQA.

Additionally, the VEGA 6 project would not involve the development of any new local or regional roadways, new water systems, or sewer; and thus, the VEGA 6 project would not further facilitate additional development into outlying areas. For these reasons, the proposed VEGA 6 project would not be growth-inducing.

4.1.2 Ramon Substation Expansion

Development of housing is not proposed as part of the proposed Ramon Substation expansion. The unemployment rate in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside and San Bernardino Counties) as of December 2023 was 5.2 percent (State of California Employment Development Department 2023b). IID expects to utilize construction workers from the local and regional area, a workforce similar to that involved in the development of other utility-scale facilities. Based on the unemployment rate in Riverside County (5.2 percent) (State of California Employment Development Department 2024b), and the availability of the local workforce, construction of the proposed Ramon Substation expansion would not have a growth-inducing effect.

The proposed Ramon Substation expansion would not require any long-term employees during operations. There are already existing employees staffed at the existing Ramon Substation. These existing employees are anticipated to perform routine maintenance work and site security for the proposed expansion area. Therefore, the proposed expansion would not result in a substantial growth in the area.

Energy generated by VEGA 6 will be transmitted to IID's existing 161 kV "L" Line, with ultimate delivery to IID's Ramon Substation in Riverside County. IID has identified that upgrades to the Ramon Substation will be required in order to accommodate several planned utility-scale projects, including VEGA 6.

Under CEQA, an EIR should consider potentially significant energy implications of a project (CEQA Guidelines Appendix F(II); PRC Section 21100(b)(3)). However, the relationship between the proposed project's increased electrical capacity and the growth-inducing impacts outside the surrounding area is too speculative and uncertain to warrant further analysis. When a project's growth-inducing impacts are speculative, the lead agency should consider 14 CCR Section 15145, which provides that, if an impact is too speculative for evaluation, the agency should note this conclusion and terminate discussion of the impact. As the court explained in Napa Citizens for Honest Gov't v. Napa County Board of Supervisors, 91 Cal. App.4th 342, 368: "Nothing in the Guidelines, or in the cases, requires more than a general analysis of projected growth" Napa Citizens, 91 CA4th at 369. The problem of uncertainty of the proposed project's growth-inducing effects cannot be resolved by collection of further data because of the diversity of factors affecting growth.

While this document has considered that the Ramon Substation expansion might foster regional growth, the particular growth that could be attributed is unpredictable, given the multitude of variables at play, including uncertainty about the nature, extent, and location of growth and the effect of other contributors to growth besides the Ramon Substation expansion. 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 expansion's contribution of additional electrical capacity. Further evaluation of this impact is not required under CEQA.

Additionally, the proposed Ramon Substation expansion would not involve the development of any new local or regional roadways, new water systems, or sewer; and thus, the proposed expansion would not further facilitate additional development into outlying areas. For these reasons, the proposed Ramon Substation expansion would not be growth-inducing.

4.2 Significant Irreversible Environmental Changes

In accordance with CEQA Guidelines Section 15126.2(d), an EIR must identify any significant irreversible environmental changes that would be caused by implementation of the proposed project

being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources or secondary growth-inducing impacts that commit future generations to similar uses.

4.2.1 VEGA 6

Energy resources needed for the construction of the proposed VEGA 6 project would contribute to the incremental depletion of renewable and non-renewable resources. Resources, such as timber, used in building construction are generally considered renewable and would ultimately be replenished. Non-renewable resources, such as petrochemical construction materials, steel, copper, lead and other metals, gravel, concrete, and other materials, are typically considered finite and would not be replenished over the lifetime of the project. Thus, the VEGA 6 project would irretrievably commit resources over the anticipated 30-year life of the project.

At the end of the VEGA 6 project's operation term, the applicant may determine that the VEGA 6 project should be decommissioned and deconstructed. Should the VEGA 6 project be decommissioned, the project applicant is required to restore land to its pre-project state. Consequently, some of the resources on the site could potentially be retrieved after the site has been decommissioned. Concrete footings, foundations, and pads would be removed and recycled at an off-site location. All remaining components would be removed, and all disturbed areas would be reclaimed and recontoured. The applicant anticipates using the best available recycling measures at the time of decommissioning.

Implementation and operation of the proposed VEGA 6 project would promote the use of renewable energy and contribute incrementally to the reduction in demand for fossil fuel use for electricity-generating purposes. Therefore, the incremental reduction in fossil fuels would be a positive effect of the commitment of nonrenewable resources. Additionally, the VEGA 6 project is consistent with the state's definition of an "eligible renewable energy resource" in Section 399.12 of the California Public Utilities Code and the definition of "in-state renewable electricity generation facility" in Section 25741 of the California PRC.

4.2.2 Ramon Substation Expansion

Energy resources needed for the construction of the Ramon Substation expansion 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 proposed Ramon Substation expansion would irretrievably commit resources over its lifetime.

4.3 Significant and Unmitigable Impacts

In accordance with CEQA Guidelines Section 15126(c), EIRs must include a discussion of significant environmental effects that cannot be avoided if the proposed project is implemented.

4.3.1 VEGA 6

The impact analysis, as detailed in Section 3 of this EIR, concludes that no significant and unmitigable impacts were identified for the VEGA 6 project. Where significant impacts have been identified,

mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant.

4.3.2 Ramon Substation Expansion

The impact analysis, as detailed in Section 3 of this EIR, concludes that no significant and unmitigable impacts were identified for the proposed Ramon Substation expansion. Where significant impacts have been identified, mitigation measures are proposed, that when implemented, would reduce the impact level to less than significant.

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5 Cumulative Impacts

The CEQA Guidelines (Section 15355) define a cumulative impact as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” The CEQA Guidelines [Section 15130(a)(1)] further states that “an EIR should not discuss impacts which do not result in part from the project.”

Section 15130(a) of the CEQA Guidelines provides that “[A]n EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable...” Cumulatively considerable, as defined in Section 15065(a)(3), “means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

An adequate discussion of significant cumulative impacts requires either: (1) “a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) “a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.”

The CEQA Guidelines recognize that cumulative impacts may require mitigation, such as new rules and regulations that go beyond project-by-project measures. An EIR may also determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project’s contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The Lead Agency must identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable (CEQA Guidelines Section 15130(a)(3)).

This EIR evaluates the cumulative impacts of the project for each resource area, using the following steps:

1. Define the geographic and temporal scope of cumulative impact analysis for each cumulative effects issue, based on the project’s reasonably foreseeable direct and indirect effects.
2. Evaluate the cumulative effects of the project in combination with past and present (existing) and reasonably foreseeable future projects and, in the larger context of the Imperial Valley.
3. Evaluate the project’s incremental contribution to the cumulative effects on each resource considered in Chapter 3, Environmental Analysis. When the project’s incremental contribution to a significant cumulative impact is considerable, mitigation measures to reduce the project’s “fair share” contribution to the cumulative effect are discussed, where required.

5.1 Geographic Scope and Timeframe of the Cumulative Effects Analysis

The geographic area of cumulative effects varies by each resource area considered in Chapter 3. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. Similarly, impacts on the habitats of special-status wildlife species need to be considered within its range of movement and associated habitat needs.

The analysis of cumulative effects in this EIR considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the project site and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects of a project, but not beyond the scope of the direct and indirect effects of that project.

The cumulative development scenario includes projects that extend through year (2030), which is the planning horizon of the County of Imperial General Plan. Because of uncertain development patterns that are far in the future, it is too speculative to accurately determine the type and quantity of cumulative projects beyond the planning horizon of the County's adopted County General Plan. Evaluating the proposed project's cumulative impacts when future facility decommissioning occurs is highly speculative because decommissioning is expected to occur in 20 to 25 years' time. Therefore, cumulative impacts during decommissioning are speculative for detailed consideration in this analysis.

5.2 Projects Contributing to Potential Cumulative Impacts

The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the projects are to be considered: the use of a list of past, present, and probable future projects (the "list approach") or the use of adopted projections from a general plan, other regional planning document, or certified EIR for such a planning document (the "plan approach").

For this EIR, the list approach has been utilized to generate the most reliable future projections of possible cumulative impacts. When the impacts of the project are considered in combination with other past, present, and future projects to identify cumulative impacts, the other projects considered may also vary depending on the type of environmental impacts being assessed. As described above, the general geographic area associated with different environmental impacts of the project defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis.

5.3 Cumulative Impact Analysis

This cumulative impact analysis utilizes an expanded list method (as defined under CEQA) and considers environmental effects associated with those projects identified in Table 5-1 in conjunction with the impacts identified for the project in Chapter 3 of this EIR. Table 5-1 includes projects known at the time of release of the NOP of the Draft EIR, as well as additional projects that have been proposed since the NOP date.

Table 5-1. Projects Considered in the Cumulative Impact Analysis

No.	Project Name	Project Type	Distance from Project Site (miles)	Size (acres)	Capacity (MW)	Status[1]
1	Seville Solar	PV Solar Facility	18.6	1,238	Various depending on lot – from 20 MW up to 38 MW	Operational
2	Titan II Solar	Battery Storage	17.2	Within 532-acre site	40	Pending Entitlement
3	Titan III Solar	PV Solar Facility	19.3	185	20	Pending Entitlement
4	Orni 18	Geothermal Plant	8.8			Operational
5	Brawley Solar	PV Solar Facility	10.4	227	40	Approved – Not Built

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 November 8, 2023.

MW – megawatts; PV – photovoltaic

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5.3.1 Aesthetics

The cumulative study area for projects considered in the visual resources cumulative impact analysis considers a 5-mile radius from the project site. Views beyond 5 miles are obstructed by a combination of the flat topography coupled with the Earth's curvature. The short-term visual impacts of the project would be in the form of general construction activities including grading, use of construction machinery, and installation of the transmission poles and stringing of transmission lines, but would only be available to a very limited amount of people and would have to be in 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, BESS and substation.

As provided in Section 3.2, Aesthetics, implementation of the proposed project would change the natural conditions of the site with development of a solar energy and battery storage facility. Onsite vegetation would be completely removed, and the site would be graded to accommodate the installation of PV module frames in arrays. 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. Further, the project site would be restored to their existing condition following the decommissioning of the solar use. As a result, although the visual character of the project site would change from undeveloped to one with developed characteristics, a less than significant impact associated with the proposed project has been identified.

Development of the proposed project in conjunction with the cumulative projects identified in Table 5-1 will gradually change the visual character of this portion of the Imperial Valley. However, projects located within private lands and/or under the jurisdiction of the County of Imperial are being designed in accordance with the County of Imperial's General Plan and Land Use Ordinance, which includes policies to protect visual resources in the County.

Finally, all projects listed in Table 5-1 would not produce a substantial amount of light and glare, as no significant source of light or glare is proposed; or the project will otherwise comply with the County lighting ordinance, as would all other related projects. Based on these considerations, there would be no significant cumulatively considerable aesthetic impact, and cumulative aesthetic impacts would be less than significant.

5.3.2 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 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, two of the five cumulative projects (Seville Solar and Orni 18 Geothermal Plant) listed in Table 5-1 are already constructed and operational. The remaining cumulative projects are either pending entitlement or approved and not constructed, and not anticipated to involve overlapping construction activities with the proposed project. 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 project would generate air emissions due to vehicle and dust emissions associated with construction activities. Similar effects would also be realized upon site decommissioning, which would be carried out in conjunction with the project's restoration plan, and subject to applicable ICAPCD standards. Likewise, the other cumulative projects that are approved, but not yet built or pending entitlement identified in Table 5-1 would result in the generation of air emissions during construction activities.

With respect to the proposed project, during the construction and decommissioning phases, the project would generate PM_{10}, $PM_{2.5}$, ROG, CO, SO_2, and NO_X emissions during each active day of construction. As discussed in Section 3.3, Air Quality, the proposed project's daily construction emissions daily construction emissions would not exceed the ICAPCD thresholds for ROG, NOx, CO, SO_2, and $PM_{2.5}$. However, the proposed project's daily construction emissions would exceed the ICAPCD threshold for PM_{10} and represents a significant air quality impact. The proposed project's 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 project is constructed in conjunction with those pending entitlement or approved for construction, 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 project 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 project's 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 facility would result in substantially lower emissions than project construction. The project's operational emissions would not exceed the Tier I thresholds; therefore, the impact would be less than significant. Operational impacts of other renewable energy facilities identified in Table 5-1 would also be similar. Although these cumulative projects generally involve large areas, their operational requirements are very minimal, requiring minimal staff or use of machinery or equipment that generate emissions. Further, alternative energy projects, such as the project, would assist attainment of regional air quality standards and improvement of regional air quality by providing clean, renewable energy sources. Consequently, the projects would provide a positive contribution to the implementation of applicable air quality plan policies and compliance with EO S-3-05.

However, from a cumulative air quality standpoint, the potential cumulative impact associated with the generation of 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 project's 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 project 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.

5.3.3 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 has the potential to result in impacts on biological resources. These impacts are generally associated with the potential construction-related effects to burrowing owl and bird species.

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 3.4, Biological Resources, contain these requirements thereby minimizing potential impacts on these species to a less than significant level. Additionally, as provided in Section 3.4, 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 3.4, 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 project, each of the cumulative projects would be required to provide mitigation for impacts on biological resources. The analysis below is conducted qualitatively and in the context that the cumulative projects would be subject to a variety of statutes and administrative frameworks that require mitigation for impacts on biological resources.

Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of Birds listed at 50 CFR 10.3 are protected by the MBTA (16 USC 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA is enforced by USFWS. This act prohibits the killing of any migratory birds without a valid permit. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under this act. With few exceptions, most birds are considered migratory under this act. Raptors and active raptor nests are protected under California FGCs 3503.5, 3503, and 3513.

The CWA and California's Porter-Cologne Water Quality Control Act provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit. 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 project would comply with these and other laws, regulations and guidelines and therefore would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative projects within the geographic scope of the proposed project will be required to comply with the legal frameworks set forth above, as well as others, and will be required to mitigate their impacts to a less than significant level. Therefore, the project would not contribute to a cumulatively considerable impact to biological resources, and cumulative impacts would be less than significant.

5.3.4 Cultural Resources

As described in Section 3.5, Cultural Resources, 39 new cultural resources were identified within the VEGA 6 Survey Area. None of the newly recorded resources within the VEGA 6 Survey Area have been evaluated using NRHP and CRHR eligibility criteria; therefore, it is not currently known if any of

these are considered historical resources under CEQA. Based on this, implementation of the VEGA 6 project could potentially cause a substantial adverse change in the significance of historical resources. The potential impact is considered significant. Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce the potential impact associated with historical resources to a level less than significant. Although unlikely, the potential for unearthing a previously-undiscovered archaeological resource during construction does exist. This potential impact is considered significant. However, implementation of Mitigation Measures CUL-3 would reduce the potential impact associated with the inadvertent discovery of archaeological resources to a level less than significant. Implementation of Mitigation Measure CUL-4 would reduce potential impacts on human remains to a level less than significant.

Future projects with potentially significant impacts on cultural resources would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and Mitigation Measures CUL-1 through CUL-4, the proposed project would have a less than cumulatively considerable contribution to impacts on cultural resources.

During operations and decommissioning of the project, no additional impacts on archeological resources would be anticipated because the soil disturbance would have already occurred and been mitigated during construction.

5.3.5 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. Cumulative development would result in an increase in population and development that could be exposed to hazardous geological conditions, depending on the location of proposed developments. Geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices. Cumulative impacts on geologic resources would be considered significant if the project would be impacted by geologic hazard(s) and if the impact could combine with off-site geologic hazards to be cumulatively considerable. None of the projects identified within the geographic scope of potential cumulative impacts would intersect or be additive to the project's site-specific geology and soils impacts; therefore, no cumulatively considerable effects are identified for geology/soils, and cumulative impacts would be less than significant.

Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant paleontological resources impact due to the potential loss of paleontological resources unique to the region. However, mitigation is included in this EIR to reduce potentially significant project impacts to paleontological resources during construction of the proposed project. Implementation of Mitigation 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 project would have a less than cumulatively considerable contribution to impacts on paleontological resources.

5.3.6 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 project's analysis as provided in Section 3.7, Greenhouse Gases. As provided, the proposed project's CO_2 emissions would not exceed MDAQMD's threshold of 100,000 $MTCO_2e$ per year. As the project's 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 project, they would be consistent with the strategies of the Climate Change Scoping Plan. In order to meet the AB 32 GHG emissions reduction mandate, the Scoping Plan relies on achievement of the RPS target of 33 percent of California's energy coming from renewable sources by 2020 and 50 percent by 2030. The RPS target was updated in September 2018 under SB 100 to 60 percent by 2030. The project and other similar projects are essential to achieving the RPS.

Given that the project is characterized as a renewable energy project and places emphasis on solar power generation, project operations would be almost carbon-neutral with the majority of the operational GHG emissions associated with vehicle trips. Based on these considerations, no significant long-term operational GHG impacts would occur and, therefore, project-related GHG impacts would not be cumulatively considerable.

5.3.7 Hazards and Hazardous Materials

The geographic scope considered for cumulative impacts from health, safety, and hazardous materials is the area within 1 mile of the boundary of the project site. One mile is the standard American Society of Testing and Materials (ASTM) standard search distance for hazardous materials.

Under cumulative conditions, implementation of the project in conjunction with the projects listed in Table 5-1 is not anticipated to present a public health and safety hazard to residents. Additionally, the project and related projects would all involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction, operation, and decommissioning. Impacts from these activities are less than significant for the project because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various Federal, state, and local laws, regulations, and policies. It is foreseeable that the project and related projects would implement and comply with these existing hazardous materials laws, regulations, and policies. Therefore, the related projects would not cause a cumulative impact, and the project would not result in a cumulatively considerable incremental contribution to a cumulative impact related to use or routine transport of hazardous materials.

5.3.8 Hydrology and Water Quality

Table 5-1 lists the projects considered for the hydrology and water quality cumulative impact analysis. The geographic scope for considering cumulative hydrology and water quality impacts is the Imperial Valley Hydrologic Unit as defined by the Colorado Basin RWQCB Basin Plan.

The construction of the project is expected to result in short-term water quality impacts. Compliance with the SWRCB's NPDES general permit for activities associated with construction (2009-0009-DWQ) per Mitigation Measure HYD-1 would reduce water quality impacts. As with the proposed project, each of the cumulative projects would be required to comply with the Construction General Permit. The SWRCB has determined that the Construction General Permit protects water quality, is consistent with the CWA, and addresses the cumulative impacts of numerous construction activities throughout the state. This determination in conjunction with the implementation of mitigation would ensure short-term water quality impacts are not cumulatively considerable.

The project is not expected to result in long-term operations-related impacts related to water quality. The project would mitigate potential water quality impacts by implementing site design, source control, and treatment control BMPs. 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 solar energy facility site is 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. The gen-tie transmission line runs through FEMA Zone A, a special flood hazard zone with 1 percent annual chance of flooding. Compliance with County Flood Zone Ordinances, guidelines, and regulations would be required 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 project would not contribute to or result in a significant cumulatively considerable impact to hydrology or water quality, and cumulative impacts would be less than significant.

5.3.9 Land Use and Planning

The geographic scope for the analysis of cumulative land use and planning impacts is typically defined by government jurisdiction. The geographic scope for considering potential inconsistencies with the General Plan's policies 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 3.10, Land Use/Planning, the project would not involve any facilities that could otherwise divide an established community. Based on this circumstance, no cumulatively considerable impacts would occur. As discussed in Section 3.10, Land Use/Planning, the project would not conflict with the goals and objectives of the County of Imperial General Plan if all entitlements (General Plan amendment, Zone Change, and Conditional Use Permit) 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. 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.

5.3.10 Noise and Vibration

When determining whether the overall noise (and vibration) impacts from related projects would be cumulatively significant and whether the project's incremental contribution to any significant cumulative impacts would be cumulatively considerable, it is important to note that noise and vibration are localized occurrences; as such, they decrease rapidly in magnitude as the distance from the source to the receptor increases. Therefore, only those related projects and identified in Table 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.

As shown in Table 5-1, there are no cumulative projects within close proximity of the proposed project. The nearest project (Orni 18 Geothermal Plant) is located over 8 miles away. The proposed project's construction noise is not anticipated to be additive to the noise generated by the other cumulative projects. Similar to the proposed project, other cumulative projects would be required to comply with the County's construction noise standards. Construction activity is limited to the hours of 7 a.m. to 7 p.m. Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays. Adhering to the County's construction hours would reduce the noise and vibration impacts to below a level of significance. Thus, the incremental contribution of the project to a cumulative noise impact would not be cumulatively considerable.

Stationary-source and vehicular noise from the aforementioned related projects would be similar in nature and magnitude to those discussed for the project in Section 3.11, Noise and Vibration. For the proposed project, no noise impacts have been identified. Thus, the incremental contribution of the project to significant cumulative noise impacts would not be cumulatively considerable.

5.3.11 Public Services

The project would result in increased demand for public services (fire protection service and law enforcement services) (Section 3.12, Public Services). Future development in the Imperial Valley, including projects identified in Table 5-1, would also increase the demand for public services. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries. In conjunction with the project's approval, the project applicant would also be conditioned to ensure sufficient funding is available for any fire protection or prevention needs and law enforcement services. Based on the type of projects proposed (e.g., solar energy generation), their relatively low demand for public services other than fire and police, it is reasonable to conclude that the project would not increase demands for education, or other public services. Service impacts associated with the project related to fire and police would be addressed through payment of impact fees as part of the project's Conditions of Approval to ensure that the service capabilities of these departments are maintained. Therefore, no cumulatively considerable impacts would occur.

5.3.12 Transportation

During the construction phase of the proposed VEGA 6 project, the maximum number of trips generated on a daily basis would be approximately 320 trips. Under construction year conditions with and without the proposed project, all roadway segments analyzed would operate at LOS B or better and all intersections would operate at a LOS C or better during both AM and PM peak hours. Implementation of the proposed project would not require any public road widening to accommodate vehicular trips associated with the proposed project (construction phase and operational phase), while maintaining adequate LOS. Additionally, future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance.

Since the proposed project is 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 site that would be impacted by project construction or operation. Although the proposed project would increase VMT during the construction phase, these increases are temporary in nature. Operation of proposed project would only require intermittent maintenance which would result in a nominal amount of vehicle trips generated.

The construction phasing of cumulative 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 project. Future operations and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar maintenance. Based on these findings, the project would not result in cumulatively considerable roadway or intersection impacts, and this impact would be less than significant.

5.3.13 Tribal Cultural Resources

As discussed in Section 3.14, Tribal Cultural Resources, no tribes have responded that indicate the potential for traditional cultural properties or sacred sites. Therefore, the proposed project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, and impacts on tribal cultural resources would be less than significant. Future cumulative projects would also be required to comply with the requirements of AB 52 to determine the presence/absence of tribal cultural resources and engage in consultation to determine appropriate mitigation measures to minimize or avoid impacts on tribal cultural resources. Based on these considerations, the project would not contribute to or result in a significant cumulatively considerable impact tribal cultural resources.

5.3.14 Utilities and Service Systems

Future development in Imperial County would increase the demand for utility service in the region. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public utilities within their jurisdictional boundaries. The proposed project would not require or result in the relocation or construction of new or expanded wastewater facilities, storm water facilities, or water facilities. Additionally, the project would be comprised of mostly recyclable materials and would not generate significant volumes of solid waste that could otherwise contribute to significant decreases in landfill capacity. Based on these considerations, the project would result in less than significant impacts on existing utility providers and, therefore, would not result in cumulatively considerable impacts.

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6 Effects Found Not Significant

In accordance with Section 15128 of the CEQA Guidelines, an EIR must contain a statement briefly indicating the reasons that various potential significant effects of a project were determined not to be significant.

6.1 Agriculture and Forestry Resources

6.1.1 VEGA 6

Agriculture Resources

According to the farmland maps prepared by the California Department of Conservation, no portion of the solar energy facility site is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2021). The proposed gen-tie line would border land designated as Farmland of Local Importance; however, the gen-tie line would be located entirely on undeveloped BLM desert land. Therefore, implementation of the proposed project would not convert Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agriculture use.

The solar energy facility site is currently zoned Open Space/Preservation (S-2). According to the 2016/2017 Imperial County Williamson Act Map produced by the California Department of Conservation's Division of Land Resource Protection (DOC 2016), the project site is not located on Williamson Act contracted land. The proposed project would not conflict with existing zoning for agriculture use or a Williamson Act contract. Therefore, no impact would occur.

Forestry Resources

No portion of the VEGA 6 project site or the immediate vicinity is zoned or designated as forest lands, timberlands, or for timberland production. As such, the proposed VEGA 6 project would not conflict with existing zoning or cause the need for a zone change specifically related to agriculture or forest land (as defined in Public Resources Code Section 12220(g), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). Therefore, implementation of the proposed VEGA 6 project would not impact forestry resources.

6.1.2 Ramon Substation Expansion

Agriculture Resources

According to the farmland maps prepared by the California Department of Conservation, no portion of the Ramon Substation expansion area is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2020). The expansion area is designated as Other Land. Implementation of the proposed Ramon Substation expansion would not convert Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agriculture use. Therefore, no impact would occur.

The Ramon Substation expansion area is zoned General Residential Zone (R-3). The Ramon expansion area is not within an agricultural preserve, nor is it subject to a Williamson Act contract.

Under existing conditions, the expansion area is vacant and undeveloped. The proposed Ramon Substation expansion would not conflict with existing zoning for agriculture use or a Williamson Act contract. Therefore, no impact would occur.

Forestry Resources

No portion of the Ramon Substation expansion area or the immediate vicinity is zoned or designated as forest lands, timberlands, or for timberland production. As such, the proposed expansion would not conflict with existing zoning or cause the need for a zone change specifically related to agriculture or forest land (as defined in Public Resources Code Section 12220(g), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). Therefore, implementation of the proposed Ramon Substation expansion would not impact forestry resources.

6.2 Energy

6.2.1 VEGA 6

Information for this section is summarized from the *Energy Consumption Assessment for the VEGA SES 6 Solar and Battery Storage Project* prepared for the project by ECORP Consulting, Inc. This report is included in Appendix L of this EIR.

The proposed VEGA 6 project would impact energy resources during project construction and operation. The analysis focuses on the four sources of energy that are most relevant to the project: the equipment fuel necessary for construction, the electricity and natural gas necessary during operations, and the automotive fuel necessary for ongoing maintenance activities during operations.

The following discussion calculates the potential energy consumption associated with construction and operation of the proposed VEGA 6 project and analyzes if the energy utilized would be wasteful, inefficient, or unnecessary consumption of energy resources.

Construction

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 indicated in Table 6-1, the VEGA 6 project's gasoline fuel consumption during the one-time construction period is estimated to be 43,251 gallons during the first year of construction and 34,581 gallons during the second year of construction. This would increase the annual countywide gasoline fuel use associated with offroad equipment in the County by 0.020 percent and 0.016 percent, respectively. 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 VEGA 6 project would not be any more inefficient, wasteful, or

unnecessary than other similar development projects of this nature. The VEGA 6 project's energy impacts during construction would be less than significant.

Table 6-1. VEGA 6 Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Facility Electrical and Natural Gas Consumption		
Electricity Consumption	3,470,860 kilowatt-hours	0.41 percent
Natural Gas	45 therms	0.0001 percent
Automotive Fuel Consumption		
Year One of Construction	43,251 gallons	0.020 percent
Year Two of Construction	34,581 gallons	0.016 percent
Project Operations	2,785 gallons	0.001 percent

Source: Appendix L of this EIR

Operations

Once construction is completed the VEGA 6 project would be remotely controlled. No employees would be based at the VEGA 6 project site. The only operational emissions associated with the VEGA 6 project would be associated with motor vehicle use for routine maintenance work, water import, and site security as well as panel upkeep and cleaning. Six vehicle trips per day for routine maintenance work, site security, and trucking in water was assumed. This is a conservative estimate as most days would require no operational related vehicle trips. As indicated in Table 6-1, this would estimate to a consumption of approximately 2,785 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.001 percent.

As shown in Table 6-1, the annual electricity consumption due to operations would be 3,470,860 kilowatt hours, resulting in a negligible increase (0.41 percent) in the typical annual electricity consumption attributable to all non-residential uses in Imperial County. Table 6-1 shows that the annual natural gas consumption due to operations would be 45 therms, resulting an insignificant increase (0.0001 percent) in the typical annual natural gas consumption of nonresidential uses in Imperial County. The VEGA 6 project's energy impacts during operations would be less than significant.

Compliance with State and Local Plans for Renewable Energy or Energy Efficiency

The purpose of the proposed VEGA 6 project is the construction of a renewable energy and storage facility in Imperial County. Once in operation, it will decrease the need for energy from fossil fuel–based power plants in the State. The result would be a net increase in electricity resources available to the regional grid, generated from a renewable source. The proposed VEGA 6 project would help California meet its RPS of 60 percent of retail electricity sales from renewable sources by the end of 2030 and 100 percent by 2045. Additionally, the VEGA 6 project would also be consistent with the County's General Plan Conservation and Open Space Element, Objective 9.2 which encourages renewable energy developments. Therefore, the VEGA 6 project would directly support state and local plans for renewable energy development. The proposed VEGA 6 project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, no impact would occur.

6.2.2 Ramon Substation Expansion

Construction activities associated with the proposed Ramon Substation expansion would require the consumption of fossil fuel resources, for example diesel fuel and gasoline to power the off-road construction equipment and construction vehicles. Additionally, construction would require the manufacture and delivery of new equipment and materials, which would require energy use. The energy used by the proposed Ramon Substation expansion during construction would not be wasteful, inefficient, or unnecessary in light of the new facilities that would increase capacity and system reliability.

Grading activities would be required to adhere to local, regional, and state standards as well as best management practices. Construction of any structures would be subject to the California Building Code/Title 24, which includes energy efficiency and green building standards that address energy consumption.

Operations, including inspection, patrol, and maintenance would also require use of fossil fuel resources. However, no new employees would be required, and maintenance would be incorporated to IID's existing maintenance programs. The operation and maintenance activities would not change from IID's existing activities.

The proposed expansion would allow IID to increase capacity and the efficiency of the system's ability to deliver electricity to California's end users. Therefore, the proposed expansion would not conflict with any state or local plan for prioritizing renewable energy or energy efficiency.

6.3 Mineral Resources

6.3.1 VEGA 6

The VEGA 6 project site is not used for mineral resource production and the applicant is not proposing any form of mineral extraction. According to Figure 8: Imperial County Existing Mineral Resources of the Conservation and Open Space Element of the General Plan (County of Imperial 2016), no known mineral resources occur within the VEGA 6 project site nor does the project site contain mapped mineral resources. Therefore, the proposed VEGA 6 project would not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of California nor would the proposed VEGA 6 project result in the loss of availability of a locally important mineral resource.

Based on a review of the California Department Division of Oil, Gas, and Geothermal Resources Well Finder, there are no geothermal wells located within the VEGA 6 project site (California Department of Oil, Gas, and Geothermal Resources 2022). However, there are several geothermal wells located north, northeast, and east of the project site that are plugged and abandoned (California Department of Oil, Gas, and Geothermal Resources 2022). The proposed VEGA 6 project would be designed to avoid the geothermal wells and would result in no impacts.

6.3.2 Ramon Substation Expansion

The Ramon Substation expansion area is located in a region identified as Mineral Resource Zone-3 (MRZ-3) as shown in Figure OS-6 of the Riverside County's General Plan (County of Riverside 2015). Areas identified as MRZ-3 are areas where the available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposit is undetermined. The proposed Ramon Substation expansion is not located within an area known to be underlain by regionally or

locally important mineral resources or within an area that has the potential to be underlain by regionally or locally important mineral resources, as disclosed by the Riverside County General Plan. Accordingly, implementation of the proposed Ramon Substation expansion would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State of California.

Based on a review of the California Department Division of Oil, Gas, and Geothermal Resources Well Finder, there are no geothermal wells located within the Ramon Substation expansion area (California Department of Oil, Gas, and Geothermal Resources 2023). Accordingly, impacts to the environmental issue of Mineral Resources would not occur.

6.4 Population and Housing

6.4.1 VEGA 6

Development of housing is not proposed as part of the VEGA 6 project. The unemployment rate in Imperial County as of September 2023 was 21.1 percent (State of California Employment Development Department 2023a). The applicant expects to utilize construction workers from the local and regional area, a workforce similar to that involved in the development of other utility-scale solar facilities. Based on the unemployment rate in Imperial County (21.1 percent) (State of California Employment Development Department 2023a), and the availability of the local workforce, construction of the proposed VEGA 6 project would not have a growth-inducing effect.

The proposed VEGA 6 project would be operated on an unstaffed basis and be monitored remotely, with periodic on-site personnel visitations for security, maintenance and system monitoring. Therefore, no full-time site personnel would be required on-site during operations and approximately two to three employees would only be onsite up to two times per year to wash the solar panels. As the project's PV arrays produce electricity passively, maintenance requirements are anticipated to be very minimal. Therefore, the proposed VEGA 6 project would not result in a substantial growth in the area, as the number of employees required to operate and maintain the facility is minimal.

No housing exists within the VEGA 6 project site and no people reside within the project site. Therefore, the proposed VEGA 6 project would not displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. The proposed VEGA 6 project would result in no impact to population and housing.

6.4.2 Ramon Substation Expansion

Development of housing is not proposed as part of the proposed Ramon Substation expansion. The unemployment rate in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside and San Bernardino Counties) as of September 2023 was 5.0 percent (State of California Employment Development Department 2023b). IID expects to utilize construction workers from the local and regional area, a workforce similar to that involved in the development of other utility-scale facilities. Based on the unemployment rate in Riverside County (5.0 percent) (State of California Employment Development Department 2023b), and the availability of the local workforce, construction of the proposed Ramon Substation expansion would not have a growth-inducing effect.

The proposed Ramon Substation expansion would not require any long-term employees during operations. There are already existing employees staffed at the existing Ramon Substation. These existing employees are anticipated to perform routine maintenance work and site security for the

proposed expansion area. Therefore, the proposed expansion would not result in a substantial growth in the area.

No housing exists within the Ramon Substation expansion area and no people reside within the expansion area. Therefore, the proposed expansion would not displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. The proposed Ramon Substation expansion would result in no impact to population and housing.

6.5 Recreation

6.5.1 VEGA 6

The VEGA 6 project site is not used for formal recreational purposes. Also, the proposed VEGA 6 project would not generate new employment on a long-term basis. As such, the VEGA 6 project would not significantly increase the use or accelerate the deterioration of regional parks or other recreational facilities. The temporary increase of population during construction that might be caused by an influx of workers would be minimal and not cause a detectable increase in the use of parks. Additionally, the proposed VEGA 6 project does not include or require the expansion of recreational facilities. Therefore, no impact is identified for recreation.

6.5.2 Ramon Substation Expansion

The Ramon Substation expansion area is not used for formal recreational purposes. Also, as described above, the proposed expansion would not generate new employment on a long-term basis. As such, the proposed expansion 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 proposed Ramon Substation expansion does not include or require the expansion of recreational facilities. Therefore, no impact is identified for recreation.

6.6 Public Services

6.6.1 VEGA 6

Schools

The proposed VEGA 6 project does not include the development of residential land uses that would result in an increase in population or student generation. Construction of the proposed VEGA 6 project would not result in an increase in student population within the Imperial County's School District since it is anticipated that construction workers would commute in during construction operations. The proposed VEGA 6 project would have no impact on Imperial County schools.

Parks and Other Public Facilities

No full-time employees are required to operate the VEGA 6 project. The project facility will be monitored remotely. It is anticipated that maintenance of the facility will require minimal site presence to perform periodic visual inspections and minor repairs. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities are not

expected. The proposed VEGA 6 project is not expected to have an impact on parks, libraries, and other public facilities.

6.6.2 Ramon Substation Expansion

Schools

The proposed Ramon Substation expansion does not include the development of residential land uses that would result in an increase in population or student generation. The proposed VEGA 6 project would have no impact on Riverside County schools.

Parks and Other Public Facilities

The proposed Ramon Substation expansion would not generate new employment on a long-term basis. There are already existing employees staffed at the existing Ramon Substation. These existing employees are anticipated to perform routine maintenance work and site security for the proposed expansion area. Therefore, substantial permanent increases in population that would adversely affect local parks, libraries, and other public facilities are not expected. The proposed Ramon Substation expansion is not expected to have an impact on parks, libraries, and other public facilities.

6.7 Utilities and Service Systems

6.7.1 VEGA 6

Wastewater Facilities

The VEGA 6 project would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No habitable structures are proposed on the VEGA 6 project site, therefore, there would be no wastewater generation from the proposed VEGA 6 project. The proposed VEGA 6 project would not require or result in the relocation or construction of new or expanded wastewater facilities.

Storm Water Facilities

The VEGA 6 project does not require expanded or new storm drainage facilities off-site (i.e., outside of the project footprint) because the proposed solar facility would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events. Therefore, the VEGA 6 project 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 the majority of the surfaces within the project site boundary would remain pervious. As such, the proposed VEGA 6 project would not require or result in the relocation or construction of new or expanded storm water facilities beyond those proposed as part of the VEGA 6 project and evaluated in the EIR.

Water Facilities

The proposed VEGA 6 project is not anticipated to result in a significant increase in water demand/use during operation; however, water will be needed for solar panel washing and dust suppression. During operation, water would be trucked to the VEGA 6 project site from a local water source. Therefore, the proposed VEGA 6 project would not require or result in the relocation or construction of new or expanded water facilities.

Power, Natural Gas, and Telecommunication Facilities

The proposed VEGA 6 project would involve construction of power facilities. However, these are components of the project as evaluated in the EIR. The proposed VEGA 6 project would not otherwise generate the demand for or require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities that would in turn, result in a significant impact to the environment.

Solid Waste Facilities

Solid waste generation would be minor for the construction and operation of the VEGA 6 project. Solid waste would be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. Trash would likely be hauled to the Imperial Landfill (13-AA-0019) located approximately 14 miles southeast of the proposed VEGA 6 project in Imperial. The Imperial Landfill has approximately 12,384,000 cubic yards of remaining capacity and is estimated to remain in operation through 2040 (CalRecycle 2022). Therefore, Imperial Landfill has adequate capacity to receive the minor amount of solid waste generated by construction and operation of the proposed VEGA 6 project.

Additionally, the VEGA 6 project would comply with applicable 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. Further, conditions of the CUP would contain provisions for recycling and diversion of Imperial County construction waste policies.

When the proposed VEGA 6 project reaches the end of its operational life, the components would be decommissioned and deconstructed. When the project concludes operations, much of the wire, steel, and modules of which the system is comprised would be recycled to the extent feasible. The VEGA 6 project components would be deconstructed and recycled or disposed of safely, and the site could be converted to other uses in accordance with applicable land use regulations in effect at the time of closure. Commercially reasonable efforts would be used to recycle or reuse materials from the decommissioning. All other materials would be disposed of at a licensed facility. A less than significant impact is identified for this issue.

6.7.2 Ramon Substation Expansion

Wastewater Facilities

The proposed Ramon Substation expansion 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, therefore, there would be no wastewater generation from the proposed expansion. The proposed Ramon Substation expansion would not require or result in the relocation or construction of new or expanded wastewater facilities.

Storm Water Facilities

The proposed Ramon Substation expansion does not require expanded or new storm drainage facilities off-site (i.e., outside of the project footprint) because the proposed facility would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events. Therefore, the proposed Ramon Substation expansion would not require the construction of off-site storm water management facilities. As such, the proposed Ramon Substation expansion would not require or result in the relocation or construction of new or expanded storm water facilities.

Water Facilities

The proposed Ramon Substation expansion is not anticipated to result in a significant increase in water demand/use during operation; however, water will be needed for dust suppression. During operation, water would be trucked to the expansion area from a local water source. Therefore, the proposed Ramon Substation expansion would not require or result in the relocation or construction of new or expanded water facilities.

Power, Natural Gas, and Telecommunication Facilities

The proposed Ramon Substation expansion would involve construction and expansion of existing power facilities. However, these are components of the project as evaluated in the EIR. The proposed expansion 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

The Ramon Substation expansion area is within the jurisdiction of the Riverside County Waste Management Department, which operates six landfills and contracts with an additional private landfill, and administers several transfer station leases. The nearest landfill, and the one most likely to accept waste from the expansion area, is the Oasis Landfill. According to CalRecycle, the Oasis Landfill has 433,779 cubic yards of remaining capacity and is estimated to remain in operation through 2055 (CalRecycle 2023).

Construction of the Ramon Substation expansion would result in the generation of construction-related waste. Projects that have the potential to generate construction and demolition (C&D) waste are required to comply with the County of Riverside's C&D Waste Diversion Program. This program is designed to comply with AB 939 and the CALGreen Building Code, Materials Conservation and Resource Efficiency section. Compliance with the County of Riverside's C&D Waste Diversion Program would ensure that a minimum of 65 percent of the project's C&D waste would be recycled and diverted from landfills. It is anticipated that Oasis Landfill would have sufficient daily capacity to accept the construction waste generated by the proposed Ramon Substation expansion. The proposed expansion is not anticipated to cause or contribute to the need for new or expanded solid waste facilities during construction. The proposed expansion is not anticipated to generate solid waste during operations.

Based on the analysis above, the Oasis Landfill would have adequate capacity to handle solid waste generated by the proposed Ramon Substation expansion. Accordingly, impacts would be less than significant.

6.8 Wildfire

6.8.1 VEGA 6

According to the California Department of Forestry and Fire Protection, the VEGA 6 project site is not located within or near a state responsibility area or lands classified as very high severity zones (California Department of Forestry and Fire Protection 2007). Therefore, the proposed VEGA 6 project would not substantially impair an adopted emergency response plan or emergency evacuation plan; expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a

wildfire; exacerbate fire risk; or, expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact is identified for wildfire.

6.8.2 Ramon Substation Expansion

According to the California Department of Forestry and Fire Protection, the Ramon Substation expansion area is not located within or near a state responsibility area or lands classified as very high severity zones (California Department of Forestry and Fire Protection 2007). According to the WCVAP Wildfire Susceptibility Map, the expansion area is not located within an area susceptible to wildfire (County of Riverside 2021). Therefore, the proposed Ramon Substation expansion 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 80 MW alternating current (AC) of electricity to assist the State of California in achieving its 60 percent renewable portfolio standard by 2030.
- Provide a 160 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.

- Help California meet its statutory and regulatory goal of increasing renewable power generation, including greenhouse gas reduction goals of Senate Bill 32.
- Interconnect directly to IID's existing electrical transmission system.
- 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 project, as proposed, would not be implemented and the project site would not be further developed with a solar energy project. The No Project/No Development Alternative would fail to meet any of the project objectives.

7.4.1 Environmental Impact of Alternative 1: No Project/No Development Alternative

Aesthetics

Under the No Project/No Development Alternative, the project site would not be developed and would continue to be vacant land. The No Project/No Development Alternative would not modify the existing project site or add construction to the project site therefore, there would be no change to the existing condition of the site. Under this alternative, there would be no potential to create a new source of light or glare associated with the PV arrays. A less than significant aesthetic impact (including potential light and glare impact) has been identified associated with the project. However, because there would be no change to the existing condition of the project site under this alternative, there would be no potential impact associated with a change in visual character of the site and the potential aesthetic impact would be less as compared to the project as the existing visual conditions would not change.

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 3.3, Air Quality, the proposed project would not exceed the ICAPCD's significance thresholds for emissions of ROG, CO, NOx, and $PM_{2.5}$ during both the construction and operational phases of the project. However, the project would exceed the ICAPCD threshold for PM_{10}. 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. However, the project's daily construction emissions would exceed the ICAPCD threshold for PM_{10}, even with implementation of ICAPCD Regulation VIII (Mitigation Measure AQ-1). A predominate source of the project's PM_{10} emissions is workers commuting to and from the project site on unpaved roads. Commuter vehicles traveling over the exposed soils of unpaved roads generates substantial amounts of fugitive PM_{10} emissions. The majority of roadways leading to the project site are paved; however, 1.8 miles of unpaved roadway would be used by commuting workers and vendors. Mitigation Measure AQ-2 is proposed to reduce PM_{10} emissions to levels below the significance threshold. This alternative would result in less air quality emissions compared to the proposed project, 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 project.

Biological Resources

Under the No Project/No Development Alternative, existing biological resource conditions within the project site would largely remain unchanged and no impact would be identified. Unlike the proposed project which requires mitigation for biological resources including, burrowing owl, bird species, Palm Springs pocket mouse, and riparian habitat/wetlands, this alternative would not result in construction

of a solar facility that could otherwise result in significant impacts to these biological resources. Compared to the proposed project, this alternative would avoid impacts to biological resources.

Cultural Resources

The proposed project would involve ground-disturbing activities that have the potential to disturb previously undocumented cultural resources that could qualify as historical resources or unique archaeological resources pursuant to CEQA. Under the No Project/No Development Alternative, the project site would not be developed and no construction-related ground disturbance would occur. Therefore, compared to the proposed project, this alternative would avoid impacts to cultural resources.

Geology and Soils

Because there would be no development at the project site under the No Project/No Development Alternative, no grading or construction of new facilities would occur. Therefore, there would be no impact to project-related facilities as a result of local seismic hazards (strong ground shaking), expansive soils, corrosive soils, soil erosion, and paleontological resources. In contrast, the proposed project would require the incorporation of mitigation measures related to strong ground shaking, expansive soils, corrosive soils, soil erosion, and paleontological resources to minimize impacts to a level less than significant. Compared to the proposed project, this alternative would avoid significant impacts related to local geology and soil conditions and paleontological resources.

Greenhouse Gas Emissions

Under the No Project/No Development Alternative, there would be no GHG emissions resulting from project construction or operation or corresponding impact to global climate change. The No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of SB 32. While this alternative would not further implement policies for GHG reductions, this alternative would also not directly conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This alternative would not create any new GHG emissions during construction but would not lead to a long-term beneficial impact to global climate change by providing renewable clean energy. For the proposed project, a less than significant impact was identified for construction-related GHG emissions, and in the long-term, the project would result in an overall beneficial impact to global climate change as the result of creation of clean renewable energy, that does not generate GHG emissions. Compared to the proposed project, while the No Project/No Development Alternative would not result in new GHG emissions during construction, it would be less beneficial to global climate change as compared to the proposed project. Further, the construction emissions associated with the project would be off-set by the beneficial renewable energy provided by the project, negating any potential that the No Project/No Development alternative would reduce construction-related GHG emissions.

Hazards and Hazardous Materials

The No Project/No Development Alternative would not include any new construction. Therefore, no potential exposure to hazardous materials would occur. Therefore, no impact is identified for this alternative for hazards and hazardous materials. As with the proposed project, this alternative would not result in safety hazards associated with airport operations. Although a less than significant impact is identified for hazards and hazardous materials associated with the project, compared to

the proposed project, this alternative would have less of an impact related to hazards and hazardous materials as there would be no potential for the transport, use, removal or disposal of hazardous materials.

Hydrology/Water Quality

The No Project/No Development Alternative would not result in modifications to the existing drainage patterns or volume of storm water runoff as attributable to the proposed project, as 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. The proposed project has the potential to affect surface water quality with polluted runoff flowing from the project to the IID Imperial Valley Drains. To reduce impacts to a less than significant level, the applicant would file an NOI with the SWRCB to comply with the General NPDES Construction Permit and prepare a SWPPP, which addresses the measures that would be included during construction or the project to minimize and control construction and post-construction runoff to the “maximum extent practicable.” Compared to the proposed project, from a drainage perspective, this alternative would avoid changes to existing hydrology and water quality. This alternative would have less of an impact associated with hydrology/water quality as compared to the proposed project.

Land Use Planning

Under the No Project/No Development Alternative, the project site would not be developed and continue to be undeveloped, partially disturbed land. Current land uses would remain the same. No existing community would be divided, and no inconsistencies with land use planning policies would occur. Because no significant Land Use and Planning impact has been identified associated with the proposed project, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed project.

Noise

This alternative would not require construction or operation of the project facilities; therefore, this alternative would not increase ambient noise levels within the vicinity of the project site. For this reason, no significant noise impacts would occur. As discussed in Section 3.11, Noise and Vibration, the proposed project would not result in significant noise impacts to sensitive receptors during construction and operation. Compared to the proposed project, this alternative would not generate noise and would have less of an impact associated with noise.

Public Services

Under the No Project/No Development Alternative, the project site would remain vacant and unchanged and would not result in a demand for public services. The proposed project would result in a temporary increase in demand for law enforcement service and would result in a minor increase in demand for fire protection services over existing levels. Therefore, the project applicant would be required to pay the fire protection services’ impact fees and the project applicant will be required to participate in the Imperial County Public Benefit Program to pay for all costs, benefits, and fees associated with the project to offset potential impacts. Compared to the proposed project, this alternative would have less impacts related to public services.

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, or result in inadequate emergency access. Although the proposed project 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 project.

Tribal Cultural Resources

The proposed project is not anticipated to cause a substantial adverse change in the significance of a tribal cultural resource. Impacts to tribal cultural resources under the No Project/No Development Alternative are similar to the proposed project.

Utilities and Service Systems

The No Project/No Development Alternative would not require the expansion or extension of existing utilities, since there would be no new project facilities that would require utility service. No solid waste would be generated under this alternative. The proposed project would not result in any significant impacts to existing utilities or solid waste facilities. Compared to the proposed project, this alternative would have less of an impact related to utilities and solid waste facilities.

Conclusion

Implementation of the No Project/No Development Alternative would generally result in reduced impacts for a majority of the environmental issues areas considered in Chapter 3, Environmental Analysis when compared to the proposed project. A majority of these reductions are realized in terms of significant impacts that are identified as a result of project construction. However, this alternative would not realize the benefits of reduced GHG emissions associated with energy use, which are desirable benefits that are directly attributable to the proposed project.

Comparison of the No Project/No Development Alternative to Project Objectives

The No Project/No Development Alternative would not meet any of the objectives of the project. Additionally, the No Project/No Development Alternative would not help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of SB 32.

7.5 Alternative 2: Reduced Project Site

The purpose of this alternative is to reduce the size of the solar facility site to minimize impacts on riparian habitat and jurisdictional resources. There is riparian habitat associated with the detention basins within the solar facility site. Additional riparian habitat is associated with the agricultural drains and roadside ditches. Ephemeral drainages are located throughout the northern portion of the solar facility site.

As shown in Figure 7-1, this alternative would avoid development on portions of the solar facility site where riparian habitat and jurisdictional resources occur. The solar facility site would be reduced by approximately 109 acres from a total of 320 acres to 211 acres. Under this alternative, the gen-tie line alignment would be extended approximately 0.54 miles to the south.

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 project's 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 proposed project and the aesthetic impact would be similar to the proposed project.

Air Quality

Under Alternative 2, air emissions during construction would be less than the proposed project because of the reduced site development. A less than significant impact with mitigation incorporated has been identified for the proposed project during construction. As described in Section 3.3 Air Quality, the proposed project's daily construction emissions would exceed the ICAPCD threshold for PM_{10}, even with implementation of ICAPCD Regulation VIII (Mitigation Measure AQ-1). A predominate source of the project's PM_{10} emissions is workers commuting to and from the project site on unpaved roads. Commuter vehicles traveling over the exposed soils of unpaved roads generates substantial amounts of fugitive PM_{10} emissions. The majority of roadways leading to the project site are paved; however, 1.8 miles of unpaved roadway would be used by commuting workers and vendors. Mitigation Measure AQ-2 is proposed to reduce PM_{10} emissions to levels below the significance threshold. Mitigation Measure AQ-2 would require the project contractor to use soil stabilizers on the 1.8 miles of unpaved roadway used for construction worker access to the project site. Similar to the proposed project, this alternative would be required to comply with the requirements of ICAPCD Regulation VIII (Mitigation Measure AQ-1) for the control of fugitive dust and Mitigation Measure AQ-2 to minimize fugitive PM_{10} emissions.

Similar to the proposed project, 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 project, thereby reducing its ability to provide a long-term source of renewable energy. Compared to the proposed project, 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.

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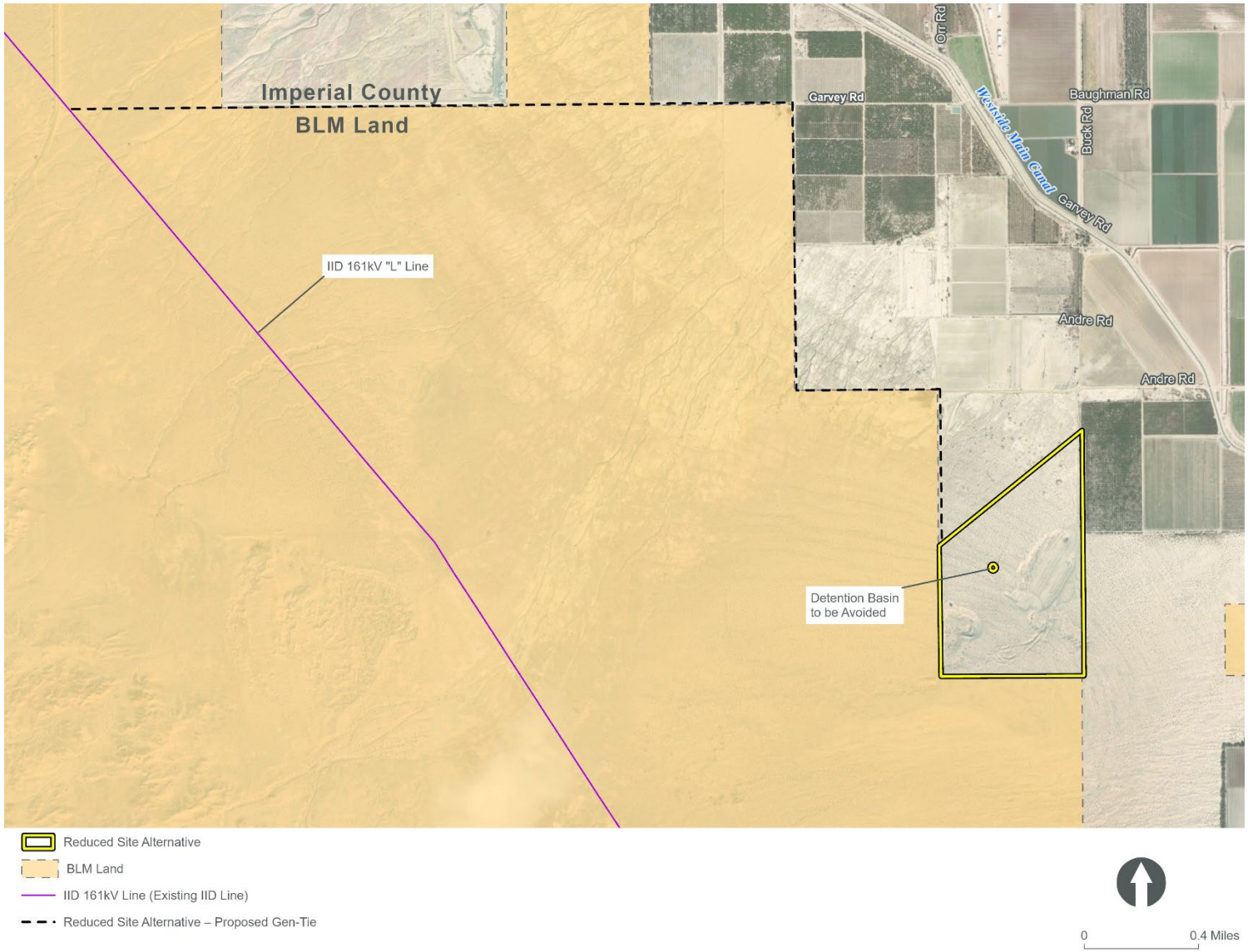
Figure 7-1. Alternative 2 – Reduced Project Site



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Biological Resources

Under Alternative 2, the overall size of the solar energy facility would be reduced by 109 acres. As described in Section 3.4 Biological Resources, there is riparian habitat associated with the detention basins within the solar facility site. Additional riparian habitat is associated with the agricultural drains and roadside ditches. Ephemeral drainages are located throughout the northern portion of the solar facility site. Under Alternative 2, impacts on biological resources would be reduced by reducing the size of the project site to avoid impacts on riparian habitat and jurisdictional resources located within the solar energy facility site. Although the overall size of the solar energy facility would be reduced, there is still potential for impacts on special-status species on the solar energy facility site. Also, the proposed project's potential impacts on biological resources as a result of the construction of the proposed gen-tie line and Ramon Substation would still occur. Compared to the proposed project, this alternative would result in a reduction in impacts on biological resources but would still require mitigation to reduce impacts to a level less than significant.

Cultural Resources

Although the overall size of the solar energy facilities would be reduced by 109 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 could avoid direct impacts to potentially significant cultural resources sites potentially located within the reduced project site footprint (yet to be evaluated for eligibility for the CRHR). Compared to the proposed project, 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 project, this alternative would also be subject to potential impacts related to strong ground shaking, expansive soils, corrosive soils, soil erosion, 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 project.

Greenhouse Gas Emissions

Under Alternative 2, the overall project footprint would be reduced by approximately 109 acres, thereby contributing to reductions in GHG emissions during project construction. However, as a consequence of the reduced size of the project, this alternative would result in a reduced power production capacity as compared to the proposed project; hence, the overall benefits of the project to global climate change through the creation of renewable energy would also be reduced. This alternative would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Similar to the proposed project, this alternative would not exceed 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 project, this alternative would not avoid or reduce a significant impact related to this issue and, therefore, it is considered similar to the proposed project.

Hazards and Hazardous Materials

Similar to the proposed project, construction of this alternative would involve the limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment. No impact associated with potential safety hazards to the public residing or working within proximity to a public airport would occur. Implementation of this alternative would result in a similar hazards and hazardous materials impact as the proposed project. This alternative would not avoid or lessen the impact to hazards and hazardous materials as no significant impact associated with the proposed project has been identified.

Hydrology/Water Quality

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 project. Because the overall project footprint would be reduced, this alternative would realize a minor reduction in the corresponding impacts on hydrology and on-site drainage; however, the same mitigation measures would be applicable to this alternative. Compared to the proposed project, 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 project has been identified. As with the proposed project, this alternative would be consistent with the County Land Use Ordinance, Division 17, RE Overlay Zone, which authorizes the development and operation of RE projects with an approved CUP. Implementation of this alternative would be similar to the proposed project with respect to land use and planning.

Noise

As with the proposed project, Alternative 2 would not result in significant noise impacts associated with construction activities. As with the proposed project, operational impacts associated with this alternative would not expose persons or generate noise levels in excess of applicable noise standards, exposure persons to, or generate excessive groundborne vibration, or expose persons to excessive aircraft noise. Because no significant noise impact has been identified associated with the proposed project, this alternative would not avoid or reduce a significant impact related to this issue and therefore, it is considered similar to the proposed project.

Public Services

While the overall project footprint would be reduced under this alternative, the impacts of this alternative to public services and associated service ratios would be similar. Similar to the proposed project, this alternative would be conditioned to provide law enforcement and fire service development impact fees. This alternative would result in a similar impact related to public services.

Transportation

This alternative would result in a similar level of construction and operation-related vehicle and truck trips as compared to the proposed project. However, the increase in vehicular traffic was identified as a less than significant impact for the proposed project. In this context, Alternative 2 would not reduce or avoid an impact related to transportation and would result in less than significant impacts similar to the proposed project. As with the proposed project, Alternative 2 would not impact any applicable plan, ordinance, or policy addressing the performance of the circulation system, substantially increase hazards because of a design feature, result in inadequate emergency access, or conflict with public transit, bicycle, or pedestrian facilities. This alternative would result in a similar impact related to transportation as the proposed project.

Tribal Cultural Resources

Implementation of this alternative would not avoid or reduce a tribal cultural resources impact, as no significant impact associated with the project has been identified. Impacts to tribal cultural resources under this alternative are similar to the proposed project.

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 project as a less than significant impact to utilities has been identified associated with the project. Implementation of this alternative would not achieve to the same degree the beneficial impacts of providing renewable energy. As compared to the proposed project, the overall demand for utilities would be less under this alternative.

Conclusion

Implementation of the Reduced Project Site Alternative would generally result in reduced impacts to air quality, biological resources, cultural resources, hydrology/water quality, and utilities/service systems.

Comparison of the Reduced Project Site Alternative to Project Objectives

Alternative 2 would meet most of the basic objectives of the proposed project and should remain under consideration. However, this alternative would make it more difficult to achieve the overall objective of providing a total of 80 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 project. As noted on Table 7-1, the No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant impacts identified for the project. However, CEQA Guidelines Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." As shown in Table 7-1, Alternative 2 would be the environmental superior alternative because it would reduce impacts for the following environmental issue areas as compared to the proposed project: 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 and Visual Resources	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *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
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

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
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	No Impact	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Similar Impact	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Similar Impact
Noise and Vibration	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact
Public Services	Less than Significant	*CEQA Significance:* No Impact *Comparison to Proposed Project:* Less Impact	*CEQA Significance:* Less than Significant *Comparison to Proposed Project:* Similar Impact

Environmental Issue Area	Proposed Project	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Site
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:* Less 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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8 References

California Air Pollution Control Officers Association (CAPCOA). 2021. Health Effects. Available on-line at http://www.capcoa.org/health-effects/. Accessed April 28, 2022.

California Air Resources Board (CARB). 2023. iADAM: Air Quality Data Statistics. Available on-line at https://www.arb.ca.gov/adam/. Accessed October 26, 2023.

——— 2016. Ambient Air Quality Standards. Available on-line at https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed April 28, 2022.

——— 2021. California Greenhouse Gas Emissions for 2000 to 2019 – Trends of Emissions and Other Indicators. July 28. Available on-line at https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000_2019_ghg_inventory_trends_20220401.pdf. Accessed May 2, 2022.

——— 2017. California's 2017 Climate Change Scoping Plan. Available on-line at https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf. Accessed May 3, 2022.

California Department of Conservation (DOC). 2021. California Important Farmland Finder. Available on-line at https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed April 27, 2022.

——— 2018. Imperial County Important Farmland 2018.

——— 2019. Seismic Hazards Mapping Act. Available on-line at https://www.conservation.ca.gov/cgs/shma?msclkid=e9bb80deb51a11eca2734d5126931ef9. Accessed November 7, 2023.

California Department of Fish and Wildlife (CDFW). 2023. California Sensitive Natural Communities. Available on-line at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline. Accessed October 30, 2023.

California Department of Forestry and Fire Protection. 2007. Fire Hazard Severity Zones in SRA. Available on-line at https://osfm.fire.ca.gov/media/6680/fhszs_map13.pdf. Accessed April 28, 2022.

California Department of Oil, Gas, and Geothermal Resources. 2023. Geologic Energy Management Division's Well Finder. Available on-line at https://maps.conservation.ca.gov/calGEM/wellfinder/v2/#/-116.36769/33.81803/17. Accessed November 1, 2023.

——— 2022. Geologic Energy Management Division's Well Finder. Available on-line at https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-115.71291/33.01887/14. Accessed April 27, 2022.

California Department of Transportation (Caltrans). 1998. Technical Noise Supplement.

——— 2013. Transportation and Construction-Induced Vibration Guidance Manual. Available on-line at https://www.placer.ca.gov/DocumentCenter/View/8273/Caltrans-2013-Transportation-and-Construction-Vibration-Guidance-Manual-PDF. Accessed May 16, 2022.

California Department of Water Resources. 2022. Imperial Valley. Available on-line at https://groundwaterexchange.org/basin/imperial-valley-7-030/. Accessed May 12, 2022.

——— 2023. SGMA Data Viewer. Available on-line at https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels. Accessed November 11, 2023.

California Geologic Survey (CGS). 2016. Earthquake Zones of Required Investigation. Available on-line at https://maps.conservation.ca.gov/cgs/EQZApp/. Accessed May 3, 2022.

——— 2023. Information Warehouse: Regulatory Maps. Available on-line at https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/. Accessed October 24, 2023.

California Natural Resources Agency. 2018. *California's Fourth Climate Change Assessment – California's Changing Climate 2018.* Available on-line at https://www.energy.ca.gov/sites/default/files/2019-11/20180827_Summary_Brochure_ADA.pdf. Accessed May 2, 2022.

California Regional Water Quality Control Board (RWQCB). 2019. Water Quality Control Plan for the Colorado River Basin Region. Available on-line at https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/docs/2020/rb7bp_e2019.pdf. Accessed May 12, 2022.

——— 2022. Impaired Water Bodies. Available on-line at https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml?wbid=CAR725000002000012709505 7. Accessed May 12, 2022.

CalRecycle. 2023. SWIS Facility/Site Activity Details – Oasis Sanitary Landfill (33-AA-0015). Available on-line at https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2254?siteID=2376. Accessed November 1, 2023.

——— 2022. SWIS Facility/Site Activity Details – Imperial Landfill (13-AA-0019). Available on-line at https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4191?siteID=603. Accessed April 28, 2022.

County of Imperial. N.d. County of Imperial General Plan. Available on-line at https://www.icpds.com/planning/land-use-documents/general-plan. Accessed April 27, 2022.

——— 2016. Conservation and Open Space Element.

——— 1997. Seismic and Public Safety Element.

——— 1996. Airport Land Use Compatibility Plan – Imperial County Airports.

——— 2008. Circulation and Scenic Highways Element.

——— 2008a. Engineering Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage and Grading Plans Within Imperial County.

——— 2015a. Division 31 – Stormwater Control, Chapter 1 General Provisions and Definitions. Available on-line at https://library.municode.com/ca/imperial_county/codes/code_of_ordinances?nodeId=TIT9LAUSCO_DIV31STCO_CH3REPOST_93103.01REOBPEIMBM. Accessed May 4, 2022.

——— 2015b. Noise Element.

——— 2020. Land Use Ordinance. Title 9, Division 5: Zoning Areas Established, Chapter 19. Available on-line at https://www.icpds.com/assets/5-Zoning-Areas-Established-.pdf. Accessed May 20, 2022.

——— 2017. Land Use Ordinance. Title 9, Division 17: Renewable Energy Resources. Available on-line at https://www.icpds.com/assets/planning/ordinances/title-9-div-17-2017.pdf. Accessed May 23, 2022.

County of Riverside. 2021. Western Coachella Valley Area Plan. Available on-line at https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-WCVAP-4-2022-rev.pdf.

——— 2020. County of Riverside General Plan – Circulation Element. Available on-line at https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-2019-elements-Ch04-Circulation-072720v2.pdf.

——— 2018. County of Riverside General Plan – Air Quality Element. Available on-line at https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-plan-2018-elements-Ch09-AQE-071718.pdf.

——— 2015. County of Riverside General Plan – Multipurpose Open Space Element. Available on-line at https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-Plan-2017-elements-OCT17-Ch05-MOSE-120815.pdf.

——— 2005. Riverside County Airport Land Use Compatibility Plan Policy Document. Available on-line at https://rcaluc.org/sites/g/files/aldnop421/files/2023-06/Palm%20Springs.pdf. Accessed October 19, 2023.

——— 2019. Riverside County Emergency Operations Plan.

Department of Toxic Substances Control (DTSC). 2023. EnviroStor. Available on-line at https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=ramon+substation+. Accessed October 2, 2023.

Department of Transportation. 2022. Transporting Lithium Batteries. Available on-line at https://www.phmsa.dot.gov/lithiumbatteries. Accessed May 6, 2022.

Federal Emergency Management Agency. 2008. FEMA Flood Map Service Center – Search by Address (Panel 06025C1000C). Available on-line at https://msc.fema.gov/portal/search?AddressQuery=Westmorland%2C%20CA#searchresultsanchor. Accessed May 12, 2022.

Imperial County Air Pollution Control District (ICAPCD). 2009. Final 2009 Imperial County State Implementation Plan for Particulate Matter Less than 10 Microns in Aerodynamic Diameter. Available on-line at https://apcd.imperialcounty.org/wp-content/uploads/2020/08/Final-IC-2009-PM10-SIP-document.pdf. Accessed April 29, 2022.

——— 2014. Final 2013 State Implementation Plan for the 2006 24-Hour PM2.5 Moderate Nonattainment Area. Available on-line at https://apcd.imperialcounty.org/wp-content/uploads/2020/01/Final_PM25_SIP.pdf. Accessed April 29, 2022.

——— 2017. 2017 State Implementation Plan for the 75 ppb 2008 8-Hour Ozone Standard. September 2017. Available on-line at https://apcd.imperialcounty.org/wp-content/uploads/2020/01/OzoneSIP.pdf. Accessed April 29, 2022.

——— 2017b. CEQA Air Quality Handbook. As amended December 12, 2017. Available on-line at https://apcd.imperialcounty.org/wp-content/uploads/2020/01/CEQAHandbk.pdf. Accessed April 29, 2022.

——— 2018a. 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less than 10 Microns in Diameter. Adopted October 23, 2018. Available on-line at https://apcd.imperialcounty.org/wp-content/uploads/2020/01/2018PM10PlanBoardPacket.pdf. Accessed April 29, 2022.

——— 2018b. 2018 Annual Particulate Matter Less than 2.5 Microns in Diameter State Implementation Plan. Available on-line at https://ww3.arb.ca.gov/planning/sip/planarea/imperial/final_2018_ic_pm25_sip.pdf. Accessed April 29, 2022.

Imperial County Office of Emergency Services (OES). 2016. Imperial County Emergency Operations Plan. Available on-line at https://firedept.imperialcounty.org/wp-content/uploads/2019/10/EmergencyOpPlan.pdf. Accessed May 6, 2022.

Imperial Irrigation District (IID). 2009. Imperial Integrated Regional Water Management Plan. Available on-line at https://www.iid.com/water/water-supply/water-plans/imperial-integrated-regional-water-management-plan. Accessed May 12, 2022.

Riverside County Information Technology (RCIT). 2023. Riverside County Map My County. Available on-line at https://gis1.countyofriverside.us/Html5Viewer/?viewer=MMC_Public. Accessed October 2, 2023.

South Coast Air Quality Management District (SCAQMD). 2023. South Coast AQMD Air Quality Significance Thresholds. Available on-line at https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25.

——— 2009. Appendix C – Mass Rate LST Look-up Table. Available on-line at http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2.

——— 2008. Final Localized Significance Threshold Methodology. Available on-line at http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2.

State of California Employment Development Department. 2024a. Current Month Labor Force Data for El Centro Metropolitan Statistical Area (Imperial County). January 19, 2024.

——— 2024b. Current Month Labor Force Data for Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside and San Bernardino Counties). January 19, 2024.

State Water Resource Control Board. 2023. GeoTracker. Available on-line at https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=ramon+substation. Accessed October 2, 2023.

U.S. Bureau of Land Management. 2016. Executive Summary for the Record of Decision – Desert Renewable Energy Conservation Plan. Available on-line at https://eplanning.blm.gov/public_projects/lup/66459/133459/163123/DRECP_BLM_ROD_Executive_Summary.pdf. Accessed May 17, 2022.

United States Department of Agriculture (USDA). 2023. Natural Resources Conservation Service Web Soil Survey. Available on-line at https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed October 2, 2023.

——— 2015a. Carsitas Series. Available on-line at https://soilseries.sc.egov.usda.gov/OSD_Docs/C/CARSITAS.html. Accessed October 2, 2023.

——— 2015b. Myoma Series. Available on-line at https://soilseries.sc.egov.usda.gov/OSD_Docs/M/MYOMA.html. Accessed October 2, 2023.

U.S. Environmental Protection Agency (U.S. EPA). 2016. Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2. October 25, 2016. Available on-line at https://www.govinfo.gov/content/pkg/FR-2016-10-25/pdf/2016-21203.pdf. Accessed May 2, 2022.

——— 2011. Final Rulemaking to Establish Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Final Rule. September 5, 2011. Available on-line at https://www.govinfo.gov/content/pkg/FR-2011-09-15/pdf/2011-20740.pdf. Accessed May 2, 2022.

United States Geologic Survey (USGS). 2022. National Water Dashboard. Available on-line at https://dashboard.waterdata.usgs.gov/app/nwd/?region=lower48&aoi=default. Accessed May 12, 2022.

——— 2014. Groundwater Quality in the Borrego Valley, Central Desert, and Low-Use Basins of the Mojave and Sonoran Deserts, California. April.

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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 Hidalgo, Project Manager

Regan Del Rosario, Environmental Planner

Madison Gallagher, Environmental Planner

Ben Volta, Cultural Resources Project Manager

Daniel Leonard, Senior Cultural Resources

Aaron Newton, Biologist

Ronell Santos, Biologist

Victoria Hsu, Senior Air Quality Specialist

Sharon Jacobs, Geographic Information Systems Analyst

Katherine Turner, Document Production Administrator

HDR was assisted by the following consultants:

ECORP Consulting, Inc. (Air Quality and Greenhouse Gas Assessment, Aquatic Resources Delineation, Biological Technical Report, Cultural Resources Inventory, Energy Impact Assessment, Noise Impact Assessment, Visual Impact Assessment Letter Report)

3838 Camino del Rio North, Suite 370

San Diego, CA 92108

EMKO Environmental, Inc. (Water Supply Assessment)

551 Lakecrest Drive

El Dorado Hills, CA 95762

GS Lyon Consultants, Inc. (Phase I ESA Report)

780 N. 4th Street

El Centro, CA 92243

KOA (Traffic Impact Study)

5095 Murphy Canyon Road, Suite 330

San Diego, CA 92123

Landmark Consultants, Inc. (Geotechnical Report)

780 N. 4th Street

El Centro, CA 92243

9.2 Persons and Organizations Contacted

The following persons and organizations were contacted in preparation of this document:

- IID

Appendix A

Initial Study and Notice of Preparation and Responses

Notice of Preparation

To: Office of Planning & Research
(Agency)

P.O. Box 3044, 1400 Tenth Street, Room 212
(Address)

Sacramento, CA 95812-3044

Subject: Notice of Preparation of a Draft Environmental Impact Report

Lead Agency:		**Consulting Firm** (If applicable):	
Agency Name	Imperial County, Planning & Dev Svcs.	Firm Name	HDR
Street Address	801 Main Street	Street Address	591 Camino de la Reina, Suite 300
City/State/Zip	El Centro, CA 92243	City/State/Zip	San Diego, CA 92108
Contact	David Black	Contact	Tim Gnibus

The County of Imperial will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the Environmental Information, which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study is attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but ***not later than 35 days*** after receipt of this notice.

Please send your response to Imperial County Planning & Development Services, Attn: David Black at the address shown above. We will need the name for a contact person in your agency.

Project Title: VEGA SES 6 Solar and Battery Storage Project

Project Location: The solar energy facility site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel No. [APN] 034-160-002) in the unincorporated area of Imperial County, CA. The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal. The solar energy facility site is bound by undeveloped Open Space/Bureau of Land Management (BLM) land to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

The proposed project includes an approximately 4-mile electrical generator intertie (gen-tie) transmission line that would connect to the Imperial Irrigation District's (IID) existing 161 kilovolt (kV) "L" Line. The entire gen-tie route would be on federal lands managed by the BLM within the California Desert Conservation Area planning area. The gen-tie route begins at the northwest corner of the solar facility site, heads west approximately 0.5 miles on BLM land, then north for approximately 1 mile, and then west for 2.5 miles along Garvey Road where it would connect to IID's 161 kV "L" Line.

Project Description (brief)**:** The project applicant, Apex Energy Solutions, LLC, proposes to construct and operate an 80 megawatt (MW) photovoltaic (PV) solar facility with an integrated 160 MW battery energy storage system (BESS) on approximately 320 acres of privately-owned land. The proposed project would be comprised of solar PV

arrays panels, an on-site substation, BESS, gen tie-line, inverters, transformers, underground electrical cables, and access roads.

The County Land Use Ordinance, Division 17, includes the Renewable Energy (RE) Overlay Zone, which authorizes the development and operation of renewable energy projects with an approved conditional use permit (CUP). CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. The entire project site (APN 034-160-002) is located outside of the RE Overlay Zone.

Implementation of the project requires an amendment to the County's General Plan Renewable Energy and Transmission Element, Zone Change, and approval of a CUP, as described below:

- **General Plan Amendment:** The applicant is requesting a General Plan Amendment to include/classify the project parcel (APN 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.
- **Zone Change:** The project site is currently zoned Open Space/Preservation (S-2). The applicant is requesting a Zone Change to classify the project parcel (APN 034-160-002) into the RE Overlay Zone to allow for solar and battery storage development.
- **Conditional Use Permit:** Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility with an integrated battery storage system on land zoned S-2.
- **Water Supply Assessment:** Implementation of the project would require the approval of the Water Supply Assessment.

As previously mentioned above, the proposed gen-tie line would be located entirely on BLM land. The project applicant has filed a right-of-way (ROW) grant application with the BLM for a permit to construct, operate, and maintain the gen-tie line. The proposed ROW would be 60-feet-wide. Construction of the gen-tie line would result in approximately 24.5 acres of disturbed area.

Project Applicant: Apex Energy Solutions, LLC.

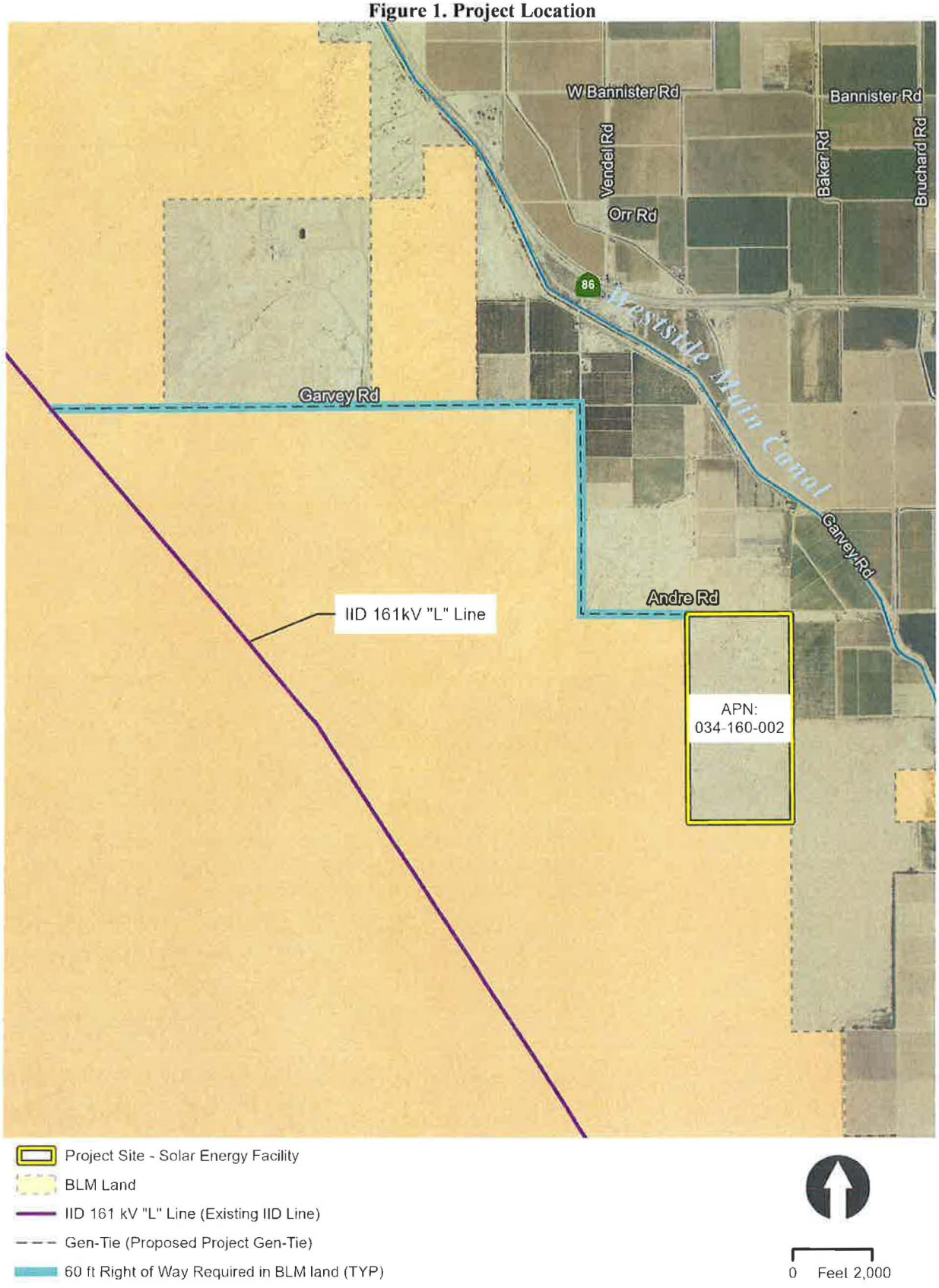
Date 07/01/2022 Signature 

Title Assistant Director

Telephone 442-265-1736

Reference: California Administrative Code, Title 14, (CEQA Guidelines) Section 15082(a), 15103, 15375.

Figure 1. Project Location



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Imperial County
Planning & Development Services Department

NOTICE OF PREPARATION OF DRAFT EIR FOR VEGA SES 6 SOLAR AND BATTERY STORAGE PROJECT AND NOTICE OF PUBLIC EIR SCOPING MEETING

The Imperial County Planning & Development Services Department intends to prepare an Environmental Impact Report (EIR) for the proposed VEGA SES 6 Solar and Battery Storage Project as described below. Additionally, a public scoping meeting for the proposed EIR will be by the Imperial County Planning & Development Services Department on July 28, 2022 at 6:00 P.M. This scoping meeting will be at the Planning & Development Services building located at 801 Main Street, El Centro, CA 92243. Public comments regarding the scope of the EIR are welcomed at this meeting.

SUBJECT: VEGA SES 6 Solar and Battery Storage Project EIR
BOARD OF SUPERVISORS CONSIDERATION: To Be Determined.

PROJECT LOCATION: The solar energy facility site is located on approximately 320 acres of privately owned vacant land on a single parcel (Assessor Parcel No. [APN] 034-160-002) in the unincorporated area of Imperial County, CA. The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal. The solar energy facility site is bound by undeveloped, Open Space/Bureau of Land Management (BLM) land to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

The proposed project includes an approximately 4-mile electrical generator intertie (gen-tie) transmission line that would connect to the Imperial Irrigation District's (IID) existing 161 kilovolt (kV) "L" Line. The entire gen-tie route would be on federal lands managed by the BLM within the California Desert Conservation Area planning area. The gen-tie route begins at the northwest corner of the solar facility site, heads west approximately 0.5 miles on BLM land, then north for approximately 1 mile, and then west for 2.5 miles along Garvey Road where it would connect to IID's 161 kV "L" Line.

PROJECT DESCRIPTION: The project applicant, Apex Energy Solutions, LLC, proposes to construct and operate an 80- megawatt (MW) photovoltaic (PV) solar facility with an integrated 160 MW battery energy storage system (BESS) on approximately 320 acres of privately owned land. The proposed project would be comprised of solar PV arrays panels, an onsite substation, BESS, gen-tie line, inverters, transformers, underground electrical cables, and access roads.

The County Land Use Ordinance, Division 17, includes the Renewable Energy (RE) Overlay Zone, which authorizes the development and operation of renewable energy projects with an approved conditional use permit (CUP). CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. The entire project site (APN 034-160-002) is located outside of the RE Overlay Zone.

Implementation of the project requires an amendment to the County's General Plan Renewable Energy and Transmission Element, Zone Change, and approval of a CUP, as described below:

- **General Plan Amendment:** The applicant is requesting a General Plan Amendment to include/classify the project parcel (APN 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.
- **Zone Change:** The project site is currently zoned Open Space/Preservation (S-2). The applicant is requesting a Zone Change to classify the project parcel (APN 034-160-002) into the RE Overlay Zone to allow for solar and battery storage development.
- **Conditional Use Permit:** Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility with an integrated battery storage system on land zoned S-2.
- **Water Supply Assessment:** Implementation of the project would require the approval of the Water Supply Assessment.

As previously mentioned above, the proposed gen-tie line would be located entirely on BLM land. The project applicant has filed a right-of-way (ROW) grant application with the BLM for a permit to construct, operate, and maintain the gen-tie line. The proposed ROW would be 60-feet-wide. Construction of the gen-tie line would result in approximately 24.5 acres of disturbed area.

PROJECT APPLICANT: Apex Energy Solutions, LLC

URBAN AREA PLAN: None, located in unincorporated area of County of Imperial

BOARD OF SUPERVISORS DISTRICT: District 3, Supervisor Michael W. Kelley

ANTICIPATED SIGNIFICANT EFFECTS: The EIR will analyze potential impacts associated with the following: Aesthetics; Air Quality; Biological Resources; Cultural Resources; Geology/Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology/Water Quality; Land Use/Planning; Noise and Vibration; Public Services; Transportation/Circulation; Tribal Cultural Resources; Utilities and Service Systems including water supply; Cumulative Impacts; and, Growth-Inducing Impacts.

COMMENTS REQUESTED: The Imperial County Planning & Development Services Department would like to know your ideas about the potential effects this project might have on the environment and your suggestions as to mitigation or ways the project may be revised to reduce or avoid any potentially significant environmental impacts. Your comments will guide the scope and content of potential environmental issues to be examined in the EIR. Your comments may be submitted in writing to David Black, Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA 92243. Available project information may be reviewed at this location.

Initial Study

Initial Study and NOP

VEGA SES 6 Solar and Battery Storage Project

Initial Study #22-0007
General Plan Amendment #22-0001
Zone Change #22-0001
CUP #22-0005

Imperial County, CA

July 2022

Reviewed by:

County of Imperial

Planning & Development Services Department

801 Main Street

El Centro, CA 92243

Prepared by:

HDR Engineering, Inc.

591 Camino de la Reina, Suite 300

San Diego, CA 92108

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Contents

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Introduction

A. Purpose

This document is a ☐ policy-level; ☒ project-level Initial Study for evaluation of potential environmental impacts resulting with the proposed VEGA SES 6 Solar and Battery Storage Project.

B. CEQA Requirements and the Imperial County's Rules and Regulations for Implementing CEQA

As defined by Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines and Section 7 of the County's Rules and Regulations for Implementing CEQA, an **Initial Study** is prepared primarily to provide the Lead Agency with information to use as the basis for determining whether an Environmental Impact Report (EIR), Negative Declaration, or Mitigated Negative Declaration would be appropriate for providing the necessary environmental documentation and clearance for any proposed project.

☒ According to Section 15065, an **EIR** is deemed appropriate for a particular proposal if the following conditions occur:

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

☐ According to Section 15070(a), a **Negative Declaration** is deemed appropriate if the proposal would not result in any significant effect on the environment.

☐ According to Section 15070(b), a **Mitigated Negative Declaration** is deemed appropriate if it is determined that though a proposal could result in a significant effect, mitigation measures are available to reduce these significant effects to insignificant levels.

This Initial Study has determined that the proposed applications will result in potentially significant environmental impacts and therefore, an Environmental Impact Report is deemed as the appropriate document to provide necessary environmental evaluations and clearance for the proposed project.

This Initial Study and Notice of Preparation are prepared in conformance with the California Environmental Quality Act of 1970, as amended (Public Resources Code, Section 21000 et. seq.); the State CEQA Guidelines & County of Imperial's CEQA Regulations, Guidelines for the Implementation of CEQA; applicable requirements of the County of Imperial; and the regulations, requirements, and procedures of any other responsible public agency or an agency with jurisdiction by law.

Pursuant to the County of Imperial's CEQA Regulations, Guidelines for the Implementation of CEQA, depending on the project scope, the County of Imperial Board of Supervisors, Planning Commission and/or Planning Director is designated the Lead Agency, in accordance with Section 15050 of the

CEQA Guidelines. The Lead Agency is the public agency which has the principal responsibility for approving the necessary environmental clearances and analyses for any project in the County.

C. Intended Uses of Initial Study and Notice of Preparation

This Initial Study and Notice of Preparation are informational documents which are intended to inform County of Imperial decision makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed applications. The environmental review process has been established to enable public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any potentially adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency and other responsible public agencies must balance adverse environmental effects against other public objectives, including economic and social goals.

The Initial Study and Notice of Preparation, prepared for the project will be circulated for a period of no less than 35 days for public and agency review and comments.

D. Contents of Initial Study and Notice of Preparation

This Initial Study is organized to facilitate a basic understanding of the existing setting and environmental implications of the proposed applications.

SECTION 1

I. INTRODUCTION presents an introduction to the entire report. This section discusses the environmental process, scope of environmental review, and incorporation by reference documents.

SECTION 2

II. ENVIRONMENTAL CHECKLIST FORM contains the County's Environmental Checklist Form. The checklist form presents results of the environmental evaluation for the proposed applications and those issue areas that would have either a significant impact, potentially significant impact, or no impact.

PROJECT SUMMARY, LOCATION AND ENVIRONMENTAL SETTINGS describes the proposed project entitlements and required applications. A description of discretionary approvals and permits required for project implementation is also included. It also identifies the location of the project and a general description of the surrounding environmental settings.

ENVIRONMENTAL ANALYSIS evaluates each response provided in the environmental checklist form. Each response checked in the checklist form is discussed and supported with sufficient data and analysis as necessary. As appropriate, each response discussion describes and identifies specific impacts anticipated with project implementation.

SECTION 3

III. MANDATORY FINDINGS presents Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

E. Scope of Environmental Analysis

For evaluation of environmental impacts, each question from the Environmental Checklist Form is summarized and responses are provided according to the analysis undertaken as part of the Initial

Study. Impacts and effects will be evaluated and quantified, when appropriate. To each question, there are four possible responses, including:

1. No Impact: A “No Impact” response is adequately supported if the impact simply does not apply to the proposed applications.
2. Less Than Significant Impact: The proposed applications will have the potential to impact the environment. These impacts, however, will be less than significant; no additional analysis is required.
3. Less Than Significant With Mitigation Incorporated: This applies where incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact."
4. Potentially Significant Impact: The proposed applications could have impacts that are considered significant. Additional analyses and possibly an EIR could be required to identify mitigation measures that could reduce these impacts to less than significant levels.

F. Policy-Level or Project-Level Environmental Analysis

This Initial Study will be conducted under a ☐ policy-level, ☒project-level analysis.

Regarding mitigation measures, it is not the intent of this document to “overlap” or restate conditions of approval that are commonly established for future known projects or the proposed applications. Additionally, those other standard requirements and regulations that any development must comply with, that are outside the County’s jurisdiction, are also not considered mitigation measures, and therefore, will not be identified in this document.

G. Tiered Documents and Incorporation by Reference

Information, findings, and conclusions contained in this document are based on incorporation by reference of tiered documentation, which are discussed in the following section.

1. Tiered Documents

As permitted in Section 15152(a) of the CEQA Guidelines, information and discussions from other documents can be included into this document. Tiering is defined as follows:

“Tiering refers to using the analysis of general matters contained in a broader EIR (such as the one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.”

Tiering also allows this document to comply with Section 15152(b) of the CEQA Guidelines, which discourages redundant analyses, as follows:

“Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including the general plans, zoning changes, and development projects. This approach can eliminate repetitive discussion of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a

general plan, policy or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration."

Further, Section 15152(d) of the CEQA Guidelines states:

"Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to effects which:

(1) Were not examined as significant effects on the environment in the prior EIR; or

(2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means."

2. **Incorporation by Reference**

Incorporation by reference is a procedure for reducing the size of EIRs/MND and is most appropriate for including long, descriptive, or technical materials that provide general background information, but do not contribute directly to the specific analysis of the project itself. This procedure is particularly useful when an EIR or Negative Declaration relies on a broadly-drafted EIR for its evaluation of cumulative impacts of related projects (*Las Virgenes Homeowners Federation v. County of Los Angeles* [1986, 177 Ca.3d 300]). If an EIR or Negative Declaration relies on information from a supporting study that is available to the public, the EIR or Negative Declaration cannot be deemed unsupported by evidence or analysis (*San Francisco Ecology Center v. City and County of San Francisco* [1975, 48 Ca.3d 584, 595]).

When an EIR or Negative Declaration incorporates a document by reference, the incorporation must comply with Section 15150 of the CEQA Guidelines as follows:

- The incorporated document must be available to the public or be a matter of public record (CEQA Guidelines Section 15150[a]). The General Plan EIR is available, along with this document, at the County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243 Ph. (442) 265-1736.
- This document must be available for inspection by the public at an office of the lead agency (CEQA Guidelines Section 15150[b]). These documents are available at the County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243, Ph. (442) 265-1736.
- These documents must summarize the portion of the document being incorporated by reference or briefly describe information that cannot be summarized. Furthermore, these documents must describe the relationship between the incorporated information and the analysis in the tiered documents (CEQA Guidelines Section 15150[c]). As discussed above, the tiered EIRs address the entire project site and provide background and inventory information and data which apply to the project site. Incorporated information and/or data will be cited in the appropriate sections.
- These documents must include the State identification number of the incorporated documents (CEQA Guidelines Section 15150[d]). The State Clearinghouse Number for the 'County of Imperial General Plan EIR is SCH #93011023.

The material to be incorporated in this document will include general background information (CEQA Guidelines Section 15150[f]).

Environmental Checklist Form

1. **Project Title:** VEGA SES 6 Solar and Battery Storage Project
2. **Lead Agency name and address:** Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA 92243
3. **Contact person and phone number:** David Black, Planner IV, 442-265-1746
4. **Project location:** The solar energy facility site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel No. [APN] 034-160-002) in the unincorporated area of Imperial County, CA. The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The project site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal. The solar energy facility site is bound by undeveloped Open Space/Bureau of Land Management (BLM) land to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

   The proposed project includes an approximately 4-mile electrical generator intertie (gen-tie) transmission line that would connect to the Imperial Irrigation District's (IID) existing 161 kilovolt (kV) "L" Line. The entire gen-tie route would be on federal lands managed by the BLM within the California Desert Conservation Area planning area. The gen-tie route begins at the northwest corner of the solar facility site, heads west approximately 0.5 miles on BLM land, then north for approximately 1 mile, and then west for 2.5 miles along Garvey Road where it would connect to IID's 161 kV "L" Line.
5. **Project sponsor's name and address:** Apex Energy Solutions, LLC, 604 Sutter Street, Suite 250, Folsom, CA 95630
6. **General Plan Designation:** Agriculture
7. **Zoning:** S-2 (Open Space/Preservation)
8. **Description of project:** The project applicant, Apex Energy Solutions, LLC, proposes to construct and operate an 80 megawatt (MW) photovoltaic (PV) solar facility with an integrated 160 MW battery storage system on approximately 320 acres of privately-owned land. The proposed project would be comprised of solar PV arrays panels, an on-site substation, BESS, generation tie-line (gen-tie), inverters, transformers, underground electrical cables, and access roads.
9. **Surrounding land uses and setting: Briefly describe the project's surroundings:** The solar energy facility site is bound by undeveloped Open Space/BLM land to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):**
    - Department of Public Works – Ministerial permits (building, grading, encroachment)
    - Imperial County Air Pollution Control District – Fugitive dust control plan, Authority to construct

- California Regional Water Quality Control Board – Notice of Intent for General Construction Permit
- Imperial Irrigation District – Water supply agreement/permit for water use lease agreement
- Bureau of Land Management – Right-of-way grant for the off-site gen-tie line to be located on federal lands under the jurisdiction of the BLM

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Yes, California Native American tribes that are traditionally and culturally affiliated with the project area were sent an AB 52/SB 18 consultation request letter on July 1, 2022.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☒	Geology/Soils	☒	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials
☒	Hydrology / Water Quality	☒	Land Use/Planning	☐	Mineral Resources
☐	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☒	Transportation	☒	Tribal Cultural Resources
☒	Utilities/Service Systems	☐	Wildfire	☒	Mandatory Findings of Significance

Environmental Evaluation Committee Determination

After Review of the Initial Study, the Environmental Evaluation Committee (EEC) has:

- ☐ Found that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ Found that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ Found that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ Found that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ Found that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

CALIFORNIA DEPARTMENT OF FISH AND GAME DE MINIMIS IMPACT FINDING:

☐Yes ☐No

EEC VOTES	YES	NO	ABSENT
PUBLIC WORKS	☐	☐	☐
ENVIRONMENTAL HEALTH	☐	☐	☐
OFFICE EMERGENCY SERVICES	☐	☐	☐
APCD	☐	☐	☐
AG	☐	☐	☐
SHERIFF DEPARTMENT	☐	☐	☐
ICPDS	☐	☐	☐

Jim Minnick, Director of Planning/EEC Chairman Date:

Signature

Project Summary

Project Location

The solar energy facility site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel No. [APN] 034-160-002) in the unincorporated area of Imperial County, CA. The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland (Figure 1). The project site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal (Figure 2). The solar energy facility site is bound by undeveloped Open Space/Bureau of Land Management (BLM) land to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

The proposed project includes an approximately 4-mile electrical generator intertie (gen-tie) transmission line that would connect to the Imperial Irrigation District's (IID) existing 161 kilovolt (kV) "L" Line. The entire gen-tie route would be on federal lands managed by the BLM within the California Desert Conservation Area planning area. As shown in Figure 2, the gen-tie route begins at the northwest corner of the solar facility site, heads west approximately 0.5 miles on BLM land, then north for approximately 1 mile, and then west for 2.5 miles along Garvey Road where it would connect to IID's 161 kV "L" Line.

Project Summary

The project applicant, Apex Energy Solutions, LLC, proposes to construct and operate an 80 megawatt (MW) photovoltaic (PV) solar facility with an integrated 160 MW battery storage system on approximately 320 acres of privately-owned land. The proposed project would be comprised of solar PV arrays panels, an on-site substation, battery storage system, gen-tie line, inverters, transformers, underground electrical cables, and access roads.

Environmental Setting

The solar energy facility site is bound by undeveloped Open Space/Bureau of Land Management (BLM) land to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

General Plan Consistency

The proposed project is located within an unincorporated area of the County. The existing General Plan land use designation is Agriculture. The project site is currently zoned Open Space/Preservation (S-2). Construction of a solar facility would be allowed within the existing zoning under a Conditional Use Permit (CUP).

The County Land Use Ordinance, Division 17, includes the Renewable Energy (RE) Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved CUP. CUP applications proposed for specific renewable energy project not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. The entire project site (APN 034-160-002) is located outside of the RE Overlay Zone. Therefore, the proposed

project requires a General Plan Amendment and Zone Change to include/classify the project parcel into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.

Figure 1. Regional Location

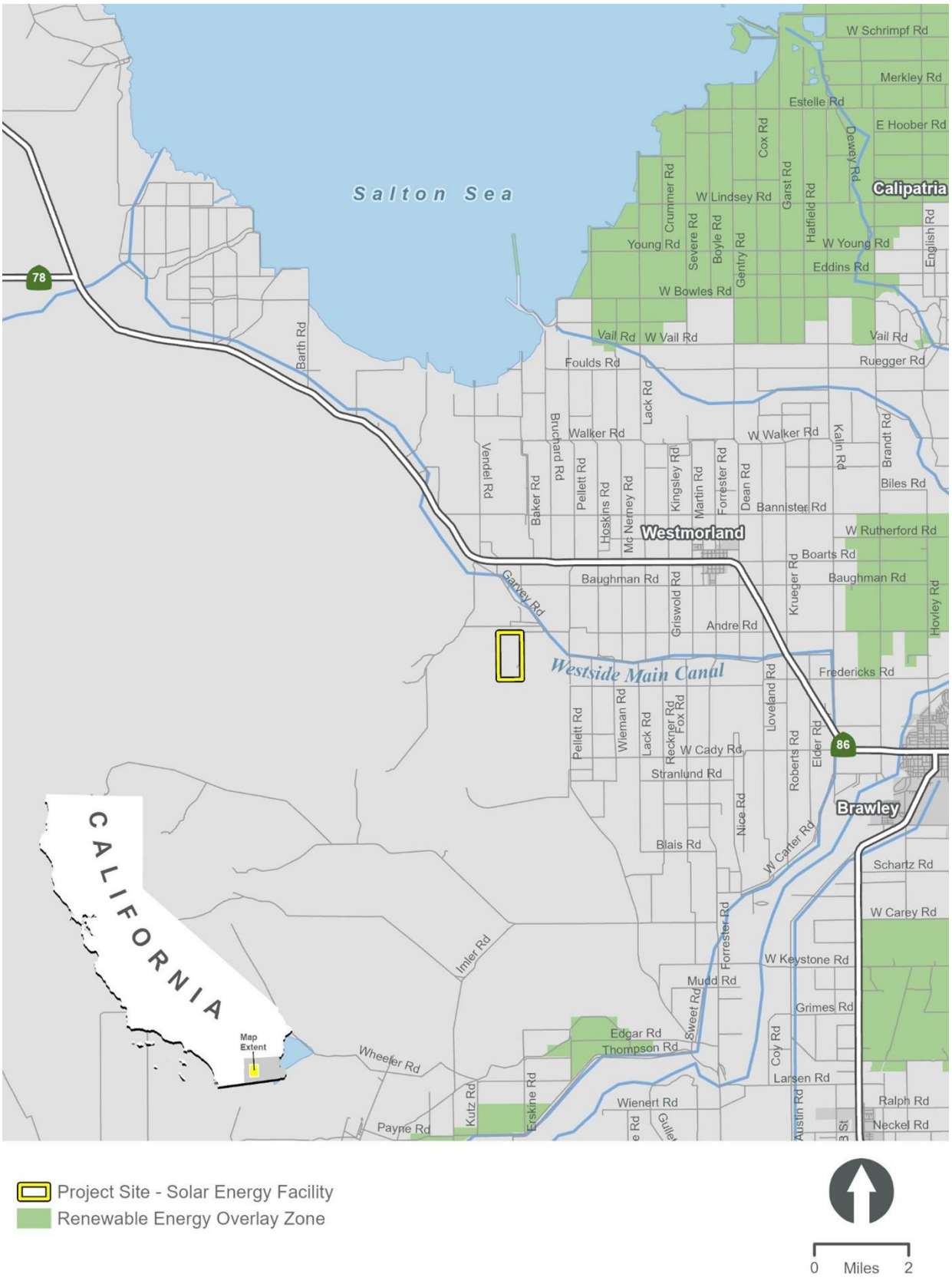
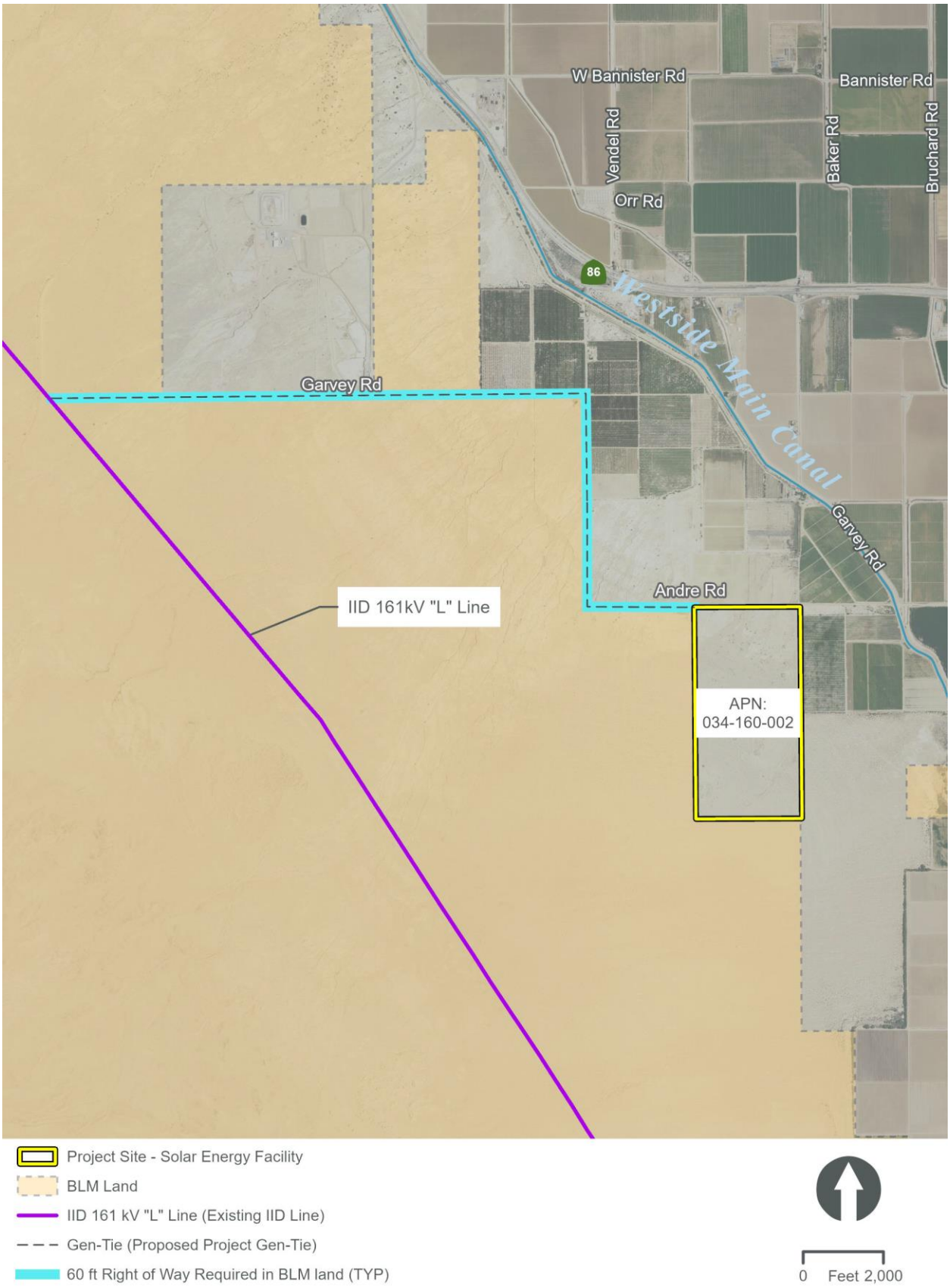


Figure 2. Project Site



Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significance.

I. Aesthetics

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) 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?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

Impact Analysis

a) **No Impact.** According to the Conservation and Open Space Element of the Imperial County General Plan, the solar energy facility site is not located within an area that has been formally identified as a federal, state, or county scenic vista (County of Imperial 2016). No scenic vistas or areas with high visual quality would be disrupted. Thus, no impact is identified for this issue area and no further analysis is warranted.

b) **No Impact.** According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System (Caltrans 2019), the project site is not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project site. The nearest scenic highway to the project site is the junction of SR-78 and SR-86, located over 10 miles northwest of the site. The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway. Therefore, no impact is identified for this issue area and no further analysis is warranted.

c) **Potentially Significant Impact.** Although the project site is not located near a scenic highway or designated scenic vista, the proposed project may result in a change to the look and rural character of the surrounding area. Therefore, a potentially significant impact is identified for this issue area. A visualization study will be prepared for the project and this issue will be addressed in the EIR.

d) **Potentially Significant Impact.** Minimal lighting is required for project operation and is limited to safety and security functions. All lighting will be directed downwards and/or away from any public right-of-way; however, there are no heavily traveled public roadways in immediate proximity to the project site.

The solar panels will be constructed of low reflective materials; therefore, it is not anticipated that they would result in creating glare. Additionally, the proposed project is located in a rural undeveloped area of Imperial County. There are no established residential neighborhoods immediately adjacent to the project site. However, minimal lighting would be required for operations and would be limited to safety and security functions. Although the proposed project is not expected to create a substantial new source of light or glare affecting day or nighttime views, a glare study will be prepared for the proposed project and this issue will be addressed in the EIR. Therefore, a potentially significant impact is identified for this issue area.

The Brawley Municipal Airport is located approximately 10 miles southeast of the project site. Although the solar panels will be constructed of low reflective materials, the potential for glare to impact aircraft will be analyzed further in the EIR.

II. Agriculture and Forestry Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** According to the farmland maps prepared by the California Department of Conservation (DOC) (DOC 2021), no portion of the solar energy facility site is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The proposed gen-tie line would border land designated as Farmland of Local Importance; however, the gen-tie line would be located entirely on undeveloped BLM desert land. Therefore,

implementation of the proposed project would not convert Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural use.

b) **No Impact.** The solar energy facility site is currently zoned Open Space/Preservation (S-2). According to the 2016/2017 Imperial County Williamson Act Map produced by the California Department of Conservation's Division of Land Resource Protection (DOC 2016), the project site is not located on Williamson Act contracted land. The proposed project would not conflict with existing zoning for agriculture use or a Williamson Act contract. Therefore, no impact would occur.

c) **No Impact.** There are no existing forest lands, timberlands, or timberland zoned "Timberland Production" within or immediately adjacent to the project site that would conflict with existing zoning or cause rezoning. Therefore, no impact is identified for this issue area.

d) **No Impact.** There are no existing forest lands within or immediately adjacent to the project site. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact is identified for this issue area.

e) **No Impact.** As discussed in Response II. a) above, the project site does not contain any lands mapped by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The project site is not used for agricultural production. Implementation of the proposed project would not convert any farmland to non-agricultural uses. Therefore, no impact is identified for this issue area.

III. Air Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) 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?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☐	☒

Impact Analysis

a) **Potentially Significant Impact.** The project site is located within the jurisdiction of Imperial County Air Pollution Control District (ICAPCD) in the Imperial County portion of the Salton Sea Air Basin. Construction of the proposed project would create temporary emissions of dust, fumes, equipment exhaust, and other air contaminants that may conflict with the ICAPCD's rules and regulations. No stationary source emissions are proposed from the proposed project; however, temporary construction emissions have the potential to result in a significant air quality impact. An air quality and greenhouse gas study will be prepared to analyze the proposed project's consistency with air quality plans, and will be included in the EIR analysis.

b) **Potentially Significant Impact.** Currently, the Salton Sea Air Basin is either in attainment or unclassified for all federal and state air pollutant standards, with the exception of the federal ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) standards, and state standards for O_3 and PM_{10}. Air pollutants transported into the Salton Sea Air Basin from the adjacent South Coast Air Basin (Los Angeles County, San Bernardino County, Orange County, and Riverside County) and Mexicali (Mexico) substantially contribute to the non-attainment conditions in the Salton Sea Air Basin. A potentially significant impact is identified for this issue area. An air quality and greenhouse gas study will be prepared to analyze the proposed project's potential air quality impacts and will be included in the EIR analysis.

c) **Potentially Significant Impact.** The solar energy facility site is bound by undeveloped Open Space/ BLM land to the west and south, and active agricultural land to the north and east. The nearest sensitive receptor to the project site is a single-family residence located approximately 2,725 feet from the northeastern corner of the solar energy facility site. There are also single-family homes located approximately 1.53 miles east of the solar energy

facility site, located at the intersection of Andre Road and Hoskins Road. This issue will be addressed in the air quality and greenhouse gas study and EIR analysis.

d) **No Impact**. Land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, and concentrated agricultural feeding operations and dairies. The construction and operation of a solar facility, battery storage system, and gen-tie line are not odor producers. Therefore, no impact is identified for this issue area.

IV. Biological Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☒	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☒	☐	☐	☐

Impact Analysis

a) **Potentially Significant Impact.** According to the Conservation and Open Space Element of the General Plan (County of Imperial 2016), numerous special-status species occur in the County, and of particular concern is the western burrowing owl which may have the potential to occur near the project site due to suitable habitat. The disturbed areas, berms of the irrigation canals, and agricultural areas in the immediate vicinity provide potential habitat for

the western burrowing owl. Flat-tailed horned lizard has a high potential to occur on the solar energy facility site and gen-tie line due to suitable habitat. Thus, a potentially significant impact is identified for this issue area. A biological resources report and aquatic resources delineation report that will address the proposed project's potential impacts on biological resources will be prepared and included in the EIR analysis.

b) **Potentially Significant Impact.** Refer to response IV. a) above.

c) **Potentially Significant Impact.** The project site is adjacent to the Westside Main Canal and unlined irrigation drains which could potentially meet the definition of waters of the U.S. and regulated under the California Water Act, the Porter-Cologne Act, and California Fish and Game Code Section 1602. Therefore, a potentially significant impact is identified for this issue area. A jurisdictional waters/wetlands delineation report will be prepared and included in the EIR analysis.

d) **Potentially Significant Impact.** Refer to response IV. a) above

e) **Potentially Significant Impact.** Refer to response IV. a) above

f) **Potentially Significant Impact.** The entire gen-tie route would be on federal lands managed by the BLM within the California Desert Conservation Area planning area. A portion of the gen-tie transmission line falls within BLM Renewable Energy Development Focus Areas of the Desert Renewable Energy Conservation Plan. However, none of the project area falls within Areas of Environmental Concern. If habitat within the California Desert National Conserved Lands area of the project is impacted, a potentially significant impact may occur. Therefore, a biological technical report will be prepared, and this potential impact will be evaluated in the EIR analysis.

V. Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☒	☐	☐	☐

Impact Analysis

a) **Potentially Significant Impact.** The solar energy facility site is bound by undeveloped Open Space/ BLM land to the west and south, and active agricultural land to the north and east. Although the proposed project is not expected to cause a substantial adverse change in the significance of a historical resource or archaeological resource, a potentially significant impact could occur if an unanticipated cultural resource is discovered. A cultural resources report that will address the proposed project's potential impacts on historic and prehistoric resources will be prepared and this issue will be addressed in the EIR.

b) **Potentially Significant Impact.** Refer to response V. a) above.

c) **Potentially Significant Impact.** Although unlikely, there is a potential for unknown human remains to be unearthed during earthwork activities. This issue is potentially significant and will be addressed in the EIR.

VI. Energy

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Impact Analysis

a) **Less than Significant Impact.** Information contained in this section is summarized from the *Energy Impact Analysis* prepared for the project (ECORP Consulting, Inc. 2021). The proposed project would impact energy resources during construction and operation. Energy resources that would be potentially impacted include electricity, and petroleum-based fuel supplies and distribution systems. The proposed project would not utilize any natural gas during either construction or operation of the proposed project, and no further analysis of natural gas is provided in this analysis.

The following discussion calculates the potential energy consumption associated with the construction and operation of the proposed project and analyzes if any energy utilized by the proposed project is wasteful, inefficient, or unnecessary consumption of energy resources.

Construction Energy

Construction activities would primarily involve demolition and grubbing; grading of the project area; trenching; the installation of solar equipment and security fencing; and the offsite infrastructure work required for the IID gen-tie transmission line route.

Construction-Related Electricity

During construction of the proposed project, electricity would be consumed to construct the new structures and infrastructure. Electricity would be supplied to the project site by IID and would be obtained from the existing electrical lines in the vicinity of the project site. The use of electricity from existing power lines rather than temporary diesel or gasoline powered generators would minimize impacts on energy use. Electricity consumed during project construction would vary throughout the construction period based on the construction activities being performed. Various construction activities include electricity associated with the conveyance of water that would be used during project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power. Such electricity demand would be temporary, nominal, and would cease upon the completion of construction. Overall, construction activities associated with the proposed project would require limited electricity consumption that would not be expected to have an adverse impact on available electricity supplies and infrastructure. Therefore, the use of electricity during project construction would not be wasteful, inefficient, or unnecessary.

Construction-Related Petroleum Fuel Use

Petroleum-based fuel usage represents the highest amount of transportation energy potentially consumed during construction, which would be utilized by both off-road equipment operating on the project site and on-road automobiles transporting workers to and from the project site and on-road trucks transporting equipment and supplies to the project site.

The proposed project's gasoline fuel consumption during the one-time construction period is estimated to be 119,015 gallons during 2022 construction and 28,966 gallons during 2023 construction for the combination of the solar/battery storage facilities and gen-tie line (ECORP Consulting, Inc. 2021). The proposed project's gasoline consumption would increase the annual countywide gasoline fuel use in the county by less than 0.1 percent. As such, the construction-related petroleum use would be nominal, when compared to current county-wide petroleum usage rates. 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 project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Construction activities associated with the proposed project would be required to adhere to all State and ICAPCD regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. As such, construction activities for the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. Impacts regarding transportation energy would be less than significant.

Operational Energy

Operations of the proposed project 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 Renewable Portfolio Standards goal of increasing the percentage of electricity procured from renewable sources (ECORP Consulting, Inc. 2021).

Operations-Related Electricity

Operation of the proposed project would result in the production of electricity at the project site. The proposed project would generate a maximum of 80 MW of electricity at any one time and would potentially displace approximately 34,614 metric tons of CO2e per year and approximately 1,038,461 metric tons of CO2e over the course of 30 years (ECORP Consulting, Inc. 2021). Therefore, the contribution of renewable energy production would result in a net cumulative reduction of GHG emissions, a key environmental benefit. As such, the operations-related electricity use would provide a significant renewable resource for the IID and would help IID achieve the State's Renewable Portfolio Standards requirement for non-carbon sources of electricity. No impact would occur from electricity-related energy consumption from the proposed project.

Operations-Related Petroleum Fuel Usage

Operation of the proposed project would result in increased consumption of petroleum-based fuels related to automotive fuel necessary for ongoing maintenance activities. The proposed project would consume 121 gallons of petroleum fuel per year from vehicle travel. This equates to a 0.00006 percent increase of the gasoline and diesel consumed in Imperial

County annually. As such, the operations-related petroleum use would be nominal, when compared to current petroleum usage rates.

It should be noted that, the proposed project would comply with all Federal, State, and County requirements related to the consumption of transportation energy and would provide a non-carbon source of electricity to power electric vehicles in Imperial County. Thus, impacts with regard transportation energy supply and infrastructure capacity would be less than significant and no mitigation measures would be required.

b) **Less than Significant Impact.** The proposed project would help California meet its Renewable Portfolio Standard of 60 percent of retail electricity sales from renewable sources by the end of 2030 and 100 percent by 2045. The electricity generation process associated with the project would utilize solar technology to convert sunlight directly into electricity. Solar PV technology is consistent with the definition of an “eligible renewable energy resource” in Section 399.12 of the California Public Utilities Code (CPUC) and the definition of “in-state renewable electricity generation facility” in Section 25741 of the CPUC. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy of energy efficiency. This is considered a less than significant impact.

VII. Geology and Soils

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☒	☐	☐	☐
iii. Seismic-related ground failure, including liquefaction?	☒	☐	☐	☐
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☒	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property?	☒	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐

Impact Analysis

ai) **No Impact.** According to the California Earthquake Hazards Zone Application (California DOC 2022), the project site is not located within a State of California, Alquist-Priolo Earthquake Fault Zone. The nearest Alquist-Priolo Earthquake Fault Zone is the Superstition Hills fault located approximately 4.5 miles southwest of the project site. Therefore, no impact is identified for this issue area.

aii) **Potentially Significant Impact.** The project site is located in the seismically-active Imperial Valley in Southern California and considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. The project site could be affected by the occurrence of seismic activity to some degree but no more than the surrounding properties. A potentially significant impact has been identified for this issue area. A geotechnical report that will address the proposed project's potential impacts on geology and soils will be prepared and this issue will be addressed in the EIR.

aiii) **Potentially Significant Impact.** Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as vibratory motion produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases, and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations.

Four conditions are generally required for liquefaction to occur:

1) The soil must be saturated (relatively shallow groundwater).
2) The soil must be loosely packed (low to medium relative density).
3) The soil must be relatively cohesionless (not clayey).
4) Groundshaking of sufficient intensity must occur to function as a trigger mechanism.

All these conditions may exist to some degree at the project site. Therefore, there is a potentially significant impact associated with liquefaction. A geotechnical report that will address the proposed project's potential impacts on geology and soils will be prepared and this issue will be addressed in the EIR.

aiv) **No Impact.** According to *Figure 2: Landslide Activity* in the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the project site is not located in an area that is prone to landslide hazards. Furthermore, the project site and surrounding area is relatively flat. Therefore, no impact is identified for this issue area.

b) **Less than Significant Impact.** According to *Figure 3: Erosion Activity* in the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the project site is within a generally flat area with low levels of natural erosion. However, soil erosion can result during construction as grading and construction can loosen surface soils and make soils susceptible to wind and water movement across the surface. Impacts are not considered significant because erosion would be controlled on-site in accordance with Imperial County standards including preparation, review, and approval of a grading plan by the Imperial County Engineer. Implementation of Imperial County standards would reduce the potential impacts to a less than significant level.

c) **Potentially Significant Impact.** Near surface soils within the project site will need to be identified to determine if the soils are unstable. Therefore, this issue is potentially significant and will be analyzed in the EIR.

d) **Potentially Significant Impact.** Near surface soils within the project site will need to be identified to determine if they consist of soils having expansion potential. Therefore, this issue is potentially significant and will be analyzed in the EIR.

e) **No Impact.** The proposed project would not require the installation of septic tanks or alternative wastewater disposal systems. The proposed solar facility would be remotely

operated, controlled and monitored and with no requirement for daily on-site employees. Therefore, no impact is identified for this issue area.

f) **Potentially Significant Impact.** 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. It is not known if any paleontological resources are located on the project site. The proposed project's potential to impact paleontological resources will be addressed in the EIR.

VIII. Greenhouse Gas Emissions

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

Impact Analysis

a) **Potentially Significant Impact.** In the long-term, the proposed project is expected to provide a benefit with respect to reduction of greenhouse gas emissions. However, the proposed project has the potential to generate greenhouse gas emissions during construction, in addition to construction worker trips to and from the project site. Thus, a potentially significant impact is identified for this issue area. An air quality and greenhouse gas study will be prepared for the proposed project, and this issue will be addressed in the EIR.

b) **Potentially Significant Impact.** Refer to response VIII. a) above.

IX. Hazards and Hazardous Materials

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) 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 it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within 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 result in a safety hazard or excessive noise for people residing or working in the project area?	☒	☐	☐	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Impact Analysis

a) **Less than Significant Impact.** Construction of the proposed project will involve the limited use of hazardous materials, such as fuels and greases to fuel and service construction equipment. No extremely hazardous substances are anticipated to be produced, used, stored, transported, or disposed of as a result of project construction. Operation of the proposed project would be conducted remotely. Therefore, no habitable structures (e.g. housing) are proposed on the project site.

Regular and routine maintenance of the proposed project may result in the potential to handle hazardous materials. However, the hazardous materials handled on-site would be limited to small amounts of everyday use cleaners and common chemicals used for maintenance. The applicant will be required to comply with State laws and County Ordinance restrictions, which regulate and control hazardous materials handled on-site. Such hazardous wastes would be transported off-site for disposal according to applicable State and County restrictions and laws governing the disposal of hazardous waste during construction and operation of the project. Therefore, this is considered a less than significant impact.

b) **Less than Significant Impact.** Refer to response IX. a) above.

c) **No Impact.** The project site is not located within 0.25 mile of an existing or proposed school. No impact is identified for this issue area.

d) **No Impact.** Based on a review of the Cortese List conducted in May 2022, the project site is not listed as a hazardous materials site (Department of Toxic Substances Control 2022). No impact is identified for this issue area.

e) **Potentially Significant Impact.** The project site is not located within 2 miles of a public airport. The nearest public airport is the Brawley Municipal Airport located approximately 9.8 miles southeast of the project site. The project site is outside of the airport compatibility zones of the Brawley Municipal Airport (County of Imperial 1996). Although the solar panels will be constructed of low reflective materials, the potential for glare to impact aircraft will be analyzed further in the EIR.

f) **Less than Significant Impact.** The proposed project is not expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project applicant will be required, through the conditions of approval, to prepare a street improvement plan for the project that will include emergency access points and safe vehicular travel. In addition, local building codes would be followed to minimize flood, seismic, and fire hazard. Therefore, the proposed project would result in a less than significant impact associated with the possible impediment to emergency plans.

g) **Less than Significant Impact.** The solar energy facility site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low.

Proposed project facilities would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements (e.g., CPUC safety standards). Primary access to the project site would be located off SR-78 from the north and west, and across the IID aqueduct, via county roadways (Garvey Road and Andre Road). Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders. Additionally, water for emergency fire suppression would likely be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. Water would be picked up from a nearby lateral canal and delivered to the construction location by a water truck that would be capable of carrying approximately 4,000 gallons per load. Based on these considerations, a less than significant impact is identified for this issue area.

X. Hydrology and Water Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☒	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☒	☐	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☒	☐	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Impact Analysis

a) **Potentially Significant Impact.** The proposed project has the potential to create urban non-point source discharge (e.g., synthetic/organic chemicals). 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. If they are not intercepted or are left uncontrolled, the polluted runoff would otherwise freely sheet flow from the project site to the IID Imperial Valley drains and could result in the accumulation of these pollutants in the receiving waters. Potentially significant water quality impacts have been identified and will be addressed in the EIR.

b) **Less than Significant Impact.** During construction, potable water would be brought to the site for drinking and domestic needs. The approximate 550 acre-feet (AF) of water required during construction would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. This water would be used for earthwork, soil conditioning, dust suppression, and compaction efforts. Because the solar panels will be pole-mounted above ground, they are not considered "hardscape", such as roads, building foundations, or parking areas, as they do not require a substantial amount of impervious material. Estimated annual water consumption for operation and maintenance of the proposed project, including periodic PV module washing, would be approximately 20-AF annually, which would be trucked to the project site as needed. Therefore, the panels and their mounting foundation would not impede groundwater recharge. A less than significant impact is identified for this issue area.

ci) **Less than Significant Impact.** The proposed project would not substantially alter the existing drainage pattern of the site. It is anticipated that the proposed drainage patterns would be similar to the existing site conditions. The project applicant would be required to implement on-site erosion control measures in accordance with Imperial County standards which require preparation, review, and approval of a grading plan by the Imperial County Engineer. Therefore, the proposed project would not result in substantial erosion or siltation on- or off-site. A less than significant impact is identified for this issue area.

cii) **Less than Significant Impact.** The proposed project is not anticipated to generate a significant increase in the amount of runoff water from water use involving solar panel washing. Water will continue to percolate through the ground, as a majority of the surface on the project site will remain pervious. Therefore, the proposed project would not substantially increase the rate of runoff in a manner which would result in flooding on- or off-site or exceed the capacity of existing or planned stormwater drainage systems and provide substantial additional sources of polluted runoff. A less than significant impact is identified for this issue area.

ciii) **Less than Significant Impact.** Refer to response X. cii) above.

civ) **Potentially Significant Impact.** According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (Panel 06025C1000C) (FEMA 2008), the solar energy facility site is entirely within Zone X, which is an area determined to be outside of the 0.2 percent annual chance of a flood. A portion of the gen-tie line that runs in the east-west direction of Garvey Road would be within Zone A, which are areas subject to inundation by the 1-percent-annual chance flood event. Therefore, the proposed project has the potential to impede or redirect flood flows and this is considered a potentially significant impact.

d) **Potentially Significant Impact.** As previously mentioned, a portion of the gen-tie line would be within Zone A, which are areas subject to inundation by the 1-percent-annual chance flood event. The proposed project has the potential to create urban non-point source discharge (e.g., synthetic/organic chemicals). 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. If they are not intercepted or are left uncontrolled, the polluted runoff would otherwise freely sheet flow from the project site to the IID Imperial Valley drains and could result in the accumulation of these pollutants in the receiving waters. The proposed project has the potential to release pollutants due to inundation by flood.

The project site is not located near any large bodies of water. The Salton Sea is located approximately 6 miles north of the project site. Furthermore, the relatively flat project site is approximately 100 miles inland from the Pacific Ocean. Therefore, the proposed project would not risk release of pollutants due to inundation by tsunami or seiche.

e) **No Impact.** The proposed project will not involve the use of groundwater nor require dewatering activities. The approximate 550 AF of water required during construction would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. This water would be used for earthwork, soil conditioning, dust suppression, and compaction efforts. Therefore, the proposed project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. No impact is identified for this issue area.

XI. Land Use and Planning

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

Impact Analysis

a) **No Impact.** The proposed project is located in a sparsely populated portion of unincorporated Imperial County. There are no established residential communities located within or in the vicinity of the project site. Therefore, implementation of the proposed project would not divide an established community. No impact is identified for this issue area.

b) **Potentially Significant Impact**. The solar energy facility site is currently zoned as Open Space/Preservation (S-2). Pursuant to Title 9, Division 5, Chapter 19 (County of Imperial 2019a), 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)*

The County Land Use Ordinance, Division 17, includes the Renewable Energy (RE) Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved CUP. CUP applications proposed for specific renewable energy projects not located in the RE Overlay Zone would not be allowed without an amendment to the RE Overlay Zone. The solar energy facility site (APN 034-160-002) is located outside of the RE Overlay Zone.

Implementation of the project requires an amendment to the County's General Plan Renewable Energy and Transmission Element, Zone Change, and approval of a CUP, as described below:

- **General Plan Amendment:** The applicant is requesting a General Plan Amendment to include/classify the project parcel (APN 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.
- **Zone Change:** The project site is currently zoned Open Space/Preservation (S-2). The applicant is requesting a Zone Change to classify the project parcel (APN 034-160-002) into the RE Overlay Zone to allow for solar and battery storage development.
- **Conditional Use Permit:** Implementation of the project would require the approval of a CUP by the County to allow for the construction and operation of the proposed solar energy facility with an integrated battery storage system on land zoned S-2.
- **Water Supply Assessment:** Implementation of the project would require the approval of the Water Supply Assessment.

The proposed General Plan Amendment and Zone Change may result in a conflict with an applicable land use plan, policy or regulation. A potentially significant impact has been identified for this issue, and this issue will be addressed in the EIR.

Because the proposed gen-tie line would be located entirely on BLM land, the project applicant has filed a right-of-way (ROW) grant application with the BLM for a permit to construct, operate, and maintain the gen-tie line. The proposed ROW would be 60-feet-wide. Construction of the gen-tie line would result in approximately 24.5 acres of disturbed area.

XII. Mineral Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The project site is not used for mineral resource production. According to *Figure 8: Imperial County Existing Mineral Resources* of the Conservation and Open Space Element of the General Plan (County of Imperial 2016), no known mineral resources occur within the project site nor does the project site contain mapped mineral resources. Therefore, the proposed project would not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of California nor would the proposed project result in the loss of availability of a locally important mineral resource.

b) **No Impact.** Refer to Response XIII. a) above.

XIII. Noise

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Impact Analysis

a) **Less than Significant Impact.** The Imperial County Code of Ordinances, Chapter 2, Section 90702.00 - Sound level limits, establishes one-hour average sound level limits for the County's land use zones. Agricultural/industrial operations are required to comply with the noise levels prescribed under the general industrial zones. Therefore, the project is required to maintain noise levels below 75 decibels (dB) (averaged over one hour) during any time of day. The project would be expected to comply with the Noise Element of the General Plan which states that construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB, when averaged over an eight-hour period, and measured at the nearest sensitive receptor. Construction equipment operation is also limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Nevertheless, the project will result in the increase in ambient noise levels during construction. This issue will be addressed in the EIR.

b) **Less than Significant Impact.** Groundborne vibration and groundborne noise could originate from earth movement during the construction phase of the proposed project. However, significant vibration is typically associated with activities such as blasting or the use of pile drivers, neither of which would be required during project construction. The project would be expected to comply with all applicable requirements for long-term operation, as well as with measures to reduce excessive groundborne vibration and noise to ensure that the project would not expose persons or structures to excessive groundborne vibration. Nevertheless, this issue will be addressed in the EIR.

c) **No Impact.** The project site is not located within 2 miles of a public airport. The nearest airport is the Brawley Municipal Airport located approximately 9.8 miles southeast of the project site. The project site is outside of the airport compatibility zones of the Brawley Municipal Airport (County of Imperial 1996). Therefore, the proposed project would not expose people residing or working in the project area to excess noise levels and no impact is identified for this issue area.

XIV. Population and Housing

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Impact Analysis

a) **Less than Significant Impact.** Development of housing is not proposed as part of the proposed project. No full-time employees are required to operate the proposed project since the project facility will be monitored remotely. However, it is anticipated that maintenance of the facility 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 facility, such actions will likely occur infrequently and would likely come from the existing local workforce. Therefore, the proposed project would not result in a substantial growth in the area, as the number of employees required to operate and maintain the facility is minimal. A less than significant impact is identified for this issue area.

b) **No Impact.** No housing exists within the project site. Therefore, the proposed project would not displace any existing people or housing, which would require the construction of replacement housing elsewhere. No impact is identified for this issue area.

XV. Public Services

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire Protection?	☐	☒	☐	☐
ii. Police Protection?	☐	☒	☐	☐
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

Impact Analysis

ai) **Potentially Significant Impact.** Fire protection and emergency medical services in the project area are provided by the Imperial County Fire Department. The project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the potential for a major fire in the unincorporated areas of the County is generally low. Primary access to the project site would be located off State Route (SR) 78 from the north and west, and across the IID aqueduct, via county roadways (Garvey Road and Andre Road). All access roads would be constructed to meet the County Fire Department's standards. Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders. Although the proposed project would be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health, and safety requirements (e.g., CPUC safety standards), the project applicant will be required to consult with the Fire Department to address any fire safety and service concerns (i.e, battery energy storage system) so that adequate service is maintained. The project's potentially significant impacts on fire services will be addressed in the EIR.

aii) **Less than Significant Impact.** 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 and the increase in construction related traffic could increase demand on law enforcement services. Therefore, on-site security systems would be provided, and access would be limited to the areas surrounding the project site during construction and operation, thereby minimizing the need for police surveillance. Six-foot high chain link fencing topped with barbed wire would be installed around the perimeter of the project site at the commencement of construction and site access would be limited to authorized site workers. Points of ingress/egress would be accessed via locked gates. In addition, a motion detection system and closed-circuit camera system may also be installed. The site would be remotely monitored 24 hours per day, 7 days per week. In addition, routine

unscheduled security rounds may be made by the security team monitoring the site security. Based on these considerations, the proposed project would not result in a need for police protection facility expansion and a less than significant impact is identified for this issue area.

aiii) **No Impact.** The proposed project does not include the development of residential land uses that would result in an increase in population or student generation. Additionally, construction of the proposed project would not result in an increase in student population within the Imperial County's School District since it is anticipated that construction workers would commute in during construction operations. Therefore, no impact is identified for this issue area and no further analysis is warranted.

aiv) **No Impact.** Although maintenance of the project facility will require minimal site presence to perform periodic visual inspections and minor repairs, no full-time employees are required to operate the proposed project because the project facility will be monitored remotely. Therefore, substantial permanent increases in population that would adversely affect local parks is not expected. No impact is identified for this issue area and no further analysis is warranted.

av) **No Impact.** Although maintenance of the project facility will require minimal site presence to perform periodic visual inspections and minor repairs, no full-time employees are required to operate the proposed project because the project facility will be monitored remotely. Therefore, substantial permanent increases in population that would adversely affect libraries and other public facilities (such as post offices) is not expected. The proposed project is not expected to have an impact on other public facilities such as post offices, and libraries. No impact is identified for this issue area and no further analysis is warranted.

XVI. Recreation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Impact Analysis

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

b) **No Impact.** Refer to response XVI. a) above.

XVII. Transportation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☒	☐	☐	☐
b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Impact Analysis

a) **Potentially Significant Impact.** Operation and maintenance would be conducted remotely, with minimal trips to the project site for panel washing and other solar and gen-tie line maintenance. Construction of the proposed project would result in a small increase of traffic to the area, which may result in a potentially significant impact and will be addressed in the EIR analysis.

b) **Potentially Significant Impact.** 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. Given the nature of the project, after construction, there would be a nominal amount of vehicle trips generated by the project. Once the proposed project is implemented, the proposed project would require intermittent maintenance requiring a negligible amount of traffic trips on an annual basis. However minimal, the proposed project would increase the number of vehicular trips related to construction and the need for intermittent maintenance on an annual basis. Therefore, this issue is potentially significant and will be addressed in the EIR analysis.

c) **Less than Significant Impact.** To accommodate emergency access, PV panels would be spaced to maintain proper clearance. Proposed project facilities would be designed, constructed, and operated in accordance with applicable fire protection, CPUC safety standards, and other environmental, health, and safety requirements. Primary access to the project site would be located off SR-78 from the north and west, and across the IID aqueduct, via county roadways (Garvey Road and Andre Road). All access roads would be constructed to meet the County Fire Department's standards. Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders. Therefore, the proposed project would not increase hazards because of incompatible uses or design features, and impacts are considered less than significant.

d) **Less than Significant Impact.** As previously stated, the PV panels would be spaced to maintain proper clearance. Proposed project facilities would be designed in accordance with applicable fire protection, CPUC safety standards, and other environmental, health, and

safety requirements. Primary access to the project site would be located off SR-78 from the north and west, and across the IID aqueduct, via county roadways (Garvey Road and Andre Road). All access roads would be constructed to meet the County Fire Department's standards. Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders. Based on this context, impacts are considered less than significant.

XVIII. Tribal Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☒	☐	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☒	☐	☐	☐

Impact Analysis

a-b) **Potentially Significant Impact.** AB 52 was passed in 2014 and took effect July 1, 2015. It established a new category of environmental resources that must be considered under CEQA called tribal cultural resources (Public Resources Code 21074) and established a process for consulting with Native American tribes and groups regarding those resources. Assembly Bill 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.

In accordance with AB 52, Imperial County, as the CEQA lead agency, sent an AB 52/SB 18 consultation request letter to California Native American tribes that are traditionally and culturally affiliated with the project area on July 1, 2022. This issue will be further analyzed in the EIR.

XIX. Utilities and Service Systems

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☒	☐	☐	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Impact Analysis

a) **Potentially Significant Impact.** Approximately 550-acre feet (AF) of water for dust suppression and site grading during construction would be required. Construction water needs would be limited to earthwork, soil conditioning, dust suppression, and compaction efforts. Water for construction and operation of the project would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. Water would be picked up from a nearby lateral canal and delivered to the construction location by a water truck that would be capable of carrying approximately 4,000 gallons per load. The proposed project would not require the relocation, expansion, or construction of new storm drainage facilities because the proposed solar facility would not generate a significant increase in the amount of impervious surfaces that would increase runoff during storm events and exceed the capacity of existing or planned stormwater drainage systems. Water from solar panel washing would continue to percolate through the ground, as a majority of the surfaces within the project site would remain pervious.

The wastewater generated during construction would be contained within portable toilet facilities and disposed of at an approved site. The minimal volume of wastewater generated during construction would not require the relocation expansion, or construction of wastewater treatment facilities.

Further, no habitable structures are proposed on the project site. Therefore, the proposed project would not require or result in the relocation or construction of new or expanded electric power or natural gas.

The proposed project includes an approximately 4-mile gen-tie line that would connect to the IID's existing 161 kV "L" Line. Construction of the proposed gen-tie line could result in potentially significant environmental impacts. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects

Once fully constructed, estimated annual water consumption for operation and maintenance of the proposed project, including periodic PV module washing, would be approximately 20-acre feet annually (af/y), which would be water purchased from the IID and trucked to the project site as needed. Although water for solar panel washing and fire protection during project operation is not anticipated to result in a significant increase in water demand/use, the proposed project's potential impacts on water supplies will be addressed in the water supply assessment and EIR analysis.

b) **Potentially Significant Impact.** Refer to response XIX. a) above.

c) **Less than Significant Impact.** The proposed project would generate a minimal volume of wastewater during construction. During construction activities, wastewater would be contained within portable toilet facilities and disposed of at an approved site. Further, no habitable structures are proposed on the project site; therefore, there would be no wastewater generation from the proposed project during operation. The proposed project would not exceed wastewater treatment requirements of the RWQCB. Therefore, a less than significant impact is identified for this issue area.

d) **Less than Significant Impact.** Solid waste generation would be minor for the construction and operation of the proposed project. Solid waste will be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. Trash would likely be hauled to the Imperial Landfill (13-AA-0019) located approximately 14 miles southeast of the proposed project in Imperial. The Imperial Landfill has approximately 12,384,000 cubic yards of remaining capacity and is estimated to remain in operation through 2040 (CalRecycle 2022). Therefore, there is ample landfill capacity in the County to receive the minor amount of solid waste generated by construction and operation of the proposed project.

Additionally, because the proposed project would generate solid waste during construction and operation, they will be required to comply with state and local requirements for waste reduction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the conditional use permit will contain provisions for recycling and diversion of Imperial County construction waste policies. Therefore, a less than significant impact is identified for this issue area.

e) **Less than Significant Impact.** Refer to response XIX. d) above.

XX. Wildfire

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** According to the Fire Hazard Severity Zone Viewer provided by the California Department of Forestry and Fire Protection, the proposed project is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2022). Therefore, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. No impact is identified for this issue area.

b) **No Impact.** The proposed project is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). Therefore, the proposed project would not exacerbate wildfire risks. No impact is identified for this issue area.

c) **Less than Significant Impact.** Fire protection and emergency medical services in the area are provided by the Imperial County Fire Department. The proposed project is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). Further, the proposed project is located in an unincorporated area of Imperial County, which has a generally low potential for a major fire (County of Imperial 2016).

The project involves the installation of solar PV arrays panels, an on-site substation, battery storage system, gen-tie, inverters, transformers, underground electrical cables, and access roads. To accommodate emergency access, PV panels would be spaced to maintain proper

clearance. Proposed project facilities would be designed, constructed, and operated in accordance with applicable fire protection, CPUC safety standards, and other environmental, health, and safety requirements. Primary access roads would be located off SR-78 78 from the north and west, and across the IID aqueduct, via county roadways (Garvey Road and Andre Road). All access roads would be constructed to meet the County Fire Department's standards. Points of ingress/egress would be accessed via locked gates that can be opened by any emergency responders. Water for emergency fire suppression would likely be provided from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. Water would be picked up from a nearby lateral canal and delivered to the construction location by a water truck that would be capable of carrying approximately 4,000 gallons per load. Therefore, operation and maintenance would not affect the ability of fire personnel to respond to fires or exacerbate fire risk and would continue to be adequately supported by the existing fire protection services. A less than significant impact is identified for this issue area.

d) **No Impact.** The proposed project is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2007). Additionally, the proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact is identified for this issue area and no further analysis is warranted.

XXI. Mandatory Findings of Significance

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Impact Analysis

a) **Potentially Significant Impact.** The proposed project has the potential to result in significant environmental effects on biological resources and cultural resources, which could directly or indirectly cause adverse effects on the environment. These issues will be further evaluated in the EIR.

b) **Potentially Significant Impact.** Implementation of the proposed project has the potential to result in impacts related to: aesthetics, air quality, biological resources, cultural resources, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use/planning, noise, public services, transportation, tribal cultural resources, and utilities/service systems. The proposed project has the potential to result in cumulative impacts with regards to the identified issue areas. Cumulative impacts will be discussed and further analyzed in the EIR.

c) **Potentially Significant Impact.** Implementation of the proposed project has the potential to result in impacts related to: air quality, geology/soils, GHG, and noise. These potential environmental effects could cause substantial adverse effects on human beings. These issues will be further evaluated in the EIR.

References

California Department of Conservation (DOC). 2016. Imperial County Williamson Act FY 2016/2017. Accessed May 2022.

——— 2022. *California Important Farmland Finder.* https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed May 2022.

——— 2022. California Earthquake Hazards Zone Application. https://www.conservation.ca.gov/cgs/geohazards/eq-zapp. Accessed May 2022.

California Department of Forestry and Fire Protection. 2007. Fire Hazard Severity Zones in SRA – Imperial County https://osfm.fire.ca.gov/media/6680/fhszs_map13.pdf. Accessed May 2022.

——— 2022. Fire Hazard Severity Zone Viewer. https://egis.fire.ca.gov/FHSZ/. Accessed May 2022.

California Department of Resources Recycling and Recovery (CalRecycle). 2022. Facility/Site Summary Details: Imperial Landfill (13-AA-0019). https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/603. Accessed May 2022.

California Department of Transportation (Caltrans). 2019. California Scenic Highway Mapping System. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed May 2022.

County of Imperial. 1996. Airport Land Use Compatibility Plan. Amended June 19, 1996.

——— 1997. County of Imperial General Plan. Seismic and Public Safety Element. https://www.icpds.com/assets/planning/seismic-and-public-safety.pdf. Accessed March 2021. Accessed May 2022.

——— 2016. County of Imperial General Plan. Conservation and Open Space Element. https://www.icpds.com/planning/land-use-documents/general-plan/conservation-and-open-space-element. Accessed May 2022.

——— 2017. Imperial County Land Use Ordinance: Title 9, Division 7, Chapter 2, Section 90702.00 - Sound Level Limits. https://www.icpds.com/assets/planning/ordinances/title-9-div-7-2015.pdf. Accessed May 2022.

——— 2019a. Imperial County Land Use Ordinance: Title 9, Division 5, Chapter 19. https://www.icpds.com/assets/5-Zoning-Areas-Established-.pdf. Accessed May 2022.

Department of Toxic Substances Control. 2022. EnviroStor – Hazardous Waste and Substances Site List (Cortese). https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITES,FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29. Accessed May 2022.

Desert Renewable Energy Conservation Plan (DRECP). 2021. Desert Renewable Energy Conservation Plan Gateway Data Basin. Available online: https://drecp.databasin.org/maps/4a5c4f9527f14b7198053bd467f315e7/active/#. Accessed May 2022.

ECORP Consulting, Inc. (2021). *Energy Impact Assessment.* July.

——— 2021b. Noise Impact Assessment. July.

Federal Emergency Management Agency (FEMA). 2008. Flood Insurance Rate Map (Panel 06025C1000C). https://hazards-

fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed May 2022.

List of Preparers

This Initial Study was prepared for the Imperial County Planning and Development Services Department by HDR at 591 Camino de la Reina, Suite 300, San Diego, CA 92108. The following professionals participated in its preparation:

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Comment Letters Received on Notice of Preparation

July 5, 2022

Mr. David Black
Planner IV
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: Administrative Draft IS and NOP of an EIR VEGA SES 6 Solar and Battery Storage Project

Dear Mr. Black:

On June 28, 2022 the Imperial Irrigation District received from the Imperial County Planning & Development Services Department, a request for agency comments on the Administrative Draft Initial Study and Notice of Preparation of an Environmental Impact Report for the VEGA SES 6 Solar and Battery Storage Project. The project consists of an 80 MW solar energy generation facility and substation, a 160 MW battery energy storage system and an electrical gen-tie transmission line to connect to the Imperial IID 161 kV "L" Line. The project will be located on approximately 320 acres of privately-owned vacant land (APN 034-160-002) in unincorporated Imperial County, approximately 6 miles south of the Salton Sea; 10 miles west of Brawley, CA and about 5 miles southwest of the community of Westmorland, CA.

The Imperial Irrigation District has reviewed the information and has the following comments:

1. If the project requires temporary construction or permanent distribution-rated electrical service (15 kilovolts or less), the applicant should be advised to contact Gabriel Ramirez, IID Customer Project Development Planner, at (760) 339-9257 or e-mail Mr. Ramirez at gramirez@iid.com to initiate the customer service application process. In addition to submitting a formal application (available for download at the district website http://www.iid.com/home/showdocument?id=12923), the applicant will be required submit a complete set of plans approved by the County of Imperial (in hardcopy and AutoCad formats), one-line diagrams, electrical loads and panel schedules, electrical panel specifications (size, voltage and location), project schedule, and the estimated in-service date, in addition to the applicable fees, permits, easements and environmental compliance documentation pertaining to the provision of electrical service to the project. The applicant shall be responsible for all costs and mitigation measures related to providing electrical service to the project.

2. Distribution-rated electrical service is limited in the area. A circuit study may be required. Any improvements or mitigation identified in the circuit study to enable the provision of electrical service shall be the financial and permitting responsibility of the applicant.

3. The project is located on APN 034-160-002-000 which is outside IID's Water Service Area. However, the Westside Main Canal is located to the north and west of the project site and

could be impacted by the project. The applicant may not use IID's canal or drain banks to access the project site. Any abandonment of easements or facilities shall be approved by IID based on systems (Irrigation, Drainage, Power, etc.) needs.

4. To insure there are no impacts to IID facilities, applicant should submit project plans to IID Water Department Engineering Services for review and comment prior to final project design and CUP approval. IID WDES can be contacted at (760) 339-9265 for further information on this matter.

5. Any construction or operation on IID property or within its existing and proposed right of way or easements including but not limited to: surface improvements such as proposed new streets, driveways, parking lots, landscape; and all water, sewer, storm water, or any other above ground or underground utilities; will require an encroachment permit, or encroachment agreement (depending on the circumstances). A copy of the IID encroachment permit application and instructions for its completion are available at https://www.iid.com/about-iid/department-directory/real-estate. The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits or agreements.

6. In addition to IID's recorded easements, IID claims, at a minimum, a prescriptive right of way to the toe of slope of all existing canals and drains. Where space is limited and depending upon the specifics of adjacent modifications, the IID may claim additional secondary easements/prescriptive rights of ways to ensure operation and maintenance of IID's facilities can be maintained and are not impacted and if impacted mitigated. Thus, IID should be consulted prior to the installation of any facilities adjacent to IID's facilities. Certain conditions may be placed on adjacent facilities to mitigate or avoid impacts to IID's facilities

7. Any new, relocated, modified or reconstructed IID facilities required for and by the project (which can include but is not limited to electrical utility substations, electrical transmission and distribution lines, water deliveries, canals, drains, etc.) need to be included as part of the project's CEQA and/or NEPA documentation, environmental impact analysis and mitigation. Failure to do so will result in postponement of any construction and/or modification of IID facilities until such time as the environmental documentation is amended and environmental impacts are fully analyzed. **Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent**.

8. Dividing a project into two or more pieces and evaluating each piece in a separate environmental document (Piecemealing or Segmenting), rather than evaluating the whole of the project in one environmental document, is explicitly forbidden by CEQA, because dividing a project into a number of pieces would allow a Lead Agency to minimize the apparent environmental impacts of a project by evaluating individual pieces separately, each of which may have a less-than-significant impact on the environment, but which together may result in a significant impact. Segmenting a project may also hinder developing comprehensive mitigation strategies. In general, if an activity or facility is necessary for the operation of a project, or necessary to achieve the project objectives, or a reasonably foreseeable consequence of approving the project, then it should be

considered an integral project component that should be analyzed within the environmental analysis. The project description should include all project components, including those that will have to be approved by responsible agencies. The State CEQA Guidelines define a project under CEQA as "the whole of the action" that may result either directly or indirectly in physical changes to the environment. This broad definition is intended to provide the maximum protection of the environment. CEQA case law has established general principles on project segmentation for different project types. For a project requiring construction of offsite infrastructure, the offsite infrastructure must be included in the project description. *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App. 4th 713.

Should you have any questions, please do not hesitate to contact me at 760-482-3609 or at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,

Donald Vargas
Compliance Administrator II

Enrique B. Martinez – General Manager
Mike Pacheco – Manager, Water Dept.
Jamie Asbury – Manager, Energy Dept.
Constance Bergmark – Deputy Mgr. Energy Dept., Energy Business, Regulatory & Transactions Admin.
Wayne K. Strumpfer, General Counsel
Michael P. Kemp – Superintendent, Regulatory & Environmental Compliance
Laura Cervantes. – Supervisor, Real Estate
Jessica Humes – Environmental Project Mgr. Sr., Water Dept.

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July 5, 2022

Mr. David Black
Planner IV
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County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: Administrative Draft IS and NOP of an EIR VEGA SES 6 Solar and Battery Storage Project – Additional Comments

Dear Mr. Black:

In addition to the comment letter the Imperial Irrigation District submitted to the Imperial County Planning & Development Services Department on this date, pursuant to the ICPDSD's request for agency comments on the Administrative Draft Initial Study and Notice of Preparation of an Environmental Impact Report for the VEGA SES 6 Solar and Battery Storage Project, the IID has the following concerns:

1. The applicant has indicated to IID through the interconnection process that the project is a 75 MW photovoltaic/energy storage project, meaning the project is a hybrid facility with 75 MW of PV and 75 MW of energy storage. The Administrative Draft IS and NOP of an EIR indicate a 80 MW PV and 160 MW BESS facility.

2. In the *Project Description* document, there is mention of a switching station to be built at the customer site (figure 2-4 and section 2.3.3). IID Transmission Planning has provided a draft facility study proposing the SS to be owned by IID and located adjacent to IID's 161kV "L" Line. This would mitigate the need for a 4-mile double circuit 161kV Line. The applicant is currently reviewing this alternative.

3. In the *Project Description* document, Section 2.3.4 Gen-Tie Line, with the recommendation of placing the SS adjacent the 161kV "L" Line, the 4-mile gen-tie would be single circuit wood poles and could very well fit within a 60 ft. right of way. IID is still pending the applicant's acceptance of the facility study but if the "L" Line would be looped in and out to the SS at the customer site, the "gen-tie" would be 4 miles of double circuit steel poles and would require at least 100-120 ft. ROW.

Should you have any questions, please do not hesitate to contact me at 760-482-3609 or at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,

Donald Vargas
Compliance Administrator II

Enrique B. Martinez – General Manager
Mike Pacheco – Manager, Water Dept.
Jamie Asbury – Manager, Energy Dept.
Constance Bergmark – Deputy Mgr. Energy Dept., Energy Business, Regulatory & Transactions Admin.
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August 3, 2022

11-IMP-86
PM 31.288
VEGA SES 6 Solar and Battery Storage Project
NOP of a DEIR/SCH#2022070146

Mr. David Black
Planner IV
Imperial County, Planning and Development Services Department
801 Main Street
El Centro, CA 92243

Dear Mr. Black:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the VEGA SES 6 Solar and Battery Storage Project (SCH#2022070146) located near State Route 86 (SR-86). The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. The Local Development Review (LDR) Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities.

Caltrans has the following comments:

Traffic Impact Study

- A Vehicle Miles of Travel (VMT) based Traffic Impact Study (TIS) should be provided for this project. Please use the Governor's Office of Planning and Research Guidance to identify VMT related impacts.[1] Or please provide justification on VMT Exemption.

- The TIS may also need to identify the proposed project's near-term and long-term safety or operational issues, on or adjacent to any existing or proposed State facilities.

[1] California Governor's Office of Planning and Research (OPR) December 2018. "Technical Advisory on Evaluating Transportation Impacts in CEQA." https://opr.ca.gov/ceqa/sb-743/

Hauling

Caltrans has discretionary authority with respect to highways under its jurisdiction and may, upon application and if good cause appears, issue a special permit to operate or move a vehicle or combination of vehicles or special mobile equipment of a size or weight of vehicle or load exceeding the maximum limitations specified in the California Vehicle Code. The Caltrans Transportation Permits Issuance Branch is responsible for the issuance of these special transportation permits for oversize/overweight vehicles on the State Highway network. Additional information is provided online at: http://www.dot.ca.gov/trafficops/permits/index.html

Environmental

Caltrans welcomes the opportunity to be a Responsible Agency under the California Environmental Quality Act (CEQA), as we have some discretionary authority of a portion of the project that is in Caltrans' Right-of-Way (R/W) through the form of an encroachment permit process. We look forward to the coordination of our efforts to ensure that Caltrans can adopt the alternative and/or mitigation measure for our R/W. We would appreciate meeting with you to discuss the elements of the EIR that Caltrans will use for our subsequent environmental compliance.

An encroachment permit will be required for any work within the Caltrans' R/W prior to construction. As part of the encroachment permit process, the applicant must provide approved final environmental documents for this project, corresponding technical studies, and necessary regulatory and resource agency permits. Specifically, CEQA determination or exemption. The supporting documents must address all environmental impacts within the Caltrans' R/W and address any impacts from avoidance and/or mitigation measures.

We recommend that this project specifically identifies and assesses potential impacts caused by the project or impacts from mitigation efforts that occur within Caltrans' R/W that includes impacts to the natural environment, infrastructure including but not limited to highways, roadways, structures, intelligent transportation systems elements, on-ramps and off-ramps, and appurtenant features including but not limited to lighting, signage, drainage, guardrail, slopes, and landscaping. Caltrans is interested in any additional mitigation measures identified for the project's draft Environmental Document.

Mitigation

Caltrans endeavors that any direct and cumulative impacts to the State Highway network be eliminated or reduced to a level of insignificance pursuant to the CEQA and National Environmental Policy Act (NEPA) standards.

Mitigation measures to State facilities should be included in TIS/TIA. Mitigation identified in the traffic study, subsequent environmental documents, and mitigation monitoring reports, should be coordinated with Caltrans to identify, and implement the appropriate mitigation. This includes the actual implementation and collection of any "fair share" monies, as well as the appropriate timing of the mitigation. Mitigation improvements should be compatible with Caltrans concepts.

Right-of-Way

- Any work performed within Caltrans' R/W will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans' R/W prior to construction.

Additional information regarding encroachment permits may be obtained by contacting the Caltrans Permits Office at (619) 688-6158 or emailing D11.Permits@dot.ca.gov or by visiting the website at https://dot.ca.gov/programs/traffic-operations/ep. Early coordination with Caltrans is strongly advised for all encroachment permits.

If you have any questions or concerns, please contact Charlie Lecourtois, LDR Coordinator, at (619) 985-4766 or by e-mail sent to Charlie.Lecourtois@dot.ca.gov.

Sincerely,

Maurice A. Eaton

MAURICE EATON
Branch Chief
Local Development Review

California Program Office
980 Ninth Street, Suite 1730 | Sacramento, California 95814 | 916-313-5800
www.defenders.org

August 12, 2022

David Black, Planner IV
Imperial County, Planning and Development Services Department
801 Main Street
El Centro, CA 92243

Delivered via email to: davidblack@co.imperial.ca.us

RE: Comments on Notice of Preparation of a Draft Environmental Impact Report and Initial Study for the proposed VEGA SES 6 Solar and Battery Storage Project (SCH 2022070146)

Dear Mr. Black:

Thank you for the opportunity to comment on the Notice of Preparation and Initial Study (NOP/IS) of a Draft Environmental Impact Report (DEIR) for the proposed VEGA SES 6 Solar and Battery Storage Project (Project). These comments are submitted on behalf of Defenders of Wildlife (Defenders) and our nearly 2.2 million members and supporters in the United States, 323,000 of which reside in California.

Defenders is dedicated to protecting all wild animals and plants in their natural communities. To that end, Defenders employs science, public education and participation, media, legislative advocacy, litigation and proactive on-the-ground solutions in order to prevent the extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

Defenders strongly supports responsible energy development that will help meet California's emission reduction goals. A low carbon energy future is critical for California – for our economy, our communities, and the environment. Achieving this future—and *how* we achieve it—is critical for protecting California's internationally treasured wildlife, landscapes, productive farmlands and diverse habitats.

As we transition toward a clean energy future, it is imperative for our future and the future of our wild places and wildlife that we strike a balance between addressing the near-term impact of solar development with the long-term impacts of climate change on our biological diversity,

fish and wildlife habitat, and natural landscapes. To ensure that the proper balance is achieved, we need smart planning for renewable power that avoids and minimizes adverse impacts on wildlife and lands with known high-resource values. We believe energy projects must be sited in a manner that avoids or minimizes impacts to wildlife and wild habitat, and where necessary, unavoidable impacts must be offset through mitigation.

The Project is located on approximately 320 acres of privately-owned vacant land located in unincorporated Imperial County. It is located 6 miles south of the Salton Sea, 10 miles west of the City of Brawley, 5 miles southwest of the community of Westmoreland, directly south of Andre Road and 0.50 mile and west of the Westside Main Canal. The Project is an 80 MW photovoltaic solar facility with an integrated 160 MW battery energy storage system and includes an approximately 4-mile electrical generator intertie (gen-tie) that would be located on federal lands managed by the BLM within the California Desert Conservation Area. The gen-tie would connect to the Imperial Irrigation District's existing 161 kilovolt "L" line.

The Project site is located on land designated Agriculture by the Imperial County General Plan and is currently zoned as Open Space/Preservation. The Project site is not currently being used for agricultural production and the Project would not convert any agricultural land to non-agricultural uses.

Our Comments on the NOP/IS for the Project are as follows:

1. **Affected special-status species:** Defenders is primarily concerned with the impact of the project on special-status species. Regarding these species, the NOP/IS *states "…a potentially significant impact is identified for this issue area. A biological resources report and aquatic resources delineation report that will address the proposed project's potential impacts on biological resources will be prepared and included in the EIR analysis."*

   Defenders recommends the County consult with Trustee and Responsible wildlife agencies to determine the scope and protocols for the biological surveys needed to support the biological resources analysis in the EIR. The surveys should be conducted for the following species:

   A. **Burrowing Owl (*Athene cunicularia*):** The Project is located within the range of the burrowing owl, a species listed as a Species of Special Concern by the California Department of Fish and Wildlife (CDFW). It is estimated that there are fewer than 10,000 breeding pairs of burrowing owls and most exist on privately

owned land.[1] A map showing the species distribution and suitable habitat for the species is available here: https://databasin.org/maps/0cfc0cb507bb4bb8bf8689e7aa1d6e97/active/

At a minimum, the surveys should follow the recommendations listed within the within the State of California's Staff Report on Burrowing Owl Mitigation.[2] If the burrowing owls are observed on or adjacent to the Project site based on the survey, the DEIR must, at a minimum, include avoidance, minimization and mitigation measures for the species based on those listed within the Staff Report on Burrowing Owl Mitigation.

B. **Flat-Tailed Horned Lizard (*Phrynosoma mcallii*):** The project is located within the range of the Flat-Tailed Horned Lizard (FTHL), a species protected by a multiagency conservation agreement in Arizona and California.[3] The FTHL has the most limited range within the U.S. of any horned lizard species and is primarily located within the Imperial and Coachella Valleys.[4] A map showing the species distribution and suitable habitat for the species is available here: https://databasin.org/maps/5fdbf62564624f72bf388c4e4ea424e1/active/

We recommend that a survey for the FTHL be performed that, at a minimum, conforms to the current survey standards established in the Flat-tailed Horned Lizard Rangewide Management Strategy prepared by the Flat-tailed Horned Lizard Interagency Coordinating Committee. If the species is observed on or adjacent to the Project site based on the survey, the DEIR must include avoidance, minimization and mitigation measures for FTHL that are developed in consultation with CDFW.

C. Swainson's Hawk (*Buteo swainsoni*)

The NOP/IS for the Project fails to adequately account for the special status species that have potential to be located on or adjacent to the Project site. The Swainson's Hawk is listed as threatened under the California Endangered Species Act. The project site located on land where the species could be present, and we recommend that a survey for the species be conducted that, at a minimum,

[1] California Department of Fish and Wildlife. 2012. Staff report on burrowing owl mitigation. The 7 March 2012 memo replacing 1995 staff report, State of California Natural resources Agency, Department of Fish and Wildlife. Sacramento, California.
[2] Ibid.
[3] California Department of Fish and Wildlife. Flat Tailed Horned Lizard Conservation Efforts. https://wildlife.ca.gov/Regions/6/Flat-Tailed-Horned-Lizard
[4] Flat-tailed Horned Lizard Interagency Coordinating Committee. 2003. Flat-tailed horned lizard rangewide management strategy, 2003 revision.

conforms to CDFW and the California Energy Commission's survey guidelines.[5] A map showing the predicted occupied habitat for the species is located here: https://databasin.org/maps/new/#datasets=addeef3693ef43328697572f663ef587

If the species is observed on or adjacent to the Project site based on the survey, the DEIR must include avoidance, minimization and mitigation measures developed in consultation with CDFW.

The DEIR must address both direct impacts from the proposed Project and cumulative impacts to the species and habitat. Defenders recommends avoidance and minimization measures should be exhausted before the compensatory mitigation options are considered.

2. **Coordination with the Bureau of Land Management (BLM)**: Defenders recommends coordination with BLM in examining the impacts of the Project on the public lands in California Desert Conservation Area (CDCA) and ensuring there is no impact on the West Mesa Area of Critical Environmental Concern (ACEC).

   The Project includes the construction, operation and maintenance of an approximately 4-mile gen-tie transmission line that would connect to the Imperial Irrigation District's existing 161 kilovolt "L" line. The line would be located entirely on land managed by the BLM within the CDCA. The NOP/IS states a portion of the gen-tie line falls within the Renewable Energy Development Focus Area, however if the project impacts habitat within the California Desert National Conserved Lands, there is potential for significant impact. Additionally, the West Mesa ACEC is in close proximity to the project site. It is essential that the County closely coordinate with BLM to identify and analyze potential impacts of the Project on BLM lands and ensure appropriate avoidance, minimization and mitigation of any adverse impacts.

Thank you once again for the opportunity to provide scoping comments for the VEGA SES 6 Solar and Battery Storage Project NOP/IS and for considering our comments. We look forward to reviewing the EIR and request to be notified when it is available. If you have any questions, please contact me at 408-603-4694 or via email at smarkowska@defenders.org.

[5] California Energy Commission and Department of Fish and Game. 2010. Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Projects in the Antelope Valley for Los Angeles and Kern Counties, California.

Respectfully submitted,

Sophia Markowska
Senior California Representative

IID

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August 15, 2022

Mr. David Black
Planner IV
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: NOP of a Draft EIR For Vega SES6 Solar and Battery Storage Project

Dear Mr. Black:

On July 11, 2022 the Imperial Irrigation District received from the Imperial County Planning & Development Services Department, the Notice of Preparation of an Draft Environmental Impact Report for the VEGA SES 6 Solar and Battery Storage Project. The project proposes a 80 MW solar energy generation facility and substation, a 160 MW battery energy storage system and an electrical gen-tie transmission line to connect to the Imperial IID 161 kV "L" Line. The project will be located on approximately 320 acres of privately-owned vacant land (APN 034-160-002) in unincorporated Imperial County, approximately 6 miles south of the Salton Sea; 10 miles west of Brawley, CA and about 5 miles southwest of the community of Westmorland, CA.

The IID has reviewed the documents and finds that the comments provided in the July 5, 2022 district letters on the project's Administrative Draft Initial Study and NOP of an EIR (see attached letters) continue to apply.

Should you have any questions, please do not hesitate to contact me at 760-482-3609 or at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,

Donald Vargas
Compliance Administrator II

Enrique B. Martinez – General Manager
Mike Pacheco – Manager, Water Dept.
Jamie Asbury – Manager, Energy Dept.
Constance Bergmark – Deputy Mgr. Energy Dept., Energy Business, Regulatory & Transactions Admin.
Geoffrey Holbrook – Interim General Counsel
Michael P. Kemp – Superintendent, Regulatory & Environmental Compliance
Laura Cervantes. – Supervisor, Real Estate
Jessica Humes – Environmental Project Mgr. Sr., Water Dept.

July 5, 2022

Mr. David Black
Planner IV
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: Administrative Draft IS and NOP of an EIR VEGA SES 6 Solar and Battery Storage Project

Dear Mr. Black:

On June 28, 2022 the Imperial Irrigation District received from the Imperial County Planning & Development Services Department, a request for agency comments on the Administrative Draft Initial Study and Notice of Preparation of an Environmental Impact Report for the VEGA SES 6 Solar and Battery Storage Project. The project consists of an 80 MW solar energy generation facility and substation, a 160 MW battery energy storage system and an electrical gen-tie transmission line to connect to the Imperial IID 161 kV "L" Line. The project will be located on approximately 320 acres of privately-owned vacant land (APN 034-160-002) in unincorporated Imperial County, approximately 6 miles south of the Salton Sea; 10 miles west of Brawley, CA and about 5 miles southwest of the community of Westmorland, CA.

The Imperial Irrigation District has reviewed the information and has the following comments:

1. If the project requires temporary construction or permanent distribution-rated electrical service (15 kilovolts or less), the applicant should be advised to contact Gabriel Ramirez, IID Customer Project Development Planner, at (760) 339-9257 or e-mail Mr. Ramirez at gramirez@iid.com to initiate the customer service application process. In addition to submitting a formal application (available for download at the district website http://www.iid.com/home/showdocument?id=12923), the applicant will be required submit a complete set of plans approved by the County of Imperial (in hardcopy and AutoCad formats), one-line diagrams, electrical loads and panel schedules, electrical panel specifications (size, voltage and location), project schedule, and the estimated in-service date, in addition to the applicable fees, permits, easements and environmental compliance documentation pertaining to the provision of electrical service to the project. The applicant shall be responsible for all costs and mitigation measures related to providing electrical service to the project.

2. Distribution-rated electrical service is limited in the area. A circuit study may be required. Any improvements or mitigation identified in the circuit study to enable the provision of electrical service shall be the financial and permitting responsibility of the applicant.

3. The project is located on APN 034-160-002-000 which is outside IID's Water Service Area. However, the Westside Main Canal is located to the north and west of the project site and

could be impacted by the project. The applicant may not use IID's canal or drain banks to access the project site. Any abandonment of easements or facilities shall be approved by IID based on systems (Irrigation, Drainage, Power, etc.) needs.

4. To insure there are no impacts to IID facilities, applicant should submit project plans to IID Water Department Engineering Services for review and comment prior to final project design and CUP approval. IID WDES can be contacted at (760) 339-9265 for further information on this matter.

5. Any construction or operation on IID property or within its existing and proposed right of way or easements including but not limited to: surface improvements such as proposed new streets, driveways, parking lots, landscape; and all water, sewer, storm water, or any other above ground or underground utilities; will require an encroachment permit, or encroachment agreement (depending on the circumstances). A copy of the IID encroachment permit application and instructions for its completion are available at https://www.iid.com/about-iid/department-directory/real-estate. The IID Real Estate Section should be contacted at (760) 339-9239 for additional information regarding encroachment permits or agreements.

6. In addition to IID's recorded easements, IID claims, at a minimum, a prescriptive right of way to the toe of slope of all existing canals and drains. Where space is limited and depending upon the specifics of adjacent modifications, the IID may claim additional secondary easements/prescriptive rights of ways to ensure operation and maintenance of IID's facilities can be maintained and are not impacted and if impacted mitigated. Thus, IID should be consulted prior to the installation of any facilities adjacent to IID's facilities. Certain conditions may be placed on adjacent facilities to mitigate or avoid impacts to IID's facilities

7. Any new, relocated, modified or reconstructed IID facilities required for and by the project (which can include but is not limited to electrical utility substations, electrical transmission and distribution lines, water deliveries, canals, drains, etc.) need to be included as part of the project's CEQA and/or NEPA documentation, environmental impact analysis and mitigation. Failure to do so will result in postponement of any construction and/or modification of IID facilities until such time as the environmental documentation is amended and environmental impacts are fully analyzed. **Any and all mitigation necessary as a result of the construction, relocation and/or upgrade of IID facilities is the responsibility of the project proponent**.

8. Dividing a project into two or more pieces and evaluating each piece in a separate environmental document (Piecemealing or Segmenting), rather than evaluating the whole of the project in one environmental document, is explicitly forbidden by CEQA, because dividing a project into a number of pieces would allow a Lead Agency to minimize the apparent environmental impacts of a project by evaluating individual pieces separately, each of which may have a less-than-significant impact on the environment, but which together may result in a significant impact. Segmenting a project may also hinder developing comprehensive mitigation strategies. In general, if an activity or facility is necessary for the operation of a project, or necessary to achieve the project objectives, or a reasonably foreseeable consequence of approving the project, then it should be

considered an integral project component that should be analyzed within the environmental analysis. The project description should include all project components, including those that will have to be approved by responsible agencies. The State CEQA Guidelines define a project under CEQA as "the whole of the action" that may result either directly or indirectly in physical changes to the environment. This broad definition is intended to provide the maximum protection of the environment. CEQA case law has established general principles on project segmentation for different project types. For a project requiring construction of offsite infrastructure, the offsite infrastructure must be included in the project description. *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App. 4th 713.

Should you have any questions, please do not hesitate to contact me at 760-482-3609 or at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,

Donald Vargas
Compliance Administrator II

Enrique B. Martinez – General Manager
Mike Pacheco – Manager, Water Dept.
Jamie Asbury – Manager, Energy Dept.
Constance Bergmark – Deputy Mgr. Energy Dept., Energy Business, Regulatory & Transactions Admin.
Wayne K. Strumpfer, General Counsel
Michael P. Kemp – Superintendent, Regulatory & Environmental Compliance
Laura Cervantes. – Supervisor, Real Estate
Jessica Humes – Environmental Project Mgr. Sr., Water Dept.

IID

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July 5, 2022

Mr. David Black
Planner IV
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

SUBJECT: Administrative Draft IS and NOP of an EIR VEGA SES 6 Solar and Battery Storage Project – Additional Comments

Dear Mr. Black:

In addition to the comment letter the Imperial Irrigation District submitted to the Imperial County Planning & Development Services Department on this date, pursuant to the ICPDSD's request for agency comments on the Administrative Draft Initial Study and Notice of Preparation of an Environmental Impact Report for the VEGA SES 6 Solar and Battery Storage Project, the IID has the following concerns:

1. The applicant has indicated to IID through the interconnection process that the project is a 75 MW photovoltaic/energy storage project, meaning the project is a hybrid facility with 75 MW of PV and 75 MW of energy storage. The Administrative Draft IS and NOP of an EIR indicate a 80 MW PV and 160 MW BESS facility.

2. In the *Project Description* document, there is mention of a switching station to be built at the customer site (figure 2-4 and section 2.3.3). IID Transmission Planning has provided a draft facility study proposing the SS to be owned by IID and located adjacent to IID's 161kV "L" Line. This would mitigate the need for a 4-mile double circuit 161kV Line. The applicant is currently reviewing this alternative.

3. In the *Project Description* document, Section 2.3.4 Gen-Tie Line, with the recommendation of placing the SS adjacent the 161kV "L" Line, the 4-mile gen-tie would be single circuit wood poles and could very well fit within a 60 ft. right of way. IID is still pending the applicant's acceptance of the facility study but if the "L" Line would be looped in and out to the SS at the customer site, the "gen-tie" would be 4 miles of double circuit steel poles and would require at least 100-120 ft. ROW.

Should you have any questions, please do not hesitate to contact me at 760-482-3609 or at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,

Donald Vargas
Compliance Administrator II

Enrique B. Martinez – General Manager
Mike Pacheco – Manager, Water Dept.
Jamie Asbury – Manager, Energy Dept.
Constance Bergmark – Deputy Mgr. Energy Dept., Energy Business, Regulatory & Transactions Admin.
Wayne K. Strumpfer, General Counsel
Michael P. Kemp – Superintendent, Regulatory & Environmental Compliance
Laura Cervantes. – Supervisor, Real Estate
Jessica Humes – Environmental Project Mgr. Sr., Water Dept.

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FAX: (442) 265-1799

AIR POLLUTION CONTROL DISTRICT

August 17, 2022

Jim Minnick, Director
Imperial County Planning & Development Services
801 Main Street
El Centro, CA 92243

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report for VEGA SES 6 Solar and Battery Storage Project

Dear Mr. Minnick:

The Imperial County Air Pollution Control District (Air District) received your notice and has the following general comments on the scope of the review for the VEGA SES 6 Solar and Battery Storage (Project). As you know, the Air District's established programs help to keep the quality of air in Imperial County from declining. The programs, Rules and Regulations of the Air District in conjunction with the California Environmental Quality Act (CEQA), the most current CEQA Air Quality Handbook for Imperial County (CEQA Handbook), and the Air District's State Implementation Plans (SIP's) for Ozone, $PM_{2.5}$ and PM_{10} work together to assure that air quality improves or does not degrade. Currently, the non-attainment status of "moderate" for ozone, "moderate" for $PM_{2.5}$ and the maintenance requirements for PM_{10} are the driving criteria in establishing the thresholds for NOx, ROG, PM_{10}, SOx and CO found in the CEQA Handbook. These thresholds and their significance are explained under Section 6 of the CEQA handbook, which describes the preparation of an Air Quality Analysis for an Environmental Impact Report (EIR) for nonrenewable projects. The Air District will look closely at the potential impacts, both direct and indirect, as a result of the proposed project.

When exploring the impacts of solar farm projects, it is a common misconception that these types of projects are not a significant source of air pollution. While it is true that solar projects that do not employ fuel based combustion units as supplemental power are typically cleaner projects operationally, in most cases construction and cumulative impacts have the potential to cause adverse air quality impacts. Solar farms in Imperial County, historically, have been placed under time pressures for completion that are typically not discussed or evaluated within an

Environmental Impact Report. These potential changes in timeline affect the level of pollutant concentrations, specifically, those emissions related to NOx. Similarly, during operations, because there are several functioning solar farms in Imperial County, cumulative emissions of PM10 have the potential to elevate or cause an exceedance of the Standard. Thus, experience has demonstrated that shortened construction periods not previously analyzed during the CEQA process creates a potential for elevated levels of NOx emissions, as well as elevated levels of PM10 during operations. In regards to the storage portion of this project, Battery Energy Storage Systems are a relatively new type of project within Imperial County and the Air District is still evaluating their possible impacts. For your convenience below are highlights of the elements involved in an **Air Quality Analysis**.

A thorough analysis should include a description, impacts and health consequences of all air quality and emissions. The analysis should be conducted using APCD approved modeling factors.[1] The analysis should include short and long term emissions as well as daily and yearly emission calculations. Project alternatives should be included along with a thorough emissions analysis. A description of the County's attainment status, both at the state and federal levels, as well as any regulatory restrictions to the project, should be included. All temporary construction and grading impacts should quantify fugitive dust and combustion emissions and propose mitigation measures.

Therefore, a thorough analysis should be performed in order to assess the level of significance of potential impacts of this solar farm project. This analysis should include an overview containing a complete description of the Project (including the proposed Battery Energy Storage System component) in its current existing conditions, what the proposed development will be, how that will change the existing conditions, and should disclose the mitigations and conditions that would assist in keeping pollutant emissions below the thresholds. These questions are designed to assess the project's level of significance before and after proposed mitigation. Compliance with **Regulation VIII** is required for all construction activities, including a **Construction Dust control Plan (CDCP)**, as well as **notification 10 days prior** to the commencement of all construction activities.

In order to identify NO_x emissions created during the construction phase of the solar project, a **Construction Equipment List** detailing the equipment type, make, model, year, horsepower, hours of **daily** operation, date arrived onsite, and date removed from site should be provided to the Air District in Excel format.[2] This is to ensure NO_x emissions during the construction period

[1] Such as using the most current CalEEMod.

[2] The Equipment List submittal will require a written commitment by the applicant to a submittal schedule agreed upon between the applicant and the Air District

remain under the CEQA thresholds of significance.

In regards to cumulative impacts, which occur during the operational phase of solar farm projects, PM_{10} is of main concern. Therefore, an **Operational Dust Control Plan (ODCP)** is required detailing how dust emissions will be controlled and maintained during the operational phase of the project.[3] An initial site visit is required to confirm the elements of any draft ODCP before it can be finalized by the Air District. After this, continual site visits will typically occur on a yearly basis. Please note that an ODCP is intended to provide pertinent information specific to your operation for the reduction of fugitive dust emissions created by the ongoing operations at your facility.

Our rules and regulations can be found on our website at https://apcd.imperialcounty.org under the Rules & Regulations. If any questions arise, please feel free to contact our office at (442) 265-1800.

Sincerely,

Ismael Garcia
Environmental Coordinator I

Via Email
Reviewed by,
Monica Soucier
APC Division Manager

[3] The ODCP needs to be approved prior to the issuance of the Certificate of Occupancy.

March 13, 2023

Ramon Gonzalez
ZGlobal, Inc.
750 W. Main Street
El Centro, CA 92243

RE: Visual Impact Assessment Letter Report– Vega SES 6 Project

Dear Mr. Gonzalez:

The purpose of this Visual Impact Assessment (VIA) letter report is to evaluate the potential visual impacts associated with the construction and implementation of the Vega SES 6 Solar Energy Storage Project located in Imperial County, California. This VIA includes an analysis and description of the existing visual setting and potential visual impacts. If the Project results in any adverse visual impacts, the purpose of the VIA is also to propose measures to minimize those impacts.

1.0 PROJECT DESCRIPTION, LOCATION, AND SETTING

The Vega SES 6 Solar Project (Project) is an 80-megawatt (MW) direct current and 320 MW-hour battery storage utility-scale solar project located in Imperial County, California. The Proposed Project is located on approximately 320 acres of vacant land on a single parcel in Imperial County, California (APN 034-160-002) with one gen-tie line alignment. Figure 1 depicts the Project location and vicinity (Attachment A). The Project site is located 6.0 miles south of the southern-most edge of the Salton Sea; 10.0 miles west of the City of Brawley; and approximately 5.0 miles southwest of the community of Westmorland. The Project site is located approximately 0.5 mile west of the Andre Road/Garvey Road/Aqueduct intersection. The proposed gen-tie transmission line route will traverse through Project vicinity roadways, potentially adjacent to private property, on its way to the IID electrical grid transmission line that runs north to south, and west of the Proposed Project. The site is currently vacant, undeveloped land, bound by undeveloped Open Space/Bureau of Land Management (BLM) land to the west and south, and active agricultural land to the north and east. The transmission line route would be along existing roadways.

Project Characteristics

Solar panels would use 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 fixed-frame racks would be secured at a fixed tilt of 20 degrees to 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 (if necessary). These arrays would be separated from each other and the perimeter security fence by up to 30-foot-wide interior roads. If HSAT

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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 nine (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 six feet above the ground, depending on the final design. The individual PV systems would be arranged in large arrays by placing them in columns spaced approximately ten feet apart to maximize operational performance and to allow access for panel cleaning and maintenance. 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. These HSAT arrays would be separated from each other and the perimeter security fence by up to 30-foot-wide roads, consistent with County emergency access requirements.

The Project also proposes the construction of on-site water groundwater well(s) for production. Well construction will consist of drilling of the new well or activation of a previously drilled but unused well and will require the installation of a small structure to house pumps, motors, pressure tanks, piping, and other equipment necessary to make the well operational.

Construction activities would primarily involve demolition and grubbing; grading at the Project site to establish access roads and pads for electrical equipment (inverters and step–up transformers); trenching for underground electrical collection lines; and the installation of solar equipment and security fencing. Stormwater management facilities would be constructed internally within the site and would consist of basins and infiltration areas. Dust generated during construction would be controlled by watering and, as necessary, the use of other dust suppression methods and materials accepted by the Imperial County Air Pollution Control District (ICAPCD) or the California Air Resources Board (CARB). A temporary, portable construction supply container would be located at the Project site at the beginning of construction and removed at the end of construction. Onsite parking would be provided for all construction workers.

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

Conceptual plans for the Vega SES 6 project are provided in Attachment B.

2.0 VISUAL IMPACT ASSESSMENT METHODOLOGY

The following steps were taken in analyzing the visual impacts of the proposed Vega SES 6 Solar and Battery Storage Project.

1. Describe the existing visual setting, including any sensitive viewer groups (i.e., baseline conditions);
2. Identify key viewpoints for visual assessment;
3. Describe or depict the visual appearance of the projects at the key viewpoints. Key viewpoints are selected to represent the typical views from the public right-of-way;
4. Assess the visual changes that would be introduced by the project and the viewer response based on defined attributes which are neither good nor bad. Change in visual character cannot be described as having good or bad attributes until compared with viewer responses to the change;
5. Determine the degree of visual impact;
6. Proposed methods to minimize adverse impacts

Evaluation of potential visual impacts resulting from implementation of the Proposed Project is 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. The plans help to understand the potential changes in visual quality of the site after implementation of the Project. Physical changes are analyzed in relation to vividness, intactness, and unity of the proposed project conditions. Sensitivity of various viewer groups is evaluated to measure response to the visual quality changes.

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 limits and vicinity 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 conduce light analysis and compare potential impacts caused by the introduction of the Proposed Project. Impacts relating to light, glare, shade, and shadow were examined during field observations 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 Project implementation. New light sources and reduction or elimination of light could be considered impacts that could change the natural environmental setting of a project site. 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. General Plans, Specific Plans, and other regulations or policies relating to visual resources and setting at the project site 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.

3.0 LOCAL VISUAL RESOURCE POLICIES

County of Imperial General Plan

Circulation and Scenic Highways Element

The Imperial County General Plan Circulation and Scenic Highways Element provides information about the transportation needs of the County and the various modes to meet these needs and provides for the movement of goods and people, including pedestrian, bicycles, transit, train, air and automobile. This Element is also intended to provide a plan to accommodate a pattern of concentrated and coordinated growth and to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

The potential designation of Scenic Highway has been placed on specific roadways in the County and may be added to others in the future. This designation is intended to protect and enhance the County's scenic aesthetic resources which are visible from major County and State routes. As identified in the Circulation and Scenic Highways Element, four State routes within the County have the potential for designation as Scenic Highways:

- **Interstate 8 (I-8):** The initial segment for future Scenic Highway Designation status lies between the San Diego County line and its junction with State Route 98 (SR-98). This segment known as Mountain Springs Grade has a long, rapid elevation change, remarkable rock and boulder scenery, and plant life variations.
- **State Route 78 (SR-78):** The portion of SR-78 from the junction with State Route 86 (SR-86) to the San Diego County line is eligible for future Scenic Highway Designation. The area is considered scenic because of its desert characteristics and view of Salton Sea.
- **State Route 111 (SR-111):** SR-111 travels along the northeast shore of the Salton Sea and is eligible for future Scenic Highway Designation from Bombay Beach to the County line. The drive along this body of water is a study in primitive beauty and an interesting and startling anomaly. The contract between the flat, wide Salton Sea with its sandy beach and the rugged rise of the Chocolate Mountains has many variations. The panoramic view of the opposite (southwest) shore and its backdrop of mountains is also a sight of pre-historic beauty.
- **Borrego-Salton Seaway:** County Highway S-22 is also known as the Borrego-Salton Seaway. It begins in Salton City and ends at the community of Borrego Springs in San Diego County. Along its route, is Clay Point, located a mile and half west of SR-86, which is a formation ring above a flat desert shore which shows the bed of pre-Columbian Lake Cahuilla. Three and a half miles farther west, the Anza Verde Wash parallels the Borrego-Salton Seaway with uniquely scenic desert landforms and vegetation.

The Circulation and Scenic Highways Elements contains the following objectives for the preservation of environmental and scenic amenities of the area along potential Scenic Highways.

Objective 4.1 Establish various systems of scenic recreational travel utilizing multiple transportation modes.

Objective 4.2 Preserve, enhance, and protect Imperial County's scenic resources by the removal of illicit billboards from scenic areas and restrictions on new off-site sign construction visible from designated scenic highways.

Objective 4.3 Protect areas of outstanding scenic beauty along any scenic highways and protect the aesthetics of those areas.

Objective 4.4 Acquire scenic easements from private owners when required.

Objective 4.5 Develop standards for aesthetically valuable sites. Design review may be required so that structures, facilities, and activities are properly merged with the surrounding environment.

Conservation and Open Space Element

The Imperial County General Plan Conservation and Open Space Element is a conservation guide for the protection of regional aesthetics. This Element identifies goals and policies to ensure the managed use of environmental resources to prevent limiting the range of resources available to future generations. The Conservation and Open Space Element identifies scenic visual resources within the County which include the deserts, sand dunes, mountains, and the Salton Sea.

Desert areas include the Yuha Desert, West Mesa, lower Borrego Valley, East Mesa, and Pilot Knob Mesa. Within the desert areas, there are unique geologic features which add scenic value to the natural landscape and desert vegetation which results in springtime blooms of desert flowers in the springtime. The Algodones Dunes are the largest sand dunes in California covering approximately 160 square miles and are a well-known landmark to County residents and highway travelers. These dunes are a significant visual resource due to their unique scenic qualities, historic features, and prominent visibility to a large number of viewers.

As described in this Element, scenic mountains within the County include the eastern foothills of the Peninsular Range along the County's southwest side consisting of the In-Ko-Pah or Jacumba Mountains, Coyote Mountains, and Fish Creek Mountains. East of this area is Mount Signal located along the international border on the eastern edge of the Yuha Desert, west of Calexico. The southeast foothills of the San Rosa-San Jacinto Mountain are a prominent feature from SR-86. The Superstition Mountains and Superstition Hills, located in West Mesa southeast of the lower Borrego Valley and west of Westmorland and Brawley, are visible from I-8 west of El Centro and from SR-86 between El Centro and the Salton Sea. In the northeastern part of the County, the Chocolate Mountains stretch northwest by southeast between Riverside County and the Colorado River. Portions of these mountain areas are designated by the Bureau of Land Management (BLM) as Wilderness Areas, part of the National Wilderness Preservation System. The intention of this designation is to secure natural areas for the public purposes of recreation, scenic, scientific, educational, conservation, and historical use.

The Salton Sea is located in the northwestern portion of the County and encompasses approximately 376 square miles. This body of water has been sustained by agricultural drainage from the Imperial, Coachella, and Mexicali valleys, rainfall, storm runoff from surrounding mountains, and groundwater inflow. The

Salton Sea provides migrating and winter habitat for waterfowl and other birds and is a unique visual resource because of its size, location in a desert environmental, and its value for wildlife.

Anza-Borrego Desert State Park, located on the eastern side of San Diego County with portions extending into Imperial Count, features washes, wildflowers, palm groves, cacti, sweeping vistas, and hiking trails.

The Conservation and Open Space Element also identifies scenic vista points which include the Osborne Overlook and Juan Bautista de Anza Overlook. The Osborne Overlook offers scenic views of the Imperial Sand Dunes Recreational Area, North Algodones Dunes Wilderness, and surrounding area while the Juan Bautista de Anza Overlook provides a view of the Yuha Basin and surrounding landscape.

The Conservation and Open Space Element contains the following objectives for the preservation of environmental and scenic amenities of the area along potential Scenic Highways (County of Imperial 2016).

Objective 5.1 Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.

Objective 5.2 Utilize the Code Enforcement process to eliminate visually dilapidated buildings that impact the visual character of rural communities.

4.0 BASELINE VISUAL CONDITIONS

A view is defined by the topography, development, activity, and vegetation. The Project area was observed and mapped to identify existing visual resources in the area and viewer groups. The Project area was photodocumented during a visual field survey in July 2021 to record existing visual conditions in the Project vicinity and surrounding area. Land uses and topography were assessed to characterize the physical environment and establish the existing visual setting as described below.

Topography

Topography is relatively flat, with elevations ranging between -39 meters (-129 feet) and -6 meters (-21 feet). Adjacent land uses include Open Space/Bureau of Land Management (BLM) land to the west and south, and active agriculture to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the site.

Land Use

The Project site is within an Agricultural area as designated by the Imperial County General Plan and is zoned S-2 (Open Space/Preservation). Pursuant to Section 91703.02 (Conditional Use Permits), Renewable Energy Projects must be located within the Renewable Energy and Transmission Overlay Zone (RE Overlay Zone) and may be permitted only through the issuance of a Conditional Use Permit (CUP) as approved by the Approving Authority unless otherwise allowed by applicable law. An amendment to the County's General Plan, with a zone change to include and classify the Project Site within the RE Overlay Zone; and a CUP to allow construction and operation of the solar energy generation facility with batter storage within

the RE Overlay Zone, will be required for Project implementation. At present, the Project is not located within the Renewable Energy Zone and has a Farmland Classification of Grazing Land.

Vegetation

The majority of the Project Area consists of creosote bush scrub, disturbed creosote bush scrub, agriculture, and disturbed areas. Small portions of the Project site along the northwestern perimeter and centrally within the site contain areas of disturbed tamarisk thickets. A sliver of unpaved road exists along the eastern perimeter (ECORP 2021).

Historic Resources

A records search for historic resources was conducted in September 2020 at the South Coastal Information Center (SCIC) at San Diego State University. The records search included a review of all recorded historic and prehistoric archaeological sites within a one-mile radius of the Project area, as well as a review of known cultural resource surveys and excavation report. One hundred fifty-nine previously recorded resources were located within one mile of the Project site; however, the Project site itself (APN 034-160-002) has never been surveyed and no recorded resources were identified within the Project site. A total of 39 newly identified resources are located within the Project Area. The National Register Information System (NPS 2020) did not list any eligible or listed properties within the Project Area or one-mile vicinity. Additionally, no resources were identified as listed as *California Historical Landmarks* (OHP 1996) and by the OHP (OHP 2020). The remaining resources within the Project site that cannot be avoided by implementation of the Project include both pre-contact or historic period cultural resources.

5.0 KEY VIEWS

Because it is not feasible to study every available view of the Project site, two 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 site and were taken from locations within the public right-of-way. A description of the two key views is provided below and key view locations are depicted in Figure 2 (Attachment A).

Key View 1: Andre Road, Northeast Corner of Project Site

Key View 1 is a view from Andre Road, at the northeast corner of the Project site facing southwest. The dominant feature within this key view is the existing unpaved roadway in the foreground and sparse vegetation visible throughout the middleground. There are no striking topographic features visible within this key view. This view does not exhibit any striking or distinctive visual patterns and there are no scenic resources.

While existing unpaved roadways are present and distinguishable within this key view, it is free from encroaching man-made elements.

Key View 2: Garvey Road, Gen-Tie Alignment

Key View 2 is a view from Garvey Road, west of the Westside Main Canal and the agricultural areas facing east. Similar to Key View 1, the dominant feature within this key view is the existing paved roadway in the center throughout the view and sparse vegetation visible throughout the middleground. Also visible within this view is the existing electrical utility lines and poles on the left side of the roadway. This does not exhibit any striking or distinctive visual patterns; however, the presence of existing agricultural uses on the left and at the horizon soften the view and provide some aesthetic resources mostly unobstructed in the view.

The existing electrical utility line and poles constitute encroaching man-made elements within this key view.

6.0 VISUAL CHANGE AND VISUAL IMPACT EVALUATION

Evaluation of potential visual impacts resulting from implementation of the proposed Vega SES 6 Project is 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 engineering plans, which provide information on the various elements that will be replaced and/or reconstruction 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 limits and vicinity 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 adverse visual impacts. Mitigation is typically implemented to remove or minimize adverse 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 introduction of one of the alternatives. Impacts relating to light, glare, shade, and shadow were examined during field observations 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 project implementation. New light sources and reduction or elimination of light could be considered impacts that could change the natural environmental setting of a project site. Impacts are evaluated based on how much the existing conditions change, the degree of those changes, and the sensitivity of the affected environment.
- **Compatibility with Visual Policies.** General Plans, Specific Plans, and other regulations or policies relating to visual resources and setting at the project site have been identified, reviewed, and used in preparation of this assessment. Proposed visual changes that conflict with the adopted agency guidelines could be considered an adverse impact.

Impacts at Key View 1

From Key View 1, the overall character and experience for the viewer would change substantially with implementation of the Project. The main physical change that would occur within this view is the complete removal of vegetation and grading of the Project site to accommodate the construction of solar apparatus and security fencing. Other facilities proposed such as roads, pads, underground utilities, and stormwater facilities would not be visible from the public right-of-way. There are no County-designated scenic resources visible from Key View 1. No scenic vista points are identified in the County General Plan and none of the roadways in the Project vicinity are designated scenic highways or roadways.

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 site ranges consists of low-lying shrubs and there are no visual obstructions. The installation of the new PV module frames would not result in the obstruction of any scenic resources as none exist within this view.

Well construction would necessitate the installation of a small pump structure to house well equipment and associated piping. The proposed pump structure would be small in comparison to the site as a whole and not readily visible from the public right-of-way. The pump structure would not result in the obstruction of any scenic resources as none exist within this view.

Implementation of the Proposed Project would change the natural conditions of the site to a solar energy generation and battery storage facility. Onsite vegetation would be completely removed, and the site

would be graded to accommodate the installation of the PV module frames in arrays. The Imperial County General Plan has designated the Project site as "Agriculture" and it is zoned S-2 (Open Space/Preservation). Renewable energy projects must be located within the Renewable Energy Overlay Zone and may be permitted only through the issuance of a Conditional Use Permit (CUP). With a CUP, the Project would be consistent with the intended use of the land. As previously identified, an amendment to the County's General Plan, with a zone change to include and classify the Project Site within the RE Overlay Zone will be required for Project implementation. Although Project implementation would result in the conversion of a naturally vegetated area with energy-related facilities, open space vegetated areas are not considered to be scenic resources by the County of Imperial.

Impacts at Key View 2

From Key View 2, the overall character and experience for the viewer would not change substantially with implementation of the Project. The main physical change that would occur within this view is the replacement of the existing electrical lines and poles with new electrical lines and poles associated with the proposed gen-tie line. The Project would replace the existing electrical facilities within the same alignment and the post-Project condition would be similar to the pre-Project condition.

There would be no substantial visual impacts with the installation of the proposed electrical facilities associated with the gen-tie alignments at Key View 2.

Construction Impacts

Construction of the Proposed Project would result in temporary visual changes due to construction activities. Potential short-term construction impacts would result from the Proposed Project through the presence of construction equipment and materials. Upon completion of construction, equipment and construction materials would no longer be present.

Light, Glare, Shade, and Shadow

Minimal lighting would be required for operations and would be limited to safety and security functions. All lighting will be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements. If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used. The Project is not anticipated to create a new source of substantial light which would adversely affect nighttime views in the Project area.

The Project 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 (National Renewable Energy Laboratory 2020). Therefore, the PV panels would not create a significant source of glare during sunlight hours. The Project 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.

Shade and shadow effects would be introduced within the Project site due to the placement of PV modules in arrays. However, due to the height of the proposed apparatus at 7.5 feet and the perimeter fencing at 6 feet, the effects of shade and shadow would not encroach into areas offsite for extended periods of time that would result in significant shade and/or shadow impacts.

Scenic Highways

There are no designated Caltrans scenic highways in the vicinity of the Proposed Project. None of the scenic highways identified in the County's General Plan Circulation and Scenic Highways Element are located in the Project vicinity. The junction of SR-78 with SR-86 is located over 10 miles away to the northwest. There would be no impact to scenic resources within a State or locally designated scenic highway.

Historic Resources

As previously identified, there are a total of 39 cultural resources present onsite. The National Register Information System (NPS 2020) did not list any eligible or listed properties within the Project Area or one-mile vicinity. Additionally, no resources were identified as listed as *California Historical Landmarks* (OHP 1996) and by the OHP (OHP 2020). The 39 newly identified resources have not been evaluated for significance. If these resources are determined to be eligible per the eligibility criteria for inclusion in the California Register of Historical Resources and avoidance is not feasible, mitigation would be required that could consist of either avoidance by preserving them in dedicated open space, by requiring archaeological monitoring, or by carrying out data recovery efforts prior to project approval, implementation, or construction. As none of the cultural resources identified within the Project site are visible from public vantage points, there would be no visual impact to historic resources.

Visual Resource Policies

Scenic features, vistas, or landforms identified by the County of Imperial would not be significantly affected by construction and implementation of the Project. The Proposed Project would not conflict with specific policies identified in the Circulation and Scenic Highways Element or Open Space and Conservation Element of the County's General Plan. No impacts associated with incompatibility with visual resource policies would occur under the Proposed Project.

Summary of Impacts

During the construction phase, the presence of construction equipment and materials would not have a permanent, long-term impact on the visual environment. Upon completion of the Project, areas that were cleared for construction staging would be converted to a new energy generating and storage facilities or returned to their existing condition.

No obstruction of existing scenic resources would occur with Project implementation as none exist in the Project vicinity.

Minimal lighting would be required for operations and would be limited to safety and security functions and would adhere to County lighting requirements. The Project is not anticipated to create a new source of substantial light which would adversely affect nighttime views in the Project area. Shade and shadow effects would not be a significant impact to adjacent properties due to the height of the proposed apparatus and security fencing.

Potential impacts to California Register of Historical Resources-eligible historic resources would need to be avoided by preserving them in dedicated open space, by requiring archaeological monitoring, or by carrying out data recovery efforts prior to project approval, implementation, or construction.

The Project would be consistent with the County General Plan. No impacts associated with incompatibility with visual resource policies would occur under the Proposed Project.

Sincerely,

Senior Environmental Planner
ECORP Consulting, Inc.

Attachments

Attachment A: Figures
Attachment B: Conceptual Plans

REFERENCES

County of Imperial. 2008. *County of Imperial General Plan Circulation and Scenic Highways Element*. January

_____. 2016. *County of Imperial General Plan Circulation and Scenic Highways Element*. March.

_____. 2016. *County of Imperial General Plan Conservation and Open Space Element*. March.

ECORP. 2022. *Biological Technical Report Vega SES 6 Solar Projects*. December

_____. 2022. *Cultural Resources Inventory Vega SES 6 Solar Energy Project*. October

National Renewable Energy Laboratory. 2020. *Research and Analysis Demonstrate the Lack of Impacts of Glare from Photovoltaic Modules*. Website: https://www.nrel.gov/state-local-tribal/blog/posts/research-and-analysis-demonstrate-the-lack-of-impacts-of-glare-from-photovoltaic-modules.html, Accessed September 7, 2021.

NPS. 2020. National Register of Historic Places, Digital Archive on NPGallery https://npgallery.nps.gov/NRHP/BasicSearch/. Accessed 16 October 2020.

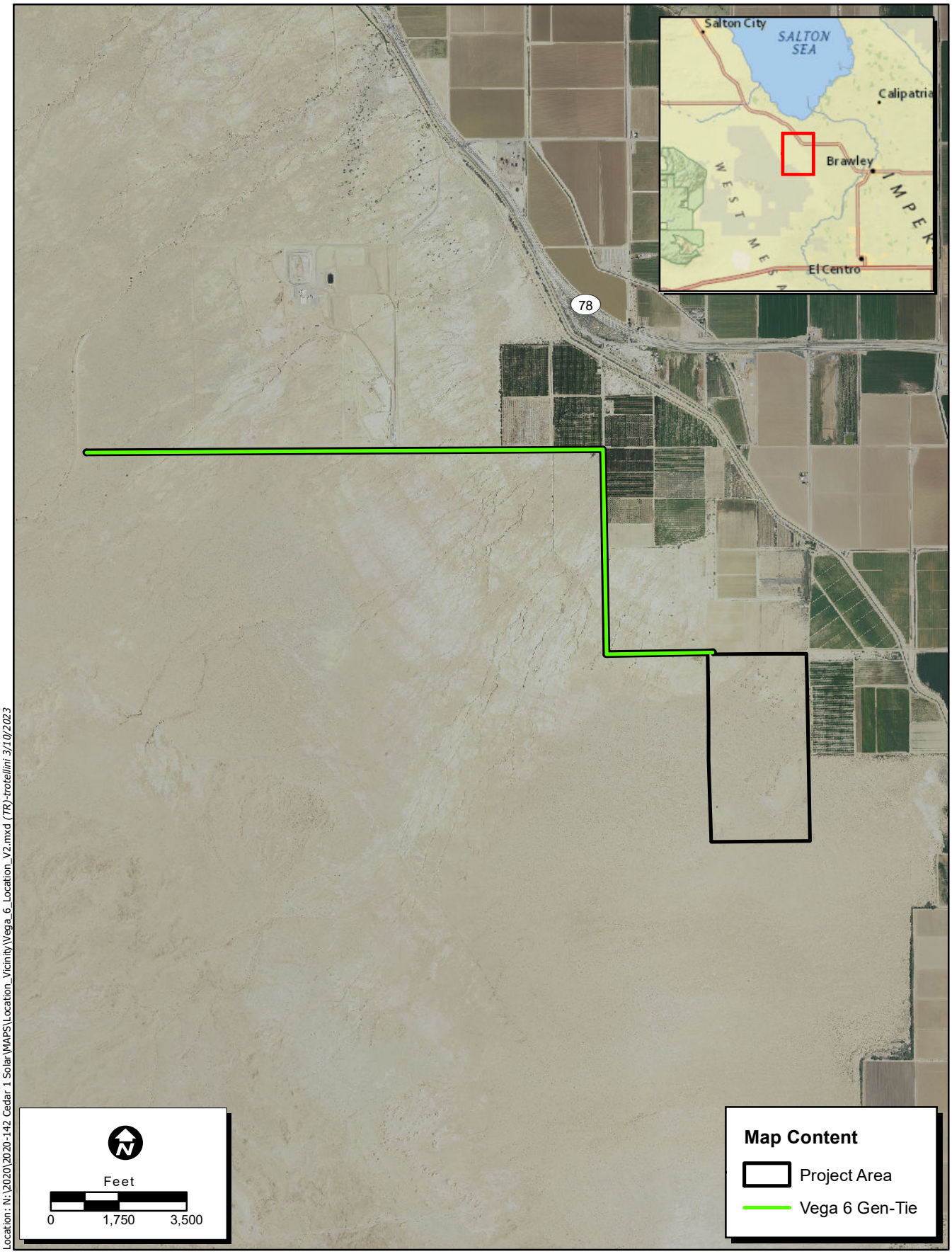
LIST OF ATTACHMENTS

Attachment A – Figures

Attachment B – Conceptual Plans

ATTACHMENT A

Figures



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Service Layer Credits: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp., NAIP (2020)

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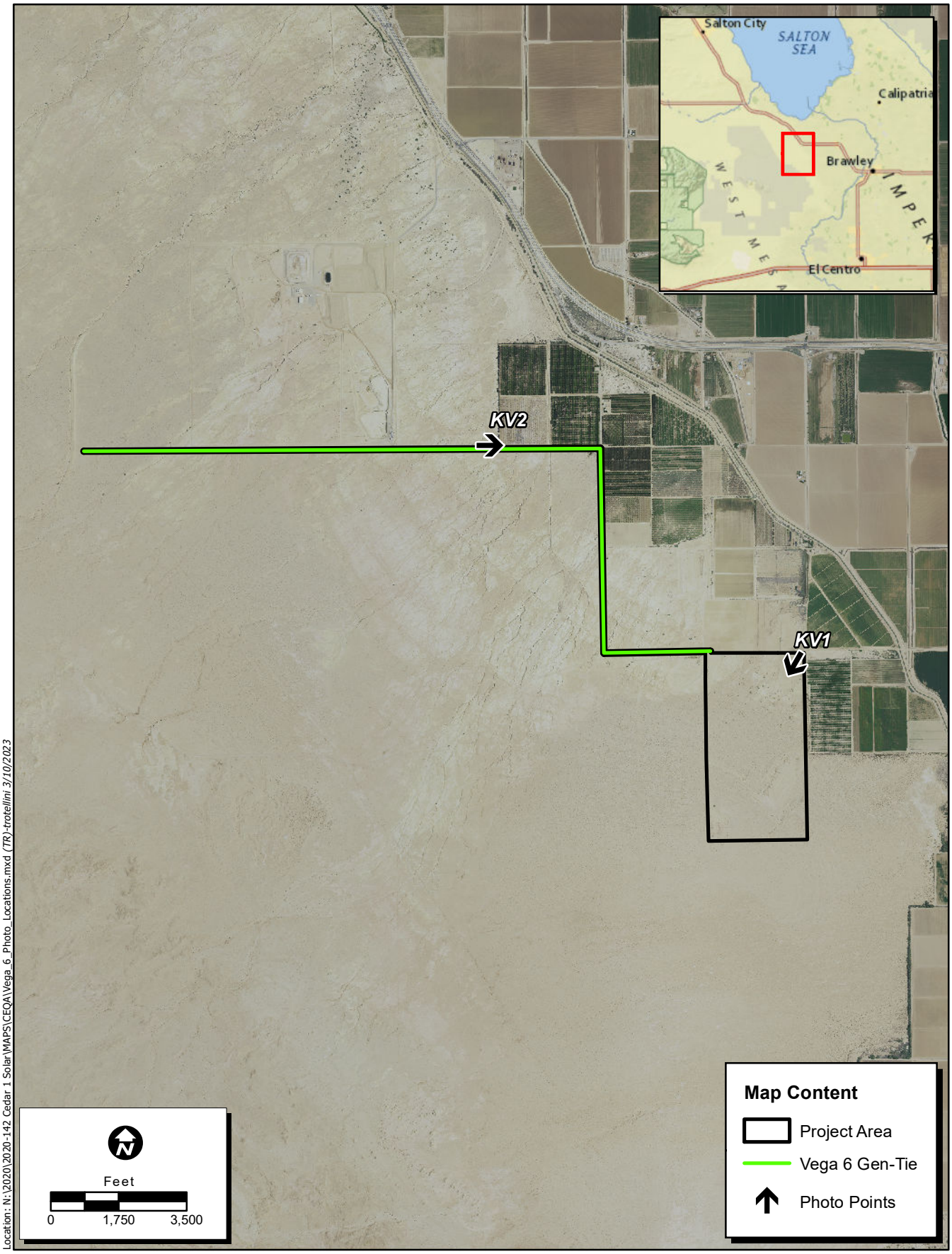
Figure 1. Project Location and Vicinity

2020-145 Vega SES 6



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Map Date: 3/10/2023

Service Layer Credits: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp., NAIP (2020)

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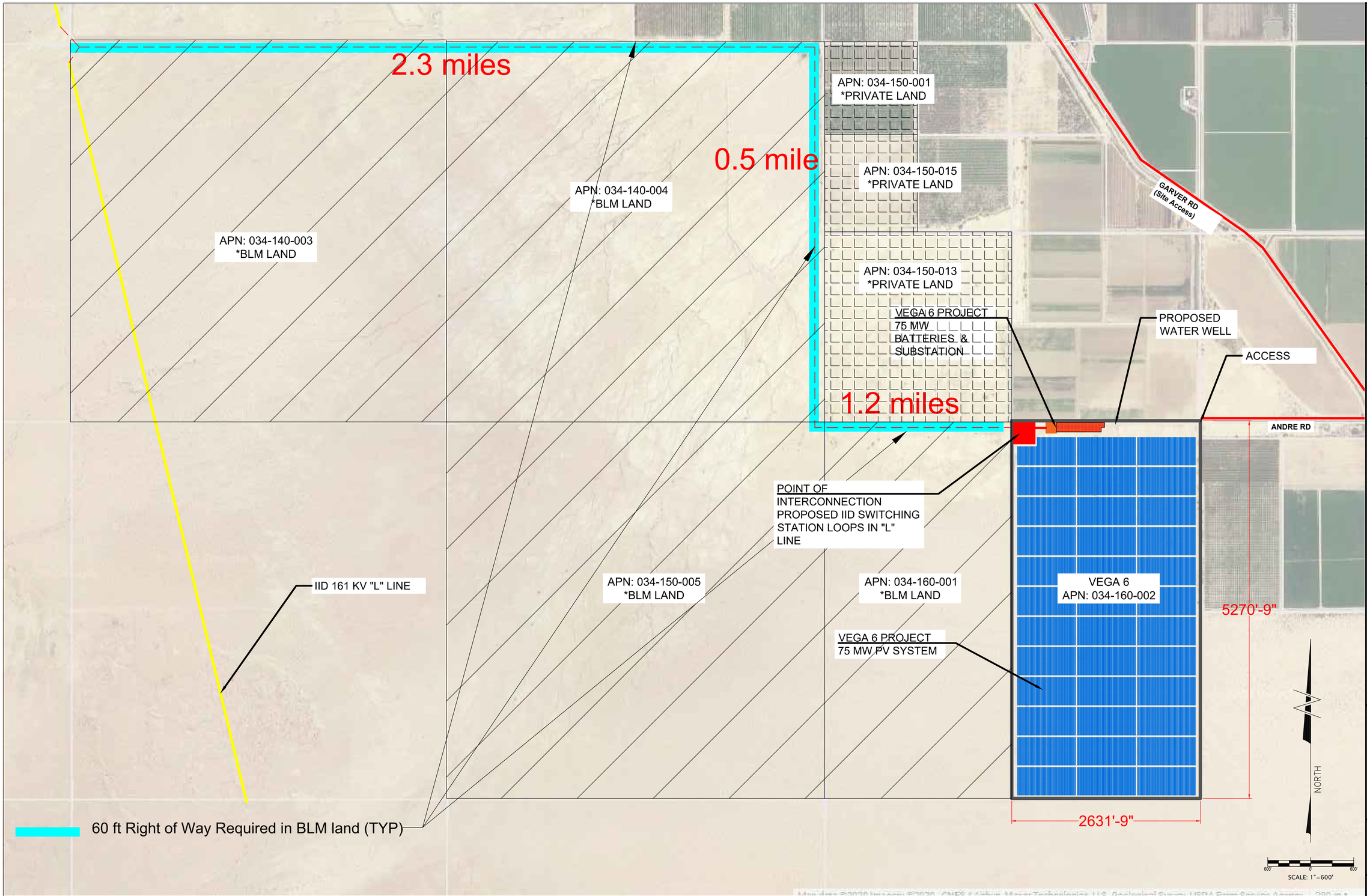
Figure 2. Photo Locations

2020-145 Vega SES 6



PROPOSED VEGA SES 6 80MW -PV 160MW- BATTERY

CONFIDENTIAL DOCUMENTS

THE INFORMATION EMBODIED ON THIS DRAWING IS STRICTLY CONFIDENTIAL AND IS SUPPLIED WITH THE UNDERSTANDING THAT IT WILL BE HELD CONFIDENTIAL AND NOT DISCLOSED TO THIRD PARTIES WITHOUT THE PRIOR WRITTEN CONSENT OF ZGLOBAL, INC.

REV.	BY	DESCRIPTION	DATE	APPRD BY
0	RO	PRELIMINARY	2/12/21	HP
1	HP	ADJUSTED FOR CEDAR 3	09/1/21	HP
2	HP	ADJUSTED FOR CEDAR 3	12/09/21	HP
3	HP	ADJUSTED FOR SYSTEM SIZE	05/18/22	HP

1 inch
Scale to Confirm 24"x36" Plot

PLOT: 11/14/2022 10:06 AM

ZGLOBAL
Power Engineering & Energy Solutions

604 SUTTER ST, STE 250
FOLSOM, CA 95630
Phone : 916.985.9461
Fax: 916.985.9467

SHEET TITLE:

SITE PLAN

DRAWN BY:	RO
CHECKED:	HP
SCALE:	AS NOTED
JOB NO:	
DATE:	1

DRAWING No.

C-000

REV No. 1

Air Quality and Greenhouse Gas Emissions Assessment for the VEGA SES 6 Solar and Battery Storage Project

County of Imperial, California

Prepared For:

ZGlobal/APEX Energy Solutions
750 W. Main Street
El Centro, CA 92243

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
2525 Warren Drive
Rocklin, California 95677

January 2023

CONTENTS

LIST OF TABLES

LIST OF ATTACHMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
µg/m^3	Micrograms per cubic meter; ppm = parts per million
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
AB	Assembly Bill
AC	Alternating current
AF	Acre Feet
APN	Assessor Parcel Number
AQMD	Air Quality Management District
BESS	Battery Electric Storage System
BLM	Bureau of Land Management
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	Methane

LIST OF ACRONYMS AND ABBREVIATIONS

CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
County	Imperial County
CUP	Conditional Use Permit
DC	Direct current
DPM	Diesel particulate matter
EO	Executive Order
Gen-tie	Electrical generator intertie
GHG	Greenhouse gas
GWP	Global warming potential
HSAT	Horizontal single-axis tracker
ICAPCD	Imperial County Air Pollution Control District
ICPDS	Imperial County Planning Development Services
IID	Imperial Irrigation District
IPCC	Intergovernmental Panel on Climate Change
kV	Kilovolt
MDAQMD	Mojave Desert Air Quality Management District
MWAC	Megawatt Alternating Current
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen dioxide
NO_x	Nitric oxides
O_3	Ozone
PM	Particulate matter
PM_{10}	Coarse particulate matter
$PM_{2.5}$	Fine particulate matter
PPA	Purchasing Power Agreement
ppb	Parts per billion
Project	VEGA SES 6 Solar and Battery Storage Project
PV	Photovoltaic
RE	Renewal Energy
ROGs	Reactive organic gases
SB	Senate Bill
SCAQMD	South Coast Air Quality Management
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SO_x	Sulfur oxides
SR	State Route
SRA	Source receptor area
SSAB	Salton Sea Air Basin
TACs	Toxic air contaminants
USEPA	U.S. Environmental Protection Agency
VOC	Volatile organic compound
VMT	Vehicle Miles Traveled

1.0 INTRODUCTION

This report documents the results of an assessment of both air quality and greenhouse gas (GHG) emissions completed for the VEGA SES 6 Solar and Battery Storage Project (Project) in Imperial County (County), California, which includes the construction of an 80 megawatt (MW) solar energy generation facility and a 160 MW battery energy storage system (BESS). The Project also proposes an electrical generator intertie (gen-tie) transmission line to connect to the Imperial Irrigation District's (IID) 161 kilovolt (kV) "L" Line. The purpose of this assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment. This assessment was prepared using methodologies and assumptions recommended in the rules and regulations promulgated by the Imperial County Air Pollution Control District (ICAPCD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations.

1.1 Project Location

The Proposed Project Site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel Number (APN) 034-160-002) in the unincorporated Imperial County, California (Figure 1-1. *Project Location Map*). The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal (Figure 1-2. *Project Vicinity Map*). The proposed BESS would be located in the northwest portion of the Project Site. The proposed gen-tie transmission line would span approximately four miles to connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the Bureau of Land Management (BLM) within the California Desert Conservation Area planning area. The gen-tie route would begin at the northwest corner of the solar facility site, head west approximately 0.5 miles on BLM land, then north for approximately 1.0 mile, and then west for 2.5 miles along Garvey Road where it would connect to the IID 161 kV "L" Line.

The topography of the Project Site is relatively flat, with elevations ranging between -39 meters (-129 feet) and -6 meters (-21 feet). The solar energy facility site is bound by undeveloped Open Space/BLM land immediately to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

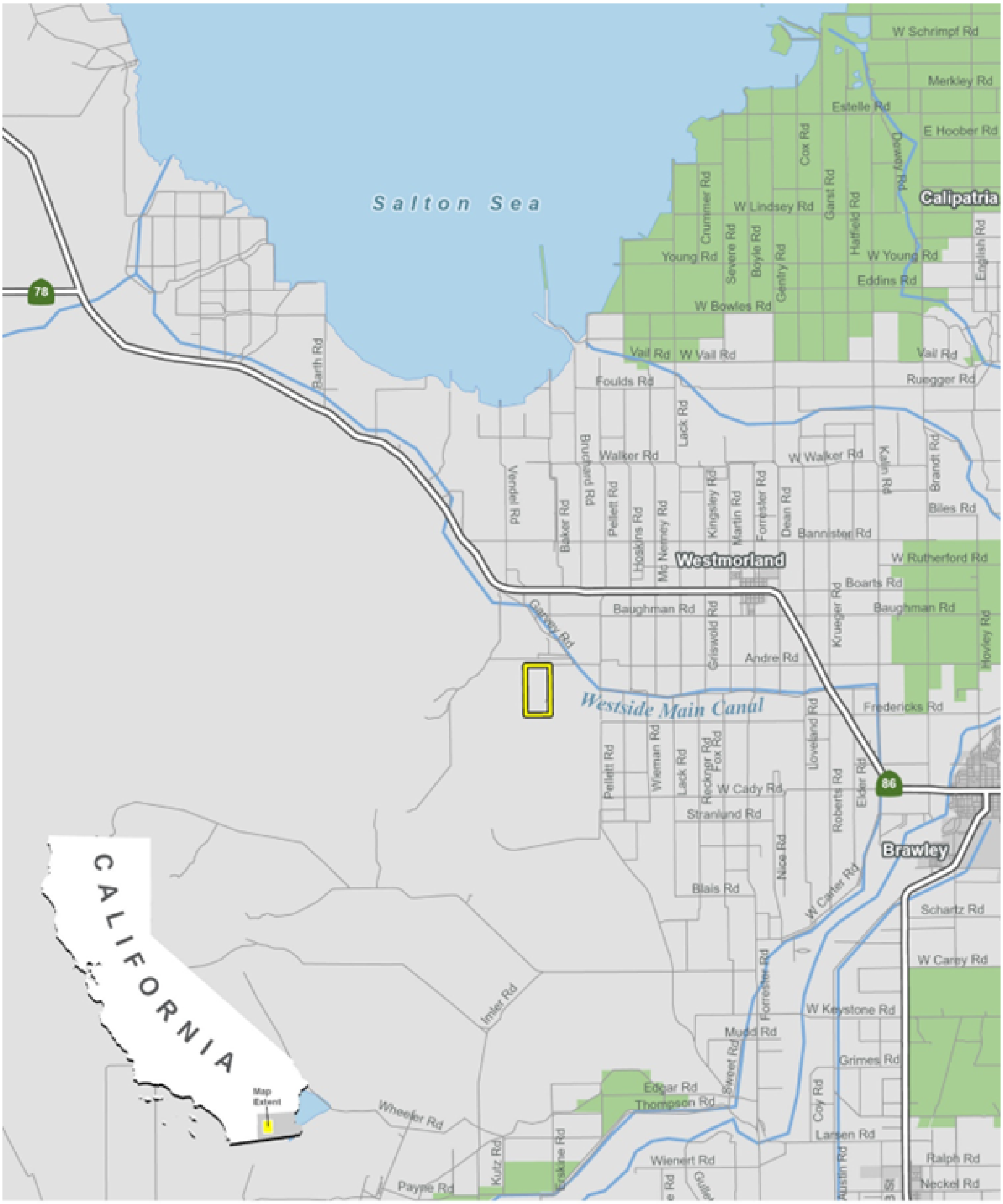


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Figure 1-1. Project Location Map

2020-144 VEGA 6 SES Solar & Battery Storage Project

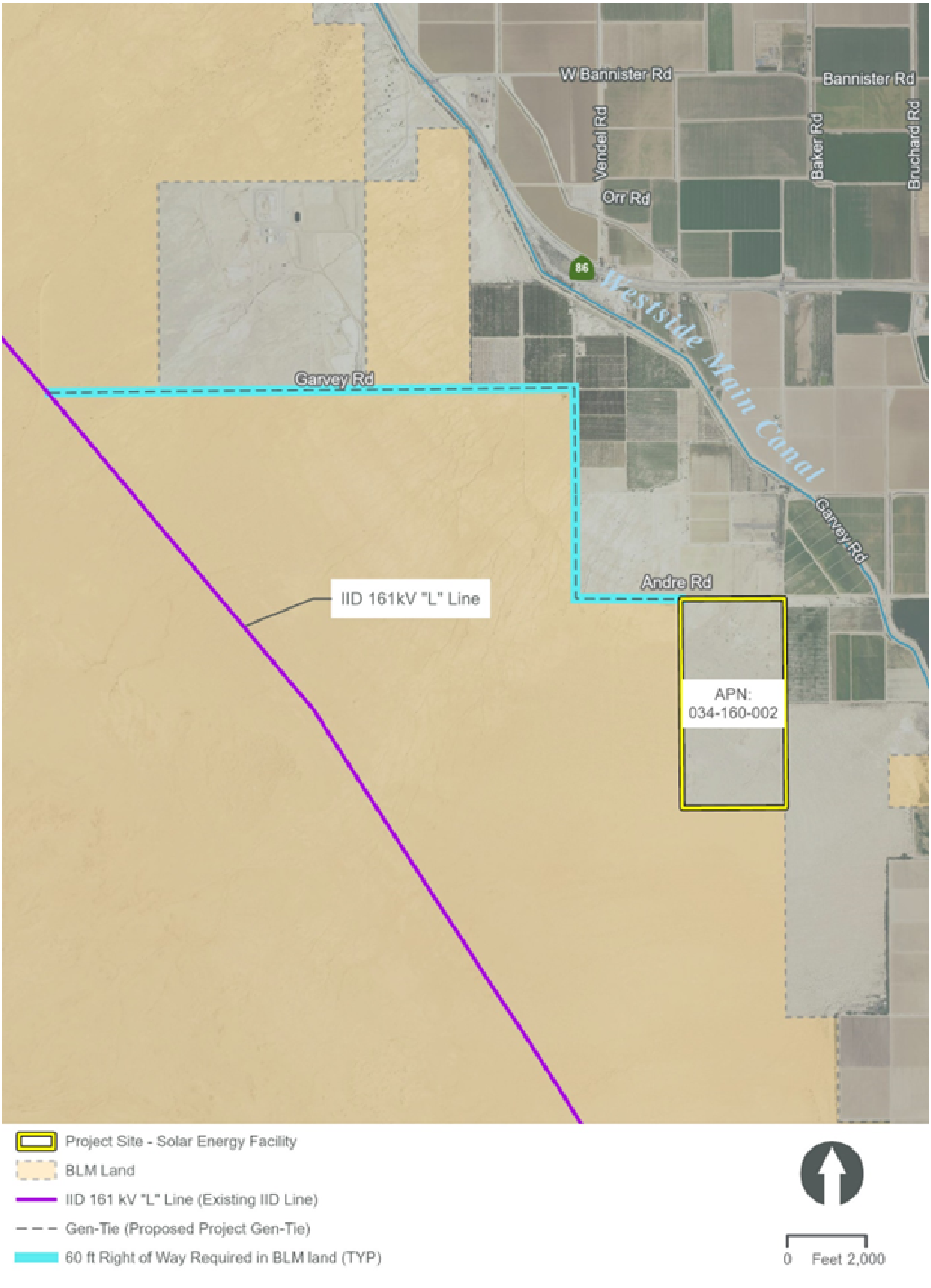

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Figure 1-2. Project Vicinity Map

2020-144 VEGA 6 SES Solar & Battery Storage Project

1.2 Project Overview

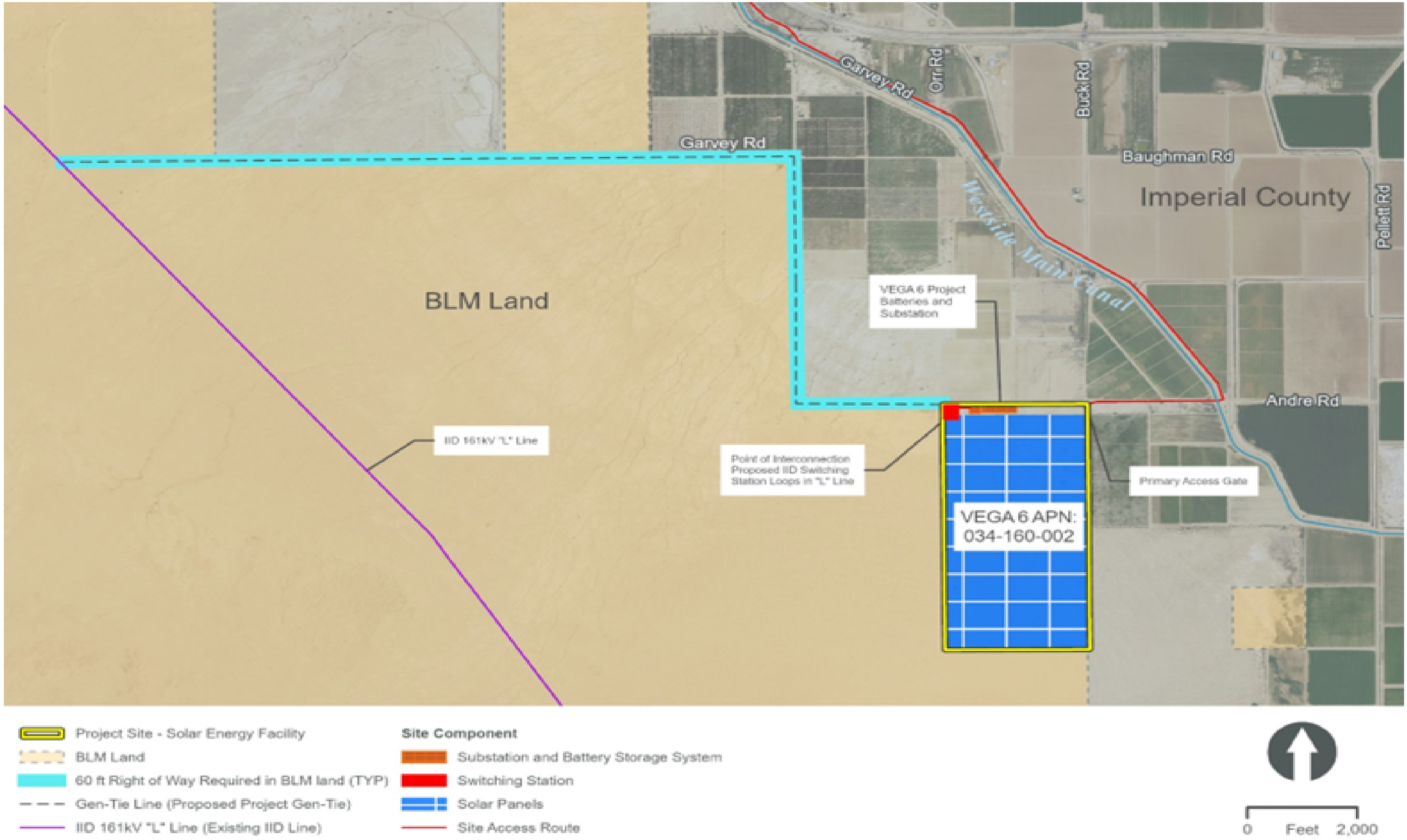
In 2016, the County adopted the Imperial County Renewable Energy and Transmission Element, which includes a Renewable Energy (RE) Zone (RE Overlay Map). This General Plan element was created as part of the California Energy Commission Renewable Energy Grant Program to amend and update the County's General 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 conditional use permit (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 1-1, the entire Project Site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify the Project Site (APN No. 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.

1.3 Project Description

As previously described, the Proposed Project involves the construction and operation of an 80 MW PV solar facility with an integrated 160 MW BESS on approximately 320 acres of privately-owned land. The Project would be comprised of solar PV arrays panels, an on-site substation, BESS, gen-tie line, inverters, transformers, underground electrical cables, and access roads. These Project components are described in detail below and depicted in Figure 1-3. *Site Plan*.



Map Date: *1/5/2023*
Photo (or Base) Source: *HDR 2022*

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Figure 1-3. Project Site Plan

Photovoltaic Panels/Solar Arrays

The Project proposes to use either thin film or crystalline solar 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 fixed-frame racks would be secured at a fixed tilt of 20 to 30 degrees from horizontal facing a southerly direction. As proposed, individual PV modules would be mounted two high on a fixed frame, providing 12 to 24 inches of 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 six 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. Individual HSAT PV modules, each approximately two feet wide by four feet long (depending on the specific PV technology selected), would be mounted on a frame which is attached to an HSAT system. These HSAT arrays would be separated from each other and the perimeter security fence by up to 30-foot-wide roads, consistent with County emergency access requirements.

Battery Energy Storage System

The proposed BESS would be constructed adjacent to the Project's substation and would consist of either lithium ion or flow batteries. The batteries will either be housed in storage containers or buildings fitted with heating, ventilation, and air conditioning and fire suppression systems. Inside the housing, the batteries would 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 direct current (DC) power to alternating current (AC) power. The BESS would be capable of storing up to 160 MW.

Substation and Interconnection Switching Station

As shown in Figure 1-3, a new substation would be constructed in the northwest portion of the solar energy facility site. The inverters would be connected to pad-mounted transformers. This system collects the energy from all the inverters and then transmits it through a generator step-up transformer, which steps up the voltage level to the 161 kV of the existing IID "L" line.

A new interconnection switching station would be constructed in the northwest corner of the solar energy facility site, immediately adjacent to the substation. 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 equipped with two circuit breakers, allowing for looping in of the IID 161 kV "L" transmission line as well as connection to the Project's gen-tie line. The substation and

switching station would be connected via a single overhead 161 kV line. The switching station would be enclosed within its own fence.

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

Electrical Generator Intertie (Gen-Tie) Transmission Line

As previously stated, the Proposed Project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The 4-mile gen-tie line would include a total of 78 pole structures, with a combination of tangent double circuit wood pole structures, dead-end double circuit wood pole structures, and double circuit steel poles. At the interconnection point, three wood pole structures and dead-end wood structures would be used. The height of the proposed gen-tie transmission structures would be 75 feet. The electrical energy produced by the Project would be conducted through the project substation to the proposed 161 kV gen-tie line and delivered to the existing IID-approved point of interconnection at the IID 161 kV "L" line. Construction of the gen-tie line would result in approximately 24.5 acres of disturbed area.

Site Access

The solar energy facility site would include one primary access driveway, proposed via State Route (SR) 78 from the north and west, and across the Westside Main Canal, via county roadways (Garvey Road and Andre Road). This driveway would be provided with a minimum of 30-foot double swing gates with "Knox Box" for keyed entry. Internal to the solar energy facility site, up to 30-foot-wide roads would be provided between the PV arrays, as well as around the perimeter of the solar energy facility site yet inside the perimeter security fence to provide access to all areas of the site for maintenance and emergency vehicles.

Project Construction

Construction activities would primarily involve demolition and grubbing; grading of the Project Area to establish access roads and pads for electrical equipment (inverters and step–up transformers); trenching for underground electrical collection lines; the installation of solar equipment and security fencing; and the offsite infrastructure work required for the IID gen-tie transmission line route. Stormwater management facilities would be constructed internally within the Project Site and would consist of basins and infiltration areas. Construction is estimated to take 12 to 18 months and would begin in 2023. A temporary, portable construction supply container would be located at the Project Site at the beginning of construction and removed at the end of construction.

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). The Proposed Project would require approximately 550-acre feet (AF) of water for dust suppression and site grading during construction of the arrays, BESS area, and onsite substation. Water for construction (primarily dust control) would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. Water would be picked up from a nearby

lateral canal and delivered to the construction location by a water truck that would be capable of carrying approximately 4,000 gallons per load.

The number of on-site construction workers for the solar energy facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the BESS and the substation is not expected to exceed 100 workers at any one time.

Project Operations

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

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 Site would periodically (approximately every 3 months) be removed manually and/or treated with herbicides.

Periodic washing of the PV modules is not expected to be necessary but could be needed to remove dust to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at 10 AF per washing, with up to two washings per year, or a total of up to 20 AF per year. This water would be water purchased from the IID.

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

2.0 AIR QUALITY

2.1 Air Quality Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the Salton Sea Air Basin (SSAB), which encompasses the Project Site, pursuant to the regulatory authority of the ICAPCD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

2.1.1 Salton Sea Air Basin

The California Air Resources Board (CARB) divides the State into air basins that share similar meteorological and topographical features. Imperial County, which extends over 4,482 square miles in the southeastern corner of California, lies in the SSAB, which includes the Imperial Valley and the central part of Riverside County, including the Coachella Valley. The province is characterized by the large-scale sinking and warming of air within the semi-permanent subtropical high-pressure center over the Pacific Ocean. The elevation in Imperial County ranges from about 230 feet below sea level in the Salton Sea to more than 2,800 feet on the mountain summits to the east.

2.1.1.1 Temperature and Precipitation

The flat terrain near the Salton Sea, intense heat from the sun during the day, and strong radiational cooling at night create deep convective thermals during the daytime and equally strong surface-based temperature inversions at night. The temperature inversions and light nighttime winds trap any local air pollution emissions near the ground. The area is subject to frequent hazy conditions at sunrise, followed by rapid daytime dissipation as winds pick up and the temperature warms. The lack of clouds and atmospheric moisture creates strong diurnal and seasonal temperature variations ranging from an average summer maximum of 108 degrees Fahrenheit (° F) down to a winter morning minimum of 38° F. 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 rainfall on an average of only four times per year (>0.10 inches in 24 hours). 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.

2.1.1.2 Wind

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

via the Gulf of California. During periods of strong solar heating and intense convection, turbulent motion creates good mixing and low levels of air pollution. However, even strong turbulent mixing is insufficient to overcome the limited air pollution controls on sources in the Mexicali, Mexico area. Imperial County is predominately agricultural land. This is a factor in the cumulative air quality of the SSAB. The agricultural production generates dust and small particulate matter through the use of agricultural equipment on unpaved roads, land preparation, and harvest practices. The Imperial County experiences unhealthful air quality from photochemical smog and from dust due to extensive surface disturbance and the very arid climate.

2.1.1.3 Inversion

The entire county is affected by inversion layers, where warm air overlays cooler air. Inversion layers trap pollutants close to the ground. In the winter, these pollutant-trapping, ground-based inversions are formed during windless, clear-sky conditions, as cold air collects in low-lying areas such as valleys and canyons. Imperial County experiences surface inversions almost every day of the year. Due to strong surface heating, these inversions are usually broken allowing pollutants to be more easily dispersed.

2.1.2 Criteria Air 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 (O_3), 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 2-1.

Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manmade Sources	Human Health & 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 (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} & $PM_{2.5}$	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: California Air Pollution Control Officers Association (CAPCOA 2013)

2.1.2.1 Carbon Monoxide

CO in the urban environment is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO levels in the SSAB are in compliance with the state and federal one- and eight-hour standards.

2.1.2.2 Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds

collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and NO_2, attribute to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

2.1.2.3 Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROGs and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. NO_x forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

2.1.2.4 Particulate Matter

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and small than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and

children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

2.1.3 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

2.1.3.1 Diesel Exhaust

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 (USEPA 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.

2.1.4 Ambient Air Quality

Ambient air quality at the Project Site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region. As

described in detail below, 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 Westmorland air quality monitoring station (570 Cook Street Westmoreland, California), located approximately 4.5 miles northeast of the Project Site, monitors ambient concentrations of O_3 and PM_{10}. The Brawley air quality monitoring station (220 Main Street Brawley, California), located approximately 9.4 miles east of the Project Site, 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 2-2 summarizes the published data concerning O_3, $PM_{2.5}$ and PM_{10} from the Westmorland and Brawley monitoring stations for each year that the monitoring data is provided. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region.

Table 2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2019	2020	2021
O_3- Westmorland – 570 Cook Street			
Max 1-hour concentration (ppm)	0.071	0.067	0.081
Max 8-hour concentration (ppm) (state/federal)	0.061 / 0.060	0.059 / 0.059	0.073 / 0.072
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	1 / 1
PM_{10}- Westmorland – 570 Cook Street			
Max 24-hour concentration (µg/m^3) (state/federal)	187.8 / 188.3	297.2 / 286.8	543.1 / 547.1
Number of days above 24-hour standard (state/federal)	56.5 / 1.0	91.3 / 2.0	105.5 / 3.0
$PM_{2.5}$- Brawley – 220 Main Street			
Max 24-hour concentration (µg/m^3) (state/federal)	46.1 / 46.1	23.7 / 23.7	24.4 / 24.4
Number of days above federal 24-hour standard	3.1	0	*

Source: CARB 2022a
µg/m^3 = micrograms per cubic meter; ppm = parts per million
* = Insufficient data available

The USEPA and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than 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 Site is included in Table 2-3.

Table 2-3. Attainment Status of Criteria Pollutants in the Imperial County Portion of the SSAB

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

Source: CARB 2020; 2018

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10} (CARB 2020; 2018).

2.1.5 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest existing sensitive receptor to the Project Site is a single-family residence located approximately 0.5 mile from the southeastern corner of the Project boundary.

2.2 Regulatory Framework

2.2.1 Federal

2.2.1.1 Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide (CO_2) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO_2.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the SSAB for the criteria pollutants.

2.2.2 State

2.2.2.1 California Clean Air Act

The California Clean Air Act (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

2.2.2.2 California State Implementation Plan

The CCAA (and its subsequent amendments) requires the state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA. 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 USEPA for approval and publication in the Federal Register.

Local air districts, such as the ICAPCD, prepare air quality attainment plans or air quality management plans and submit them to CARB for review, approval, and incorporation into the applicable SIP. The air districts develop the strategies stated in the SIPs for achieving air quality standards on a regional basis.

For 8-Hour O_3, the ICAPCD adopted the 2017 8-hour Ozone State Implementation Plan in October 2018. The plan includes control measures which are an integral part of how the ICAPCD currently controls the ROG and NO_X emissions within the O_3 nonattainment areas. The overall strategy includes programs and control measures which represent the implementation of Reasonable Available Control Technology (40 CFR 51.912) and the assurance that stationary sources maintain a net decrease in emissions.

For PM_{10}, the ICAPCD adopted the PM_{10} State Implementation Plan in 2018, which maintained previously adopted fugitive dust control measures (Regulation VIII). The USEPA had previously approved Regulation VIII fugitive dust rules into the Imperial County portion of the California SIP in 2013.

For $PM_{2.5}$, the ICAPCD adopted the $PM_{2.5}$ SIP in April 2018. This SIP concluded that the majority of the $PM_{2.5}$ emissions resulted from transport in nearby Mexico. Specifically, the SIP demonstrates attainment of the 2006 $PM_{2.5}$ NAAQS "but for" transport of international emissions from Mexicali, Mexico. In accordance with the CCAA, the $PM_{2.5}$ SIP satisfies the attainment demonstration requirement satisfying the provisions of the CCAA.

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 (AQTF) has been organized to address those issues unique to the border region known as the Mexicali/Imperial air shed. The AQTF 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.

2.2.2.3 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.

2.2.3 Local

2.2.3.1 Imperial County Air Pollution Control District

The ICAPCD is the local air quality agency and shares responsibility with CARB for ensuring that state and federal ambient air quality standards are achieved and maintained in the SSAB. Furthermore, ICAPCD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs and regulates agricultural burning. Other ICAPCD responsibilities include monitoring ambient air quality, preparing clean air plans, planning activities such as modeling and maintenance of the emission inventory, and responding to citizen air quality complaints.

To achieve and maintain ambient air quality standards, the ICAPCD has adopted various rules and regulations for the control of airborne pollutants. The ICAPCD Rules and Regulations that are applicable to the Proposed Project include, but are not limited to, ICAPCD Regulation VIII (Fugitive Dust Rules). The purpose of this regulation is 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. Regulation VIII requires the Project to adopt best available control measures to minimize emissions from surface-disturbing activities. These measures include the following (ICAPCD 2017):

- 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, or dust suppressants.
- All unpaved traffic areas of 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 the 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.
- 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.

In addition, there are other ICAPCD rules and regulations, not detailed here, which may apply to the Proposed Project, but are administrative or descriptive in nature. These include rules associated with fees, enforcement and penalty actions, and variance procedures.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

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

2.3.1.1 Imperial County Air Pollution Control District Thresholds

The significance criteria established by the applicable air quality management or air pollution control district (ICAPCD) may be relied upon to make the above determinations. The ICAPCD has identified significance thresholds for use in evaluating project impacts under CEQA. Accordingly, the ICAPCD-recommended thresholds of significance are used to determine whether implementation of the proposed Project would result in a significant air quality impact. Significance thresholds for evaluation construction and operational air quality impacts are listed in Table 2-4.

Table 2-4. ICAPCD Significance Thresholds – Pounds per Day			
Criteria Pollutant and Precursors	**Construction Activities**	**Operations**	
	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 2017

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.

2.3.2 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. 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. It is noted that CalEEMod 2022.1 was released while this analysis was in process. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Imperial County coupled with information provided by the Project applicant. For instance, as described in the Section 1.3, *Project Description*, construction activities would primarily involve demolition and grubbing; grading of the Project Area to establish access roads and pads for electrical equipment (inverters and step–up transformers); trenching for underground electrical collection lines; the installation of solar equipment and security fencing; and the offsite infrastructure work required for the IID gen-tie transmission line route. Stormwater management facilities would be constructed internally within the Project Site and would consist of basins and infiltration areas. Construction is estimated to take 12 to 18 months and would begin in 2023. A temporary, portable construction supply container would be located at

the Project Site at the beginning of construction and removed at the end of construction. The number of on-site construction workers for the solar energy facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the BESS and the substation is not expected to exceed 100 workers at any one time. According to the Traffic Study prepared for the Project (KOA 2020), Project construction would generate a maximum of 310 construction worker-commute trips in a single day.

Construction workers would travel to the Project Site via SR 78 before traversing the Westside Main Canal, via the County roadways, Garvey Road and Andre Road. It is noted that both Garvey and Andre roads, which span 2.6 miles of the access route, are unpaved. Thus, the PM emissions associated with construction workers traversing 2.6 miles of unpaved roads are accounted.

The Proposed Project would require approximately 550 AF (179,200,000 gallons) of water for dust suppression and site grading during construction of the arrays, BESS area, and onsite substation. The CalEEMod modeling software does not precisely quantify indirect emissions associated with the pumping and conveyance of water used during construction activities. Therefore, for the purposes of this analysis, the water consumption necessary for construction is amortized over the life of the Project (30 years) and added to the total water consumption anticipated during Project operations.

Operational air pollutant emissions account for the maximum three workers visiting the site in a single day. Such visits 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. Therefore, operational onsite equipment use is accounted in addition to the consumption of 20 AF (6,517,000 gallons) of water annually. [25.5 AF (12,490,333 gallons) of water accounting for the amortized water consumption during construction activities (179,200,000 + 6,517,000 = 12,490,333)].

2.3.3 Impact Analysis

2.3.3.1 Project Construction-Generated Criteria Air Quality Emissions

Emissions associated with Project implementation would be temporary and short-term but have the potential to represent a significant air quality impact. Two basic sources of short-term emissions will be generated through Project implementation: operation of the heavy-duty equipment (i.e., excavators, loaders, haul trucks) and the creation of fugitive dust during clearing and grading. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to ICAPCD Regulation VIII which, as previously described, requires taking reasonable precautions 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. Regulation VIII requires the Project to adopt best available control measures to minimize emissions from surface-disturbing activities to comply with ICAPCD Regulation VIII (Fugitive Dust Rules).

Emissions associated with Project off-road equipment, worker commute trips, and ground disturbance 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. See Section 2.3.2, *Methodology*, and Attachment A for more information regarding the construction assumptions, including types of construction equipment used and Project duration used in this analysis.

Predicted maximum daily emissions attributable to Project construction are summarized in Table 2-5. Such emissions are short-term and of temporary duration, lasting only as long as Project construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the ICAPCD thresholds of significance.

Table 2-5. Unmitigated Project Construction-Generated Emissions

Construction Year	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction in Calendar Year One	4.24	34.56	42.27	0.07	1,208.90	121.99
Construction in Calendar Year Two	3.97	22.82	41.35	0.07	1,208.73	121.87
ICAPCD Significance Threshold	*75*	*100*	*550*	*N/A*	*150*	*N/A*
Exceed ICAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2020.4.0. Refer to Attachment A for Model Data Outputs.
Notes: Pounds per day taken from the season with the highest output.

As shown in Table 2-5, emissions of PM_{10} would exceed the ICAPCD significance threshold on the peak day(s) of construction. The predominant source of Project PM_{10} emissions is workers commuting to and from the Project Site on unpaved roads. Commute vehicles traveling over the exposed soils of unpaved roads generate substantial amounts of fugitive PM_{10} emissions.

Construction workers and vendors would travel to the Project Site via SR 78 before traversing the Westside Main Canal, via the County roadways, Garvey Road and Andre Road. It is noted that both Garvey and Andre roads, which span 2.6 miles of the access route, are unpaved. Therefore, mitigation measure AQ-1 is required in order to reduce PM_{10} emissions to levels below the significance threshold. Mitigation measure AQ-1 would require the use of soil stabilizers on the 2.6 miles of unpaved roadway used for construction worker and vendor access to the Project Site.

The following mitigation is recommended:

AQ-1: Project Construction Dust Suppression

During construction activities the construction 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 2.6 miles of unpaved road on Garvey Road and Andre Road between the Westside Main Canal and the Project Site. 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 the Imperial County Air Pollution Control District, 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 Imperial County Air Pollution Control District CEQA Handbook's required additional standard and enhanced mitigation measures listed below shall be implemented prior to and during construction. Imperial County Air Pollution Control District will verify implementation and compliance with these measures as part of the grading permit review/approval process.

    Imperial County Air Pollution Control District Standard Measures for Fugitive Dust (PM_{10}) Control

    - All disturbed areas, including bulk material storage, which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative ground cover.
    - All on-site and offsite unpaved roads will be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
    - All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
    - The transport of bulk materials shall be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be 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.

Imperial County Air Pollution Control District "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, Imperial County Air Pollution Control District 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).

Table 2-6 shows the results of construction emissions with implementation of mitigation measures AQ-1.

Table 2-6. Mitigated Project Construction-Generated Emissions

Construction Year	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction in Calendar Year One	4.24	34.56	42.27	0.07	113.97	12.72
Construction in Calendar Year Two	3.97	22.82	41.35	0.07	113.84	12.60
ICAPCD Significance Threshold	*75*	*100*	*550*	*N/A*	*150*	*N/A*
Exceed ICAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2020.4.0. Refer to Attachment A for Model Data Outputs.
Notes: Pounds per day taken from the season with the highest output.

As shown in Table 2-6, emissions generated during Project construction would not exceed the ICAPCD's thresholds of significance with implementation of mitigation measures AQ-1.

2.3.3.2 Operational Criteria Air Quality Emissions

Although limited, implementation of the Project 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 NO_X. Project-generated increases in emissions would be predominately associated with motor vehicle use for routine maintenance work, site security, and trucking in water. Long-term operational emissions attributable to the Project are identified in Table 2-7 and compared to the operational significance thresholds promulgated by the ICAPCD.

Table 2-7. Operational-Related Emissions

Emission Source	Pollutant (pounds per day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer Emissions						
Area	6.09	0.00	0.05	0.00	0.00	0.00
Energy	0.27	2.42	2.03	0.01	0.18	0.18
Mobile	0.05	0.07	0.60	0.00	61.69	6.16
Offroad Equipment	1.11	10.36	12.73	0.02	0.52	0.48
Total:	**7.52**	**12.85**	**15.41**	**0.03**	**62.39**	**6.82**
Winter Emissions						
Area	6.09	0.00	0.05	0.00	0.00	0.00
Energy	0.26	2.42	2.03	0.01	0.18	0.18
Mobile	0.04	0.07	0.47	0.00	61.69	6.16
Offroad Equipment	1.11	10.36	12.72	0.02	0.52	0.48
Total:	**7.50**	**12.85**	**15.27**	**0.03**	**62.39**	**6.82**
ICAPCD Significance Threshold	*137*	*137*	*150*	*550*	*150*	*550*
Exceed ICAPCD Significance Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2020.4.0. Refer to Attachment A for Model Data Outputs.
Notes: Operational emissions account for six vehicle trips per day. It is noted that this is a conservative estimate, and many days will have no operational related vehicle trips.

As shown in Table 2-7, the Project's emissions would not exceed any ICAPCD's thresholds for any criteria air pollutants during operation. Additionally, the purpose of the Project is the operation of a renewable energy and storage facility. Once in operation, it will decrease the need for energy from fossil fuel–based power plants in the state (see Table 2-8). Thus, once operational the Project would represent a beneficial impact to air quality.

2.3.3.3 Conflict with an Applicable Air Quality Management Plan

As previously described, the Project region is classified as nonattainment for federal O_3 and $PM_{2.5}$ standards (CARB 2020; 2018). The USEPA, under the provisions of the CAA, requires each state with regions that have not attained the federal air quality standards to prepare a SIP, detailing how these standards are to be met in each local area. The SIP is a legal agreement between each state and the federal government to commit resources to improving air quality. It serves as the template for conducting regional and project-level air quality analysis. CARB is the lead agency for developing the SIP in California. Local air districts, such as the ICAPCD, prepare air quality attainment plans or air quality management plans and submit them to CARB

for review, approval, and incorporation into the applicable SIP. The air districts develop the strategies stated in the SIPs for achieving air quality standards on a regional basis.

The region's SIP is constituted of the ICAPCD air quality plans: 2018 PM_{10} SIP, the 2018 Annual $PM_{2.5}$ SIP, the 2017 8-Hour Ozone SIP, 2013 24-Hour $PM_{2.5}$ SIP, the 2009 1997 8-hour Ozone RACT SIP, the 2009 PM_{10} SIP and the 2008 Ozone Early Progress Plans. Project compliance with all of the ICAPCD rules and regulations results in conformance with the ICAPCD air quality plans. These air quality attainment plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards. These SIP plans and associated control measures are based on information derived from projected growth in Imperial County in order to project future emissions and then determine strategies and regulatory controls for the reduction of emissions. Growth projections are based on the general plans developed by Imperial County and the incorporated cities in the county.

As previously described, the Project is proposing the development of an 80 MW alternating current PV energy generation system with an integrated 320 MWH battery storage facility on approximately 320 acres of land, for a total of 344.5 acres including the gen-tie transmissions. The Project would not result in population growth and would not cause an increase in currently established population projections. The Project does not include residential development or large local or regional employment centers, and thus would not result in significant population or employment growth.

Furthermore, the operation of the Project would create renewable energy over its planned lifetime and decrease the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact to statewide air quality. The energy produced by the Project 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 2-8 shows the emissions that would potentially be displaced by the Proposed Project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the Project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-combustion sources (wind, solar, nuclear, hydro-electric) (California Energy Commission [CEC] 2020). 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.

Table 2-8. Proposed Project Displaced Criteria Pollutant Emissions (Tons)

Construction Year	Emissions (Tons)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Emissions Displaced Annually (tons)						
Displaced Natural Gas-Source Emissions	0.0	1.7	0.5	1.2	1.6	0.7
Displaced Coal-Source Emissions	0.0	11.1	0.5	0.5	0.1	0.1
Total	**0.0**	**12.8**	**1.0**	**1.7**	**1.7**	**0.8**
Emissions Displaced over 30 Years (tons)						
Total	**0.0**	**386.6**	**29.5**	**51.2**	**51.1**	**21.4**

Source: Displaced emissions calculated by ECORP using USEPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015. See Attachment B.

Notes: In order to provide a conservative analysis, the proposed Project is assumed to generate electricity 25 percent of the time available (2,190 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" (2019) 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]. 80 MW (175,200,000 annual kWH) x 9,313 heat rate = 1,631,637,600,000 Btu displaced from fossil fuel production. Fossil fuel-based energy consumption in California is predominately derived from natural gas (37.06 percent). Coal constitutes 2.74 percent of all fossil fuel-based energy. Therefore, 692,140,669,920 of the displaced Btu is displaced natural gas consumption and 44,706,870,240 of the 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 1,863 tons of burned coal annually.

As shown, the Project would potentially displace approximately 387 tons of NO_x, 30 tons of CO, 51 tons of SO_2, 51 tons of PM_{10}, and 21 tons of $PM_{2.5}$ over the course of 30 years. Furthermore, as demonstrated in Table 2-6 and Table 2-7, the Project would not exceed the applicable significance thresholds for construction or operational-source emissions.

2.3.3.4 Exposure of Sensitive Receptors to Toxic Air Contaminants

As previously described, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest existing noise-

sensitive land use to the Project Site is a single-family residence located 2,725 feet from the northeastern corner of Project Site. During construction occurring offsite along the gentie transmission line route to the IID electrical grid line, the nearest sensitive receptors would be 970 feet distant.

Construction-Generated Air Contaminants

Construction of the Project would result in temporary, short-term proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for Project construction; 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 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10} (CARB 2020; 2018). Thus, existing O_3 and PM_{10} levels in the SSAB are at unhealthy levels during certain periods. However, as shown in Table 2-6, the Project would not exceed the ICAPCD significance thresholds for construction emissions with implementation of mitigation measure AQ-1.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the ICAPCD thresholds, the Project is 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 Project would not involve activities that would result in CO emissions in excess of the ICAPCD thresholds. Thus, the Project's 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. Most PM_{10} exhaust derives from combustion, such as use of gasoline and diesel fuels by motor vehicles. As with O_3 and NOx, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the ICAPCD's thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction 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.

Operational Air Contaminants

Operation of the Proposed Project 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 Project attract additional mobile sources that spend long periods queuing and idling at the site. Onsite Project emissions would not result in significant concentrations of pollutants at the nearby sensitive receptor as the predominant operational emissions associated with the Proposed Project would be routine maintenance work, water deliveries, and site security. Therefore, the Project would not be a substantial source of TACs. The Project will not result in a high carcinogenic or non-carcinogenic risk during operation.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, 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. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SSAB is designated as in attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 Air Quality Management Plan can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD is the air pollution control officer for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and

afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD), the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

The Proposed Project is anticipated to result in no more than 6 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 Project 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.

2.3.3.5 Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in

nature and will 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, which is generally devoid of surrounding receptors. Therefore, odors generated during Project construction would not adversely affect a substantial number of people to odor emissions.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified as being associated with odors.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), and N_2O. Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. 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 (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the

last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013).

Table 3-1. Greenhouse Gases

Greenhouse Gas	Description
CO_2	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
CH_4	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[2]
N_2O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1]USEPA 2016a, [2] USEPA 2016b, [3] USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.1.1 Sources of Greenhouse Gas Emissions

In 2022, CARB released the 2022 edition of the California GHG inventory covering calendar year 2020 emissions. In 2020, California emitted 369.2 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2020, accounting for approximately 38 percent of total GHG emissions in the state. Continuing the downward trend from previous years, transportation emissions decreased 27 million metric tons of CO_2e in 2020, though the intensity of this decrease was most likely from light duty vehicles after shelter-in-place orders were enacted in response to the COVID-19 pandemic. Emissions from the electricity sector account for 16 percent of the inventory and have remained at a similar level as in 2019 despite a 44

percent decrease in in-state hydropower generation (due to below average precipitation levels), which was more than compensated for by a 10 percent growth in in-state solar generation and cleaner imported electricity incentivized by California's clean energy policies. California's industrial sector accounts for the second largest source of the state's GHG emissions in 2020, accounting for 23 percent (CARB 2022b).

3.2 Regulatory Framework

3.2.1 State

3.2.1.1 Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

3.2.1.2 Assembly Bill 32 Climate Change Scoping Plan and Updates

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 required 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 outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by the year 2017.

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.

3.2.1.3 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.

3.2.1.4 Senate Bill 100 of 2018

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.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to GHG emissions if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The Appendix G thresholds for GHG's do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines § 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 California Code of Regulations [CCR] 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a 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.
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 (14 CCR 15064.4(b)).

In addition, 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)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines § 15130(f)). As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines § 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines § 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The ICAPCD has not adopted a GHG significance threshold yet recommends the 100,000-metric ton of CO_2e threshold established by the Mojave Desert Air Quality Management District (MDAQMD). 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)). This ICAPCD-recommended threshold is 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.

In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the state that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The Supreme Court-reviewed study noted, "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227.)

3.3.2 Methodology

GHG-related impacts were assessed in accordance with methodologies recommended by the ICAPCD. Where GHG emission quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. 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. It is noted that CalEEMod 2022.1 was released while this analysis was in process. Project construction-generated GHG emissions were calculated using CalEEMod model defaults for Imperial County coupled with information provided by the Project applicant. For instance, as described in the Section 1.3, Project Description, construction activities would primarily involve demolition and grubbing; grading of the Project Area to establish access roads and pads for electrical equipment (inverters and step–up transformers); trenching for underground electrical collection lines; the installation of solar equipment and security fencing; and the offsite infrastructure work required for the IID gen-tie transmission line route. Stormwater management facilities would be constructed internally within the Project Site and would consist of basins and infiltration areas. Construction is estimated to take 12 to 18 months and would begin in 2023. A temporary, portable construction supply container would be located at the Project Site at the beginning of construction and removed at the end of construction. The number of on-site construction workers for the solar energy facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the BESS and the substation is not expected to exceed 100 workers at any one time. According to the Traffic Study prepared for the Project (KOA 2020), Project construction would generate a maximum of 310 construction worker-commute trips in a single day.

The Proposed Project would require approximately 550 AF (179,200,000 gallons) of water for dust suppression and site grading during construction of the arrays, BESS area, and onsite substation. The CalEEMod modeling software does not precisely quantify indirect emissions associated with the pumping and conveyance of water used during construction activities. Therefore, for the purposes of this analysis, the water consumption necessary for construction is amortized over the life of the Project (30 years) and added to the total water consumption anticipated during Project operations.

Operational air pollutant emissions account for the maximum three workers visiting the site in a single day. Such visits 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. Therefore, operational onsite equipment use is accounted in addition to the consumption of 20 AF (6,517,000 gallons) of water annually. [25.5 AF (12,490,333 gallons) of water accounting for the amortized water consumption during construction activities (179,200,000 + 6,517,000 = 12,490,333)].

3.3.3 Impact Analysis

3.3.3.1 Generation of GHG Emissions

Project Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the project site, and off-road construction equipment

(e.g., dozers, loaders, excavators). Table 3-2 illustrates the specific construction generated GHG emissions that would result from construction of the Project. Consistent with SCAQMD recommendations, Project construction GHG emissions have been amortized over the expected life of the Project, which is considered to be 30 years for a solar energy generation facility. Once construction is complete, the generation of these GHG emissions would cease.

Table 3-2. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Construction Year One	439
Construction Year Two	351
Significance Threshold	*100,000*
Exceed Significance Threshold?	**No**

Source: CalEEMod version 2020.4.0. Refer to Attachment B for Model Data Outputs.

As shown in Table 3-2, Project would result in the generation of approximately 439 metric tons of CO_2e in the first year of construction and 351 metric tons in the second year of construction. Therefore, Project GHG emissions would not exceed the significance threshold.

Additionally, the Project proposes a solar energy generation facility 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. As identified in Table 3-5 below, the Project would potentially displace approximately 42,576 metric tons of CO_2e per year, and approximately 1,277,277 metric tons of CO_2e over the course of 30 years, which is considerably more than would be generated during construction.

Operations

Operation of the Project would result in an increase in GHG emissions solely associated with motor vehicle trips. Long-term GHG emissions attributed to operations of the Project are identified in Table 3-3.

Table 3-3. Operational-Related Greenhouse Gas Emissions	
Emission Source	**CO_2e (Metric Tons/ Year)**
Area Source	0
Energy	1,089
Mobile	14
Offroad Equipment	8
Waste	0
Water	12
Total	**1,123**
Significance Threshold	*100,000*
Exceed Significance Threshold?	**No**

Source: CalEEMod version 2020.4.0. Refer to Attachment A for Model Data Outputs.
Notes: Operational emissions account for six heavy-duty truck vehicle trip per day. It is noted that this is a conservative estimate and many days will have no operational related vehicle trips.

As shown in Table 3-3, operational-generated emissions would not exceed the significance threshold of 100,000 metric tons of CO_2e annually.

3.3.3.2 Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

The Project would not conflict with any adopted plans, policies, or regulations adopted for the purpose of reducing GHG emissions. The Proposed Project is subject to compliance with SB 32. As discussed previously, the Proposed Project-generated GHG emissions would not surpass either the ICAPCD-recommended GHG significance threshold, which was prepared with the purpose of complying with statewide GHG-reduction efforts. Additionally, once construction is complete, the Project would be a producer of renewable energy, which generates substantially less GHG emissions compared with the more common types of fossil-fueled energy generation facilities.

GHG emissions generated by energy sources account for all stages of the life cycle (including mining, construction, etc.), which are referred to as the cumulative GHG emissions and are usually expressed in grams of CO_2e per unit of busbar electricity (i.e., gCO_2/kWh_e). When comparing various fossil-fueled energy generators, the GHG emissions generated are dependent on the type of fuel (i.e., gas, oil, coal). GHG emissions generated by some of the more common types of fossil-fueled plants and solar-power plants are summarized in Table 3-4.

Table 3-4. Life-Cycle Greenhouse Gas Emissions for Various Types of Energy Generators	
Fossil Fueled	
Coal	950 to 1,250 gCO_2e/kWhe
Oil	500 to 1,200 gCO_2e/kWhe
Gas	440 to 780 gCO_2e/kWhe
Solar	43 to 73[3] gCO_2e/kWhe

Source: Weisser 2007
Notes:
1 gCO_2e/kWhe = grams of CO_2e per unit of busbar electricity.
2 Emissions are based on lifecycle of energy source including mining, construction, operation, etc.
3 Solar PV life-cycle emissions result from using fossil-fuel-based energy to produce the materials for solar cells, modules, and systems, as well as directly from smelting, production, and manufacturing facilities.

As shown in Table 3-4, solar plants generate far less GHG life-cycle emissions (approximately 83 to 94 percent less) than fossil-fueled energy plants. Therefore, the Proposed Project would contribute to the continued reduction of GHG emissions in the interconnected California and western U.S. electricity systems, as the energy produced by the Project 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 3-5 shows the emissions that would potentially be displaced by the Proposed Project. Note that this estimate only includes that associated with the combustion of fossil fuels; it does not include the vehicle trips associated with the Project's operations, and it similarly does not include operational employee trips associated with natural gas or coal combustion nor the emissions associated with extracting and transporting those power sources. In addition, this estimate only includes the displacement of that portion of the California market that comes from fossil fuels and does not include the approximate 50 percent of the California electricity generated by non-combustion sources (wind, solar, nuclear, hydro-electric) (CEC 2020).

Table 3-5. Proposed Project Displaced GHG Emissions (Metric Tons)

	Emissions (Metric Tons)			
	CO_2	CH_4	N_2O	CO_2e
Emissions Displaced Annually (metric tons)				
Displaced Natural Gas-Source Emissions	38,068	0.00	0.00	38,068
Displaced Coal-Source Emissions	4,500	0.03	0.02	4,508
Total	**42,568**	**0.03**	**0.02**	**42,576**
Emissions Displaced over 30 Years (metric tons)				
Total	**1,277,047**	**0.89**	**0.67**	**1,277,277**

Source: Displaced emissions calculated by ECORP using USEPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015. See Attachment B.

Notes: In order to provide a conservative analysis, the proposed Project is assumed to generate electricity 25 percent of the time available (2,190 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" (2019) 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]. 80 MW (175,200,000 annual kWH) x 9,313 heat rate = 1,631,637,600,000 Btu displaced from fossil fuel production. Fossil fuel-based energy consumption in California is predominately derived from natural gas (37.06 percent). Coal constitutes 2.74 percent of all fossil fuel-based energy. Therefore, 692,140,669,920 of the displaced Btu is displaced natural gas consumption and 44,706,870,240 of the 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 1,863 tons of burned coal annually.

As shown, the Project would potentially displace approximately 42,568 metric tons of CO_2e per year, and approximately 1,277,277 metric tons of CO_2e over the course of 30 years.

While the Project would emit some GHG emissions during construction and a 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 year 2030.) Therefore, the short-term minor generation of GHG emissions during construction, which is necessary to create this new, low-GHG-emitting power-generating facility, as well as the negligible amount generated during ongoing maintenance operations, would be more than offset by GHG emission reductions associated with solar-generated energy during operation.

Increasing sources of solar energy is one of the measures identified under the Scoping Plan to reduce statewide GHG emissions. The Proposed Project would reduce GHG emissions in a manner consistent with

SB 32 and other California GHG-reducing legislation by creating a new source of solar power to replace the current use of fossil-fuel power and reduce GHG emissions power generation and use.

The Project would not conflict with any applicable plan, policy, or regulation intended to reduce GHG emissions.

4.0 REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2021. California Emissions Estimator Model (CalEEMod), version 2020.4.0.

_____. 2013. Health Effects. http://www.capcoa.org/health-effects/.

California Air Resources Board (CARB). 2022a. Air Quality Data Statistics. http://www.arb.ca.gov/adam/index.html.

_____. 2022b. California Greenhouse Gas Emission Inventory 2022 Edition. https://ww2.arb.ca.gov/ghg-inventory-data

_____. 2020. State Area Designation Maps. http://www.arb.ca.gov/desig/adm/adm.htm.

_____. 2018. Federal Area Designation Maps. http://www.arb.ca.gov/desig/adm/adm.htm.

California Energy Commission (CEC). 2020. 2020 Total System Electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation

_____. 2019. Updated Thermal Power Plant Efficiency Measures and Operational Characteristics for Production Cost Modeling.

Crockett, Alexander G. 2011. Addressing the Significance of Greenhouse Gas Emissions Under CEQA: California's Search for Regulatory Certainty in an Uncertain World.

Intergovernmental Panel on Climate Change (IPCC). 2014. Climate Change 2014 Synthesis Report: Approved Summary for Policymakers. http://www.ipcc.ch/.

_____. 2013. Carbon and Other Biogeochemical Cycles. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf.

Imperial County Air Pollution Control District (ICAPCD). 2017. *Air Quality Handbook*.

KOA. 2020. Scoping Memorandum for Traffic Impact Study: Vega SES 6 Solar Energy Storage.

South Coast Air Quality Management District (SCAQMD). 2003. Air Quality Management Plan.

_____. 1992. 1992 Federal Attainment Plan for Carbon Monoxide.

U.S. Environmental Protection Agency (USEPA). 2016a. Climate Change – Greenhouse Gas Emissions: Carbon Dioxide. http://www.epa.gov/climatechange/emissions/co2.html.

_____. 2016b. Methane. https://www3.epa.gov/climatechange/ghgemissions/gases/ch4.html.

_____. 2016c. Nitrous Oxide. https://www3.epa.gov/climatechange/ghgemissions/gases/n2o.html.

_____. 2002. Health Assessment Document for Diesel Engine Exhaust. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=300055PV.TXT.

Weisser, Daniel. 2007. A Guide to Life-Cycle Greenhouse Gas (GHG) Emissions from Electric Supply Technologies. Energy 32 (9), 1543–1559.

LIST OF ATTACHMENTS

Attachment A – CalEEMod Output Files Criteria Air Pollutants

Attachment B – Renewable Energy Emissions Displacement

Attachment C – CalEEMod Output Files Greenhouse Gas Emissions

ATTACHMENT A

CalEEMod Output Files Criteria Air Pollutants

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

VEGA 6 SES Solar and Battery Storage Project

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	316.00	Acre	316.00	13,764,960.00	0
Other Non-Asphalt Surfaces	24.50	Acre	24.50	1,067,220.00	0
Refrigerated Warehouse-No Rail	87.12	1000sqft	2.00	87,120.00	0
Refrigerated Warehouse-No Rail	87.12	1000sqft	2.00	87,120.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.983	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses account for 316 acres of solar field, 2 acres of BESS, 2 acres of substation, and 24.5 acres of transmission line distrubance.

Construction Phase - Construction phasing adjusted to reflect the Project Description. Solar panel installation and paving assumed to occur simultaneously.

Grading -

Trips and VMT - A maximum of 310 worker commute trips during solar panel installation per Traffic Study

On-road Fugitive Dust - 75.6% paved roads for worker commutes [2.6 m dirt roads / 10.2 m trip lenght default - 75.6% paved roads]. 78.2% paved roads for vendors.

Vehicle Trips - Maximum trips per day = 6 per Project Description

Consumer Products - No degresers used during operations

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water And Wastewater - Water use accounts for 179,200,000 gallons used during construction, amortized over the life of the Project + 6,517,000 gallons annually anticipated for operations

Solid Waste - No solid waste generation

Operational Off-Road Equipment - Off road equipment for operational maintenance

Construction Off-road Equipment Mitigation - Mitigation measure AQ-1 accounted. PM reduction value for applying soil stabilizers to unpaved roadways per communication with ICAPCD (Monica Soucier email correspondence)

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	6,200.00	197.00
tblConstructionPhase	NumDays	620.00	42.00
tblConstructionPhase	NumDays	440.00	197.00
tblConstructionPhase	NumDays	240.00	23.00
tblConstructionPhase	PhaseEndDate	8/15/2051	5/31/2024
tblConstructionPhase	PhaseEndDate	11/9/2027	8/30/2023
tblConstructionPhase	PhaseEndDate	4/22/2053	5/31/2024
tblConstructionPhase	PhaseEndDate	6/24/2025	7/3/2023
tblConstructionPhase	PhaseStartDate	11/10/2027	8/31/2023
tblConstructionPhase	PhaseStartDate	6/25/2025	7/4/2023
tblConstructionPhase	PhaseStartDate	8/16/2051	8/31/2023
tblConstructionPhase	PhaseStartDate	7/24/2024	6/1/2023
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.38	0.38
tblOperationalOffRoadEquipment	OperLoadFactor	0.42	0.42
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblProjectCharacteristics	CO2IntensityFactor	189.98	189.983
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	163.79	0.00
tblTripsAndVMT	VendorTripNumber	2,460.00	4.00
tblTripsAndVMT	WorkerTripNumber	6,303.00	310.00
tblVehicleTrips	ST_TR	2.12	0.00
tblVehicleTrips	SU_TR	2.12	0.00
tblVehicleTrips	WD_TR	2.12	0.07
tblWater	IndoorWaterUseRate	40,293,000.00	0.00
tblWater	OutdoorWaterUseRate	0.00	12,490,333.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.2430	34.5620	42.2769	0.0744	1,207.6774	1.4253	1,208.9018	120.8576	1.3112	121.9988	0.0000	7,256.3624	7,256.3624	1.9488	0.0870	7,317.2129
2024	3.9776	23.8214	41.3532	0.0737	1,207.6774	1.0956	1,208.7730	120.8576	1.0207	121.8783	0.0000	7,183.8255	7,183.8255	1.3864	0.0814	7,242.7415
Maximum	**4.2430**	**34.5620**	**42.2769**	**0.0744**	**1,207.6774**	**1.4253**	**1,208.9018**	**120.8576**	**1.3112**	**121.9988**	**0.0000**	**7,256.3624**	**7,256.3624**	**1.9488**	**0.0870**	**7,317.2129**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.2430	34.5620	42.2769	0.0744	112.7482	1.4253	113.9726	11.5826	1.3112	12.7238	0.0000	7,256.3624	7,256.3624	1.9488	0.0870	7,317.2129
2024	3.9776	23.8214	41.3532	0.0737	112.7482	1.0956	113.8438	11.5826	1.0207	12.6033	0.0000	7,183.8255	7,183.8255	1.3864	0.0814	7,242.7414
Maximum	**4.2430**	**34.5620**	**42.2769**	**0.0744**	**112.7482**	**1.4253**	**113.9726**	**11.5826**	**1.3112**	**12.7238**	**0.0000**	**7,256.3624**	**7,256.3624**	**1.9488**	**0.0870**	**7,317.2129**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**90.66**	**0.00**	**90.58**	**90.42**	**0.00**	**89.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0925	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Energy	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
Mobile	0.0578	0.0677	0.6034	1.2800e-003	61.6893	8.6000e-004	61.6901	6.1562	8.1000e-004	6.1570		129.5118	129.5118	5.2100e-003	5.3800e-003	131.2455
Offroad	1.1098	10.3635	12.7231	0.0217		0.5217	0.5217		0.4800	0.4800	0.0000	2,096.7652	2,096.7652	0.6781		2,113.7186
Total	**7.5263**	**12.8527**	**15.4126**	**0.0375**	**61.6893**	**0.7067**	**62.3960**	**6.1562**	**0.6650**	**6.8212**	**0.0000**	**5,131.6064**	**5,131.6064**	**0.7393**	**0.0586**	**5,167.5651**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0925	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Energy	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
Mobile	0.0578	0.0677	0.6034	1.2800e-003	61.6893	8.6000e-004	61.6901	6.1562	8.1000e-004	6.1570		129.5118	129.5118	5.2100e-003	5.3800e-003	131.2455
Offroad	1.1098	10.3635	12.7231	0.0217		0.5217	0.5217		0.4800	0.4800	0.0000	2,096.7652	2,096.7652	0.6781		2,113.7186
Total	**7.5263**	**12.8527**	**15.4126**	**0.0375**	**61.6893**	**0.7067**	**62.3960**	**6.1562**	**0.6650**	**6.8212**	**0.0000**	**5,131.6064**	**5,131.6064**	**0.7393**	**0.0586**	**5,167.5651**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	7/3/2023	5	23	
2	Grading	Grading	7/4/2023	8/30/2023	5	42	
3	Building Construction	Building Construction	8/31/2023	5/31/2024	5	197	
4	Paving	Paving	8/31/2023	5/31/2024	5	197	

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 34.5

Acres of Grading (Grading Phase): 126

Acres of Paving: 340.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	8	20.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	310.00	4.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0901	0.0417	0.6294	1.3000e-003	66.0389	6.9000e-004	66.0396	6.6086	6.4000e-004	6.6093		131.1485	131.1485	4.1500e-003	3.8600e-003	132.4025
Total	**0.0901**	**0.0417**	**0.6294**	**1.3000e-003**	**66.0389**	**6.9000e-004**	**66.0396**	**6.6086**	**6.4000e-004**	**6.6093**		**131.1485**	**131.1485**	**4.1500e-003**	**3.8600e-003**	**132.4025**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**7.6662**	**1.2660**	**8.9323**	**3.9400**	**1.1647**	**5.1047**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0901	0.0417	0.6294	1.3000e-003	6.1648	6.9000e-004	6.1655	0.6332	6.4000e-004	0.6338		131.1485	131.1485	4.1500e-003	3.8600e-003	132.4025
Total	**0.0901**	**0.0417**	**0.6294**	**1.3000e-003**	**6.1648**	**6.9000e-004**	**6.1655**	**0.6332**	**6.4000e-004**	**0.6338**		**131.1485**	**131.1485**	**4.1500e-003**	**3.8600e-003**	**132.4025**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1002	0.0464	0.6994	1.4400e-003	73.3765	7.7000e-004	73.3773	7.3429	7.1000e-004	7.3436		145.7205	145.7205	4.6100e-003	4.2900e-003	147.1139
Total	**0.1002**	**0.0464**	**0.6994**	**1.4400e-003**	**73.3765**	**7.7000e-004**	**73.3773**	**7.3429**	**7.1000e-004**	**7.3436**		**145.7205**	**145.7205**	**4.6100e-003**	**4.2900e-003**	**147.1139**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**3.5894**	**1.4245**	**5.0139**	**1.4250**	**1.3105**	**2.7355**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1002	0.0464	0.6994	1.4400e-003	6.8498	7.7000e-004	6.8505	0.7035	7.1000e-004	0.7042		145.7205	145.7205	4.6100e-003	4.2900e-003	147.1139
Total	**0.1002**	**0.0464**	**0.6994**	**1.4400e-003**	**6.8498**	**7.7000e-004**	**6.8505**	**0.7035**	**7.1000e-004**	**0.7042**		**145.7205**	**145.7205**	**4.6100e-003**	**4.2900e-003**	**147.1139**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.1848	0.0840	1.1900e-003	15.3086	1.9700e-003	15.3106	1.5349	1.8800e-003	1.5368		125.6099	125.6099	5.0000e-004	0.0173	130.7724
Worker	1.5523	0.7184	10.8402	0.0224	1,137.3364	0.0119	1,137.3483	113.8155	0.0110	113.8264		2,258.6681	2,258.6681	0.0715	0.0665	2,280.2654
Total	**1.5624**	**0.9032**	**10.9242**	**0.0235**	**1,152.6450**	**0.0139**	**1,152.6589**	**115.3504**	**0.0129**	**115.3632**		**2,384.2780**	**2,384.2780**	**0.0720**	**0.0838**	**2,411.0378**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.1848	0.0840	1.1900e-003	1.4398	1.9700e-003	1.4417	0.1508	1.8800e-003	0.1527		125.6099	125.6099	5.0000e-004	0.0173	130.7724
Worker	1.5523	0.7184	10.8402	0.0224	106.1711	0.0119	106.1830	10.9042	0.0110	10.9152		2,258.6681	2,258.6681	0.0715	0.0665	2,280.2654
Total	**1.5624**	**0.9032**	**10.9242**	**0.0235**	**107.6109**	**0.0139**	**107.6248**	**11.0550**	**0.0129**	**11.0678**		**2,384.2780**	**2,384.2780**	**0.0720**	**0.0838**	**2,411.0378**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6600e-003	0.1842	0.0806	1.1800e-003	15.3086	1.9600e-003	15.3106	1.5349	1.8700e-003	1.5368		123.9189	123.9189	4.8000e-004	0.0170	128.9853
Worker	1.4386	0.6380	9.9964	0.0217	1,137.3364	0.0113	1,137.3477	113.8155	0.0104	113.8259		2,190.6608	2,190.6608	0.0644	0.0615	2,210.5882
Total	**1.4482**	**0.8222**	**10.0770**	**0.0229**	**1,152.6450**	**0.0133**	**1,152.6582**	**115.3504**	**0.0123**	**115.3626**		**2,314.5797**	**2,314.5797**	**0.0649**	**0.0784**	**2,339.5735**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6600e-003	0.1842	0.0806	1.1800e-003	1.4398	1.9600e-003	1.4417	0.1508	1.8700e-003	0.1527		123.9189	123.9189	4.8000e-004	0.0170	128.9853
Worker	1.4386	0.6380	9.9964	0.0217	106.1711	0.0113	106.1824	10.9042	0.0104	10.9146		2,190.6608	2,190.6608	0.0644	0.0615	2,210.5882
Total	**1.4482**	**0.8222**	**10.0770**	**0.0229**	**107.6109**	**0.0133**	**107.6241**	**11.0550**	**0.0123**	**11.0673**		**2,314.5797**	**2,314.5797**	**0.0649**	**0.0784**	**2,339.5735**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0348	0.5245	1.0800e-003	55.0324	5.8000e-004	55.0330	5.5072	5.3000e-004	5.5077		109.2904	109.2904	3.4600e-003	3.2200e-003	110.3354
Total	**0.0751**	**0.0348**	**0.5245**	**1.0800e-003**	**55.0324**	**5.8000e-004**	**55.0330**	**5.5072**	**5.3000e-004**	**5.5077**		**109.2904**	**109.2904**	**3.4600e-003**	**3.2200e-003**	**110.3354**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0348	0.5245	1.0800e-003	5.1373	5.8000e-004	5.1379	0.5276	5.3000e-004	0.5282		109.2904	109.2904	3.4600e-003	3.2200e-003	110.3354
Total	**0.0751**	**0.0348**	**0.5245**	**1.0800e-003**	**5.1373**	**5.8000e-004**	**5.1379**	**0.5276**	**5.3000e-004**	**0.5282**		**109.2904**	**109.2904**	**3.4600e-003**	**3.2200e-003**	**110.3354**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0696	0.0309	0.4837	1.0500e-003	55.0324	5.5000e-004	55.0330	5.5072	5.0000e-004	5.5077		105.9997	105.9997	3.1200e-003	2.9700e-003	106.9639
Total	**0.0696**	**0.0309**	**0.4837**	**1.0500e-003**	**55.0324**	**5.5000e-004**	**55.0330**	**5.5072**	**5.0000e-004**	**5.5077**		**105.9997**	**105.9997**	**3.1200e-003**	**2.9700e-003**	**106.9639**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0696	0.0309	0.4837	1.0500e-003	5.1373	5.5000e-004	5.1379	0.5276	5.0000e-004	0.5281		105.9997	105.9997	3.1200e-003	2.9700e-003	106.9639
Total	**0.0696**	**0.0309**	**0.4837**	**1.0500e-003**	**5.1373**	**5.5000e-004**	**5.1379**	**0.5276**	**5.0000e-004**	**0.5281**		**105.9997**	**105.9997**	**3.1200e-003**	**2.9700e-003**	**106.9639**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0578	0.0677	0.6034	1.2800e-003	61.6893	8.6000e-004	61.6901	6.1562	8.1000e-004	6.1570		129.5118	129.5118	5.2100e-003	5.3800e-003	131.2455
Unmitigated	0.0578	0.0677	0.6034	1.2800e-003	61.6893	8.6000e-004	61.6901	6.1562	8.1000e-004	6.1570		129.5118	129.5118	5.2100e-003	5.3800e-003	131.2455

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	6.10	0.00	0.00	21,525	21,525
Refrigerated Warehouse-No Rail	6.10	0.00	0.00	21,525	21,525
Total	12.20	0.00	0.00	43,050	43,050

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.40	9.50	11.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.40	9.50	11.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.40	9.50	11.90	59.00	0.00	41.00	92	5	3
Refrigerated Warehouse-No	16.40	9.50	11.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504
Refrigerated Warehouse-No Rail	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
NaturalGas Unmitigated	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	12347.2	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
Total		**0.2663**	**2.4210**	**2.0337**	**0.0145**		**0.1840**	**0.1840**		**0.1840**	**0.1840**		**2,905.2168**	**2,905.2168**	**0.0557**	**0.0533**	**2,922.4811**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	12.3472	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
Total		**0.2663**	**2.4210**	**2.0337**	**0.0145**		**0.1840**	**0.1840**		**0.1840**	**0.1840**		**2,905.2168**	**2,905.2168**	**0.0557**	**0.0533**	**2,922.4811**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.0925	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Unmitigated	6.0925	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.3589					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7287					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.8400e-003	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Total	**6.0925**	**4.8000e-004**	**0.0525**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1127**	**0.1127**	**2.9000e-004**		**0.1200**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.3589					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7287					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.8400e-003	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Total	**6.0925**	**4.8000e-004**	**0.0525**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1127**	**0.1127**	**2.9000e-004**		**0.1200**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Off-Highway Trucks	1	2.00	8	402	0.38	Diesel
Other Construction Equipment	3	8.00	8	172	0.42	Diesel

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Off-Highway Trucks	0.1249	0.8361	0.8166	3.3200e-003		0.0301	0.0301		0.0277	0.0277	0.0000	321.6881	321.6881	0.1040		324.2891
Other Construction Equipment	0.9849	9.5274	11.9065	0.0183		0.4916	0.4916		0.4523	0.4523	0.0000	1,775.0771	1,775.0771	0.5741		1,789.4295
Total	**1.1098**	**10.3635**	**12.7231**	**0.0217**		**0.5217**	**0.5217**		**0.4800**	**0.4800**	**0.0000**	**2,096.7652**	**2,096.7652**	**0.6781**		**2,113.7186**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

VEGA 6 SES Solar and Battery Storage Project

Imperial County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	316.00	Acre	316.00	13,764,960.00	0
Other Non-Asphalt Surfaces	24.50	Acre	24.50	1,067,220.00	0
Refrigerated Warehouse-No Rail	87.12	1000sqft	2.00	87,120.00	0
Refrigerated Warehouse-No Rail	87.12	1000sqft	2.00	87,120.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.983	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses account for 316 acres of solar field, 2 acres of BESS, 2 acres of substation, and 24.5 acres of transmission line distrubance.

Construction Phase - Construction phasing adjusted to reflect the Project Description. Solar panel installation and paving assumed to occur simultaneously.

Grading -

Trips and VMT - A maximum of 310 worker commute trips during solar panel installation per Traffic Study

On-road Fugitive Dust - 75.6% paved roads for worker commutes [2.6 m dirt roads / 10.2 m trip lenght default - 75.6% paved roads]. 78.2% paved roads for vendors.

Vehicle Trips - Maximum trips per day = 6 per Project Description

Consumer Products - No degresers used during operations

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water And Wastewater - Water use accounts for 179,200,000 gallons used during construction, amortized over the life of the Project + 6,517,000 gallons annually anticipated for operations

Solid Waste - No solid waste generation

Operational Off-Road Equipment - Off road equipment for operational maintenance

Construction Off-road Equipment Mitigation - Mitigation measure AQ-1 accounted. PM reduction value for applying soil stabilizers to unpaved roadways per communication with ICAPCD (Monica Soucier email correspondence)

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	6,200.00	197.00
tblConstructionPhase	NumDays	620.00	42.00
tblConstructionPhase	NumDays	440.00	197.00
tblConstructionPhase	NumDays	240.00	23.00
tblConstructionPhase	PhaseEndDate	8/15/2051	5/31/2024
tblConstructionPhase	PhaseEndDate	11/9/2027	8/30/2023
tblConstructionPhase	PhaseEndDate	4/22/2053	5/31/2024
tblConstructionPhase	PhaseEndDate	6/24/2025	7/3/2023
tblConstructionPhase	PhaseStartDate	11/10/2027	8/31/2023
tblConstructionPhase	PhaseStartDate	6/25/2025	7/4/2023
tblConstructionPhase	PhaseStartDate	8/16/2051	8/31/2023
tblConstructionPhase	PhaseStartDate	7/24/2024	6/1/2023
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.38	0.38
tblOperationalOffRoadEquipment	OperLoadFactor	0.42	0.42
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblProjectCharacteristics	CO2IntensityFactor	189.98	189.983
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	163.79	0.00
tblTripsAndVMT	VendorTripNumber	2,460.00	4.00
tblTripsAndVMT	WorkerTripNumber	6,303.00	310.00
tblVehicleTrips	ST_TR	2.12	0.00
tblVehicleTrips	SU_TR	2.12	0.00
tblVehicleTrips	WD_TR	2.12	0.07
tblWater	IndoorWaterUseRate	40,293,000.00	0.00
tblWater	OutdoorWaterUseRate	0.00	12,490,333.00

2.0 Emissions Summary

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.8375	34.5641	39.0430	0.0709	1,207.6774	1.4253	1,208.9018	120.8576	1.3112	121.9988	0.0000	6,901.3848	6,901.3848	1.9489	0.0887	6,962.7608
2024	3.6074	23.8698	38.3856	0.0703	1,207.6774	1.0956	1,208.7730	120.8576	1.0207	121.8783	0.0000	6,840.3133	6,840.3133	1.3872	0.0829	6,899.7002
Maximum	**3.8375**	**34.5641**	**39.0430**	**0.0709**	**1,207.6774**	**1.4253**	**1,208.9018**	**120.8576**	**1.3112**	**121.9988**	**0.0000**	**6,901.3848**	**6,901.3848**	**1.9489**	**0.0887**	**6,962.7608**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.8375	34.5641	39.0430	0.0709	112.7482	1.4253	113.9726	11.5826	1.3112	12.7238	0.0000	6,901.3848	6,901.3848	1.9489	0.0887	6,962.7608
2024	3.6074	23.8698	38.3856	0.0703	112.7482	1.0956	113.8438	11.5826	1.0207	12.6033	0.0000	6,840.3133	6,840.3133	1.3872	0.0829	6,899.7002
Maximum	**3.8375**	**34.5641**	**39.0430**	**0.0709**	**112.7482**	**1.4253**	**113.9726**	**11.5826**	**1.3112**	**12.7238**	**0.0000**	**6,901.3848**	**6,901.3848**	**1.9489**	**0.0887**	**6,962.7608**

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**90.66**	**0.00**	**90.58**	**90.42**	**0.00**	**89.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0925	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Energy	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
Mobile	0.0407	0.0749	0.4683	1.1200e-003	61.6893	8.6000e-004	61.6901	6.1562	8.1000e-004	6.1570		114.0015	114.0015	5.2300e-003	5.5600e-003	115.7880
Offroad	1.1098	10.3635	12.7231	0.0217		0.5217	0.5217		0.4800	0.4800	0.0000	2,096.7652	2,096.7652	0.6781		2,113.7186
Total	**7.5093**	**12.8599**	**15.2775**	**0.0373**	**61.6893**	**0.7067**	**62.3960**	**6.1562**	**0.6650**	**6.8212**	**0.0000**	**5,116.0961**	**5,116.0961**	**0.7393**	**0.0588**	**5,152.1077**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0925	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Energy	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
Mobile	0.0407	0.0749	0.4683	1.1200e-003	61.6893	8.6000e-004	61.6901	6.1562	8.1000e-004	6.1570		114.0015	114.0015	5.2300e-003	5.5600e-003	115.7880
Offroad	1.1098	10.3635	12.7231	0.0217		0.5217	0.5217		0.4800	0.4800	0.0000	2,096.7652	2,096.7652	0.6781		2,113.7186
Total	**7.5093**	**12.8599**	**15.2775**	**0.0373**	**61.6893**	**0.7067**	**62.3960**	**6.1562**	**0.6650**	**6.8212**	**0.0000**	**5,116.0961**	**5,116.0961**	**0.7393**	**0.0588**	**5,152.1077**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	7/3/2023	5	23	
2	Grading	Grading	7/4/2023	8/30/2023	5	42	
3	Building Construction	Building Construction	8/31/2023	5/31/2024	5	197	
4	Paving	Paving	8/31/2023	5/31/2024	5	197	

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 34.5

Acres of Grading (Grading Phase): 126

Acres of Paving: 340.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	8	20.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	310.00	4.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0677	0.0436	0.4502	1.1000e-003	66.0389	6.9000e-004	66.0396	6.6086	6.4000e-004	6.6093		111.4761	111.4761	4.1900e-003	3.9500e-003	112.7579
Total	**0.0677**	**0.0436**	**0.4502**	**1.1000e-003**	**66.0389**	**6.9000e-004**	**66.0396**	**6.6086**	**6.4000e-004**	**6.6093**		**111.4761**	**111.4761**	**4.1900e-003**	**3.9500e-003**	**112.7579**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**7.6662**	**1.2660**	**8.9323**	**3.9400**	**1.1647**	**5.1047**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0677	0.0436	0.4502	1.1000e-003	6.1648	6.9000e-004	6.1655	0.6332	6.4000e-004	0.6338		111.4761	111.4761	4.1900e-003	3.9500e-003	112.7579
Total	**0.0677**	**0.0436**	**0.4502**	**1.1000e-003**	**6.1648**	**6.9000e-004**	**6.1655**	**0.6332**	**6.4000e-004**	**0.6338**		**111.4761**	**111.4761**	**4.1900e-003**	**3.9500e-003**	**112.7579**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0752	0.0485	0.5002	1.2300e-003	73.3765	7.7000e-004	73.3773	7.3429	7.1000e-004	7.3436		123.8624	123.8624	4.6500e-003	4.3900e-003	125.2866
Total	**0.0752**	**0.0485**	**0.5002**	**1.2300e-003**	**73.3765**	**7.7000e-004**	**73.3773**	**7.3429**	**7.1000e-004**	**7.3436**		**123.8624**	**123.8624**	**4.6500e-003**	**4.3900e-003**	**125.2866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**3.5894**	**1.4245**	**5.0139**	**1.4250**	**1.3105**	**2.7355**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0752	0.0485	0.5002	1.2300e-003	6.8498	7.7000e-004	6.8505	0.7035	7.1000e-004	0.7042		123.8624	123.8624	4.6500e-003	4.3900e-003	125.2866
Total	**0.0752**	**0.0485**	**0.5002**	**1.2300e-003**	**6.8498**	**7.7000e-004**	**6.8505**	**0.7035**	**7.1000e-004**	**0.7042**		**123.8624**	**123.8624**	**4.6500e-003**	**4.3900e-003**	**125.2866**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.5700e-003	0.2041	0.0864	1.2000e-003	15.3086	1.9700e-003	15.3106	1.5349	1.8900e-003	1.5368		125.8275	125.8275	4.8000e-004	0.0174	131.0141
Worker	1.1660	0.7514	7.7532	0.0190	1,137.3364	0.0119	1,137.3483	113.8155	0.0110	113.8264		1,919.8665	1,919.8665	0.0721	0.0680	1,941.9422
Total	**1.1756**	**0.9555**	**7.8396**	**0.0202**	**1,152.6450**	**0.0139**	**1,152.6589**	**115.3504**	**0.0129**	**115.3632**		**2,045.6940**	**2,045.6940**	**0.0726**	**0.0854**	**2,072.9563**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.5700e-003	0.2041	0.0864	1.2000e-003	1.4398	1.9700e-003	1.4417	0.1508	1.8900e-003	0.1527		125.8275	125.8275	4.8000e-004	0.0174	131.0141
Worker	1.1660	0.7514	7.7532	0.0190	106.1711	0.0119	106.1830	10.9042	0.0110	10.9152		1,919.8665	1,919.8665	0.0721	0.0680	1,941.9422
Total	**1.1756**	**0.9555**	**7.8396**	**0.0202**	**107.6109**	**0.0139**	**107.6248**	**11.0550**	**0.0129**	**11.0678**		**2,045.6940**	**2,045.6940**	**0.0726**	**0.0854**	**2,072.9563**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1800e-003	0.2034	0.0831	1.1800e-003	15.3086	1.9700e-003	15.3106	1.5349	1.8800e-003	1.5368		124.1366	124.1366	4.7000e-004	0.0170	129.2258
Worker	1.0859	0.6658	7.1634	0.0184	1,137.3364	0.0113	1,137.3477	113.8155	0.0104	113.8259		1,862.7954	1,862.7954	0.0653	0.0628	1,883.1502
Total	**1.0951**	**0.8692**	**7.2464**	**0.0196**	**1,152.6450**	**0.0133**	**1,152.6582**	**115.3504**	**0.0123**	**115.3626**		**1,986.9320**	**1,986.9320**	**0.0658**	**0.0799**	**2,012.3760**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1800e-003	0.2034	0.0831	1.1800e-003	1.4398	1.9700e-003	1.4417	0.1508	1.8800e-003	0.1527		124.1366	124.1366	4.7000e-004	0.0170	129.2258
Worker	1.0859	0.6658	7.1634	0.0184	106.1711	0.0113	106.1824	10.9042	0.0104	10.9146		1,862.7954	1,862.7954	0.0653	0.0628	1,883.1502
Total	**1.0951**	**0.8692**	**7.2464**	**0.0196**	**107.6109**	**0.0133**	**107.6241**	**11.0550**	**0.0123**	**11.0673**		**1,986.9320**	**1,986.9320**	**0.0658**	**0.0799**	**2,012.3760**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0564	0.0364	0.3752	9.2000e-004	55.0324	5.8000e-004	55.0330	5.5072	5.3000e-004	5.5077		92.8968	92.8968	3.4900e-003	3.2900e-003	93.9649
Total	**0.0564**	**0.0364**	**0.3752**	**9.2000e-004**	**55.0324**	**5.8000e-004**	**55.0330**	**5.5072**	**5.3000e-004**	**5.5077**		**92.8968**	**92.8968**	**3.4900e-003**	**3.2900e-003**	**93.9649**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0564	0.0364	0.3752	9.2000e-004	5.1373	5.8000e-004	5.1379	0.5276	5.3000e-004	0.5282		92.8968	92.8968	3.4900e-003	3.2900e-003	93.9649
Total	**0.0564**	**0.0364**	**0.3752**	**9.2000e-004**	**5.1373**	**5.8000e-004**	**5.1379**	**0.5276**	**5.3000e-004**	**0.5282**		**92.8968**	**92.8968**	**3.4900e-003**	**3.2900e-003**	**93.9649**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0526	0.0322	0.3466	8.9000e-004	55.0324	5.5000e-004	55.0330	5.5072	5.0000e-004	5.5077		90.1353	90.1353	3.1600e-003	3.0400e-003	91.1202
Total	**0.0526**	**0.0322**	**0.3466**	**8.9000e-004**	**55.0324**	**5.5000e-004**	**55.0330**	**5.5072**	**5.0000e-004**	**5.5077**		**90.1353**	**90.1353**	**3.1600e-003**	**3.0400e-003**	**91.1202**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0526	0.0322	0.3466	8.9000e-004	5.1373	5.5000e-004	5.1379	0.5276	5.0000e-004	0.5281		90.1353	90.1353	3.1600e-003	3.0400e-003	91.1202
Total	**0.0526**	**0.0322**	**0.3466**	**8.9000e-004**	**5.1373**	**5.5000e-004**	**5.1379**	**0.5276**	**5.0000e-004**	**0.5281**		**90.1353**	**90.1353**	**3.1600e-003**	**3.0400e-003**	**91.1202**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0407	0.0749	0.4683	1.1200e-003	61.6893	8.6000e-004	61.6901	6.1562	8.1000e-004	6.1570		114.0015	114.0015	5.2300e-003	5.5600e-003	115.7880
Unmitigated	0.0407	0.0749	0.4683	1.1200e-003	61.6893	8.6000e-004	61.6901	6.1562	8.1000e-004	6.1570		114.0015	114.0015	5.2300e-003	5.5600e-003	115.7880

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	6.10	0.00	0.00	21,525	21,525
Refrigerated Warehouse-No Rail	6.10	0.00	0.00	21,525	21,525
Total	12.20	0.00	0.00	43,050	43,050

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.40	9.50	11.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.40	9.50	11.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.40	9.50	11.90	59.00	0.00	41.00	92	5	3
Refrigerated Warehouse-No	16.40	9.50	11.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504
Refrigerated Warehouse-No Rail	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
NaturalGas Unmitigated	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	12347.2	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
Total		**0.2663**	**2.4210**	**2.0337**	**0.0145**		**0.1840**	**0.1840**		**0.1840**	**0.1840**		**2,905.2168**	**2,905.2168**	**0.0557**	**0.0533**	**2,922.4811**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	12.3472	0.2663	2.4210	2.0337	0.0145		0.1840	0.1840		0.1840	0.1840		2,905.2168	2,905.2168	0.0557	0.0533	2,922.4811
Total		**0.2663**	**2.4210**	**2.0337**	**0.0145**		**0.1840**	**0.1840**		**0.1840**	**0.1840**		**2,905.2168**	**2,905.2168**	**0.0557**	**0.0533**	**2,922.4811**

6.0 Area Detail

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.0925	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Unmitigated	6.0925	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.3589					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7287					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.8400e-003	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Total	**6.0925**	**4.8000e-004**	**0.0525**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1127**	**0.1127**	**2.9000e-004**		**0.1200**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.3589					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7287					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.8400e-003	4.8000e-004	0.0525	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1127	0.1127	2.9000e-004		0.1200
Total	**6.0925**	**4.8000e-004**	**0.0525**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1127**	**0.1127**	**2.9000e-004**		**0.1200**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Off-Highway Trucks	1	2.00	8	402	0.38	Diesel
Other Construction Equipment	3	8.00	8	172	0.42	Diesel

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Off-Highway Trucks	0.1249	0.8361	0.8166	3.3200e-003		0.0301	0.0301		0.0277	0.0277	0.0000	321.6881	321.6881	0.1040		324.2891
Other Construction Equipment	0.9849	9.5274	11.9065	0.0183		0.4916	0.4916		0.4523	0.4523	0.0000	1,775.0771	1,775.0771	0.5741		1,789.4295
Total	**1.1098**	**10.3635**	**12.7231**	**0.0217**		**0.5217**	**0.5217**		**0.4800**	**0.4800**	**0.0000**	**2,096.7652**	**2,096.7652**	**0.6781**		**2,113.7186**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT B

Renewable Energy Emissions Displacement

CRITERIA AIR POLLUTANT DISPLACEMENT

Table A-1. Renewable Energy Generator Specifications

Megawatt Project	**80**
Operational Time[1]	**25**
Annual Hours of Generation[1]	**2,190**
Annual Kilowatt Hours	**175,200,000**
Heat Rate[2]	**9,313**
Btu Displaced[3]	**1,631,637,600,000**

Notes:

[1] The Project is assumed to generate electricity 25 percent of the time available (2,190 hours annually).

[2] Heat Rate indicate the enery 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 highter heat rates. The CEC's "Updated Thermal Power Plant Efficiency Measures and Operational Characteristics for Production Cost Modeling" (2019) estimates heat rates and operating ranges for thermal power plants supplying energy to California. the average heat rate of power plant types are as follows:

Table A-2. Heat Rates

Steam Boiler Fueled by Coal:	10,800
Steam Boiler Fueled by Natural Gas:	10,200
Gas Turbine:	10,100
Combined Natural Gas Boiler & Turbine:	7,640

Omitting steam boilers fueled by cola since so little of California's energy is derived from coal, the average heat rate = 9313

[3] The annual kilowatt hours multipled by the average heat rate of existing fossil fuel based energy generators equals the amount of Btu displaced from fossil fuel production, as shown in Table A-3.

Table A-3. Btu Displacement

Annual Kilowatt Hours	175,200,000
Average Heat Rate	9,313
Btu Displaced from Fossil Fuel Based Energy Production	1,631,637,600,000

Energy consumption in California is predominately derived from natural gas, followed by renewables, nuclear, unspecified nonrenewable sources, and coal, as shown in Table A-4.

Table A-4. California Energy Mix (percentages)

Natural Gas	37.06
Coal	2.74
Renewables (not including hydroelctric generators)	33.09
Nuclear	9.33
Unspecified nonrenewable sources	5.36

Source: California Energy Commission. 2021. "2020 Total System Electric Generation." https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation

For the purposes of this anlaysis, the percentage of California energy derived from natural gas is added to unspecificed nonrewable sources. Table A-5 identifies the displaced Btu attributable to displaced natural gas and displaced coal.

Table A-5. Btu Displacement by Fossil Fuel Type - Annually

Natural Gas & Unspecified Nonrewable Sources	692,140,669,920
Coal	44,706,870,240

The heat content of coal is assumed at 24 million Btu per ton of coal burned. Table A-6 shows the tons of displaced burned coal based on this heat content.

Table A-6. Tons of Displaced Burned Coal - Annually

Displaced Coal Burn	1,863

Table A-7. Emissions Displacement - Tons per Year[4]

Natural Gas	
Nitrogen Oxide	1.71
Carbon Monoxide	0.52
Coarse Particulate Matter	1.63
Fine Particulate Matter	0.66
Sulfur Dioxide	1.18

Coal	
Nitrogen Oxide	11.18
Carbon Monoxide	0.47
Coarse Particulate Matter	0.08
Fine Particulate Matter	0.06
Sulfur Dioxide	0.53

Table A-8. Total Combined Emissions Displacement - Tons per Year

Natural Gas & Coal	
Nitrogen Oxide	12.89
Carbon Monoxide	0.98
Coarse Particulate Matter	1.70
Fine Particulate Matter	0.71
Sulfur Dioxide	1.71

Table A-9. Total Combined Emissions Displacement over the Life of the Project (30 years) - Tons per Year

Natural Gas & Coal	
Nitrogen Oxide	**386.69**
Carbon Monoxide	**29.54**
Coarse Particulate Matter	**51.14**
Fine Particulate Matter	**21.40**
Sulfur Dioxide	**51.23**

[4]Source: Displaced emissions calculated by ECORP Consulting using U.S. EPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015.

GREENHOUSE GAS EMISSIONS DISPLACEMENT

Table B-1. Renewable Energy Generator Specifications

Megawatt Project	**80**
Operational Time[1]	**25**
Annual Hours of Generation[1]	**2,190**
Annual Kilowatt Hours	**175,200,000**
Heat Rate[2]	**9,313**
Btu Displaced[3]	**1,631,637,600,000**

Notes:

[1] The Project is assumed to generate electricity 25 percent of the time available (2,190 hours annually).

[2] Heat Rate indicate the enery 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 highter heat rates. The CEC's "Updated Thermal Power Plant Efficiency Measures and Operational Characteristics for Production Cost Modeling" (2019) estimates heat rates and operating ranges for thermal power plants supplying energy to California. the average heat rate of power plant types are as follows:

Table B-2. Heat Rates

Steam Boiler Fueled by Coal:	10,800
Steam Boiler Fueled by Natural Gas:	10,200
Gas Turbine:	10,100
Combined Natural Gas Boiler & Turbine:	7,640

Omitting steam boilers fueled by cola since so little of California's energy is derived from coal, the average heat rate = 9313

[3] The annual kilowatt hours multipled by the average heat rate of existing fossil fuel based energy generators equals the amount of Btu displaced from fossil fuel production, as shown in Table A-3.

Table B-3. Btu Displacement

Annual Kilowatt Hours	175,200,000
Average Heat Rate	9,313
Btu Displaced from Fossil Fuel Based Energy Production	1,631,637,600,000

Energy consumption in California is predominately derived from natural gas, followed by renewables, nuclear, unspecified nonrenewable sources, and coal, as shown in Table A-4.

Table B-4. California Energy Mix (percentages)

Natural Gas	37.06
Coal	2.74
Renewables (not including hydroelctric generators)	33.09
Nuclear	9.33
Unspecified nonrenewable sources	5.36

Source: California Energy Commission. 2021. "2020 Total System Electric Generation." https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation

For the purposes of this anlaysis, the percentage of California energy derived from natural gas is added to unspecificed nonrewable sources. Table A-5 identifies the displaced Btu attributable to displaced natural gas and displaced coal.

Table B-5. Btu Displacement by Fossil Fuel Type - Annually

Natural Gas & Unspecified Nonrewable Sources	692,140,669,920
Coal	44,706,870,240

The heat content of coal is assumed at 24 million Btu per ton of coal burned. Table A-6 shows the tons of displaced burned coal based on this heat content.

Table B-6. Tons of Displaced Burned Coal - Annually

Displaced Coal Burn	1,863

Table B-7. Emissions Displacement - Metric Tons per Year[4]

Natural Gas	
Carbon Dioxide	38,068
Methane	0.000
Nitrous Oxide	0.000
Carbon Dioxide Equivalents	38,068

Coal	
Carbon Dioxide	4500
Methane	0.030
Nitrous Oxide	0.022
Carbon Dioxide Equivalents	4508

Table B-8. Total Combined Emissions Displacement - Metric Tons per Year

Natural Gas & Coal	
Carbon Dioxide	42,568
Methane	0.030
Nitrous Oxide	0.022
Carbon Dioxide Equivalents	42,576

Table B-9. Total Combined Emissions Displacement over the Life of the Project (30 years) - Metric Tons per Year

Natural Gas & Coal	
Carbon Dioxide	1,277,047
Methane	0.894
Nitrous Oxide	0.671
Carbon Dioxide Equivalents	**1,277,277**

[4]Source: Displaced emissions calculated by ECORP Consulting using U.S. EPA's AP-42 Fifth Edition Compilation of Air Emissions Factors 1995; 2015.

ATTACHMENT C

CalEEMod Output Files Greenhouse Gas Emissions

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

VEGA 6 SES Solar and Battery Storage Project

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	316.00	Acre	316.00	13,764,960.00	0
Other Non-Asphalt Surfaces	24.50	Acre	24.50	1,067,220.00	0
Refrigerated Warehouse-No Rail	87.12	1000sqft	2.00	87,120.00	0
Refrigerated Warehouse-No Rail	87.12	1000sqft	2.00	87,120.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2024
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.983	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses account for 316 acres of solar field, 2 acres of BESS, 2 acres of substation, and 24.5 acres of transmission line distrubance.

Construction Phase - Construction phasing adjusted to reflect the Project Description. Solar panel installation and paving assumed to occur simultaneously.

Grading -

Trips and VMT - A maximum of 310 worker commute trips during solar panel installation per Traffic Study

On-road Fugitive Dust - 75.6% paved roads for worker commutes [2.6 m dirt roads / 10.2 m trip lenght default - 75.6% paved roads]. 78.2% paved roads for vendors.

Vehicle Trips - Maximum trips per day = 6 per Project Description

Consumer Products - No degresers used during operations

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water And Wastewater - Water use accounts for 179,200,000 gallons used during construction, amortized over the life of the Project + 6,517,000 gallons annually anticipated for operations

Solid Waste - No solid waste generation

Operational Off-Road Equipment - Off road equipment for operational maintenance

Construction Off-road Equipment Mitigation - Mitigation measure AQ-1 accounted. PM reduction value for applying soil stabilizers to unpaved roadways per communication with ICAPCD (Monica Soucier email correspondence)

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	6,200.00	197.00
tblConstructionPhase	NumDays	620.00	42.00
tblConstructionPhase	NumDays	440.00	197.00
tblConstructionPhase	NumDays	240.00	23.00
tblConstructionPhase	PhaseEndDate	8/15/2051	5/31/2024
tblConstructionPhase	PhaseEndDate	11/9/2027	8/30/2023
tblConstructionPhase	PhaseEndDate	4/22/2053	5/31/2024
tblConstructionPhase	PhaseEndDate	6/24/2025	7/3/2023
tblConstructionPhase	PhaseStartDate	11/10/2027	8/31/2023
tblConstructionPhase	PhaseStartDate	6/25/2025	7/4/2023
tblConstructionPhase	PhaseStartDate	8/16/2051	8/31/2023
tblConstructionPhase	PhaseStartDate	7/24/2024	6/1/2023
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	VendorPercentPave	50.00	78.20
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60
tblOnRoadDust	WorkerPercentPave	50.00	75.60

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	8.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.38	0.38
tblOperationalOffRoadEquipment	OperLoadFactor	0.42	0.42
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	3.00
tblProjectCharacteristics	CO2IntensityFactor	189.98	189.983
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	163.79	0.00
tblTripsAndVMT	VendorTripNumber	2,460.00	4.00
tblTripsAndVMT	WorkerTripNumber	6,303.00	310.00
tblVehicleTrips	ST_TR	2.12	0.00
tblVehicleTrips	SU_TR	2.12	0.00
tblVehicleTrips	WD_TR	2.12	0.07
tblWater	IndoorWaterUseRate	40,293,000.00	0.00
tblWater	OutdoorWaterUseRate	0.00	12,490,333.00

2.0 Emissions Summary

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2739	2.1542	2.5575	4.9300e-003	53.4533	0.0978	53.5510	5.5007	0.0906	5.5913	0.0000	434.8539	434.8539	0.1047	3.5800e-003	438.5384
2024	0.2031	1.3118	2.1605	3.9400e-003	64.2414	0.0603	64.3017	6.4294	0.0561	6.4856	0.0000	348.3193	348.3193	0.0691	4.0900e-003	351.2656
Maximum	**0.2739**	**2.1542**	**2.5575**	**4.9300e-003**	**64.2414**	**0.0978**	**64.3017**	**6.4294**	**0.0906**	**6.4856**	**0.0000**	**434.8539**	**434.8539**	**0.1047**	**4.0900e-003**	**438.5384**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2739	2.1542	2.5575	4.9300e-003	5.1169	0.0978	5.2147	0.5845	0.0906	0.6751	0.0000	434.8535	434.8535	0.1047	3.5800e-003	438.5380
2024	0.2031	1.3118	2.1605	3.9400e-003	6.0002	0.0603	6.0604	0.6169	0.0561	0.6730	0.0000	348.3190	348.3190	0.0691	4.0900e-003	351.2653
Maximum	**0.2739**	**2.1542**	**2.5575**	**4.9300e-003**	**6.0002**	**0.0978**	**6.0604**	**0.6169**	**0.0906**	**0.6751**	**0.0000**	**434.8535**	**434.8535**	**0.1047**	**4.0900e-003**	**438.5380**

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**90.55**	**0.00**	**90.43**	**89.93**	**0.00**	**88.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	**4-11-2023**	**7-10-2023**	0.4522	0.4522
3	**7-11-2023**	**10-10-2023**	1.1263	1.1263
4	**10-11-2023**	**1-10-2024**	0.9593	0.9593
5	**1-11-2024**	**4-10-2024**	0.8942	0.8942
6	**4-11-2024**	**7-10-2024**	0.5063	0.5063
		Highest	1.1263	1.1263

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1114	4.0000e-005	4.7200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.2000e-003	9.2000e-003	2.0000e-005	0.0000	9.8000e-003
Energy	0.0486	0.4418	0.3711	2.6500e-003		0.0336	0.0336		0.0336	0.0336	0.0000	1,079.1930	1,079.1930	0.1131	0.0214	1,088.4022
Mobile	6.0300e-003	9.5000e-003	0.0655	1.5000e-004	8.0195	1.1000e-004	8.0197	0.8003	1.0000e-004	0.8004	0.0000	14.1759	14.1759	6.0000e-004	6.5000e-004	14.3839
Offroad	4.4400e-003	0.0415	0.0509	9.0000e-005		2.0900e-003	2.0900e-003		1.9200e-003	1.9200e-003	0.0000	7.6086	7.6086	2.4600e-003	0.0000	7.6701
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	11.9583	11.9583	2.0800e-003	2.5000e-004	12.0852
Total	**1.1705**	**0.4928**	**0.4923**	**2.8900e-003**	**8.0195**	**0.0358**	**8.0554**	**0.8003**	**0.0356**	**0.8359**	**0.0000**	**1,112.9449**	**1,112.9449**	**0.1183**	**0.0223**	**1,122.5512**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1114	4.0000e-005	4.7200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.2000e-003	9.2000e-003	2.0000e-005	0.0000	9.8000e-003
Energy	0.0486	0.4418	0.3711	2.6500e-003		0.0336	0.0336		0.0336	0.0336	0.0000	1,079.1930	1,079.1930	0.1131	0.0214	1,088.4022
Mobile	6.0300e-003	9.5000e-003	0.0655	1.5000e-004	8.0195	1.1000e-004	8.0197	0.8003	1.0000e-004	0.8004	0.0000	14.1759	14.1759	6.0000e-004	6.5000e-004	14.3839
Offroad	4.4400e-003	0.0415	0.0509	9.0000e-005		2.0900e-003	2.0900e-003		1.9200e-003	1.9200e-003	0.0000	7.6086	7.6086	2.4600e-003	0.0000	7.6701
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	11.9583	11.9583	2.0800e-003	2.5000e-004	12.0852
Total	**1.1705**	**0.4928**	**0.4923**	**2.8900e-003**	**8.0195**	**0.0358**	**8.0554**	**0.8003**	**0.0356**	**0.8359**	**0.0000**	**1,112.9449**	**1,112.9449**	**0.1183**	**0.0223**	**1,122.5512**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	7/3/2023	5	23	
2	Grading	Grading	7/4/2023	8/30/2023	5	42	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3	Building Construction	Building Construction	8/31/2023	5/31/2024	5	197	
4	Paving	Paving	8/31/2023	5/31/2024	5	197	

Acres of Grading (Site Preparation Phase): 34.5

Acres of Grading (Grading Phase): 126

Acres of Paving: 340.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	310.00	4.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.20	11.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2261	0.0000	0.2261	0.1162	0.0000	0.1162	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0306	0.3165	0.2098	4.4000e-004		0.0146	0.0146		0.0134	0.0134	0.0000	38.4683	38.4683	0.0124	0.0000	38.7793
Total	**0.0306**	**0.3165**	**0.2098**	**4.4000e-004**	**0.2261**	**0.0146**	**0.2406**	**0.1162**	**0.0134**	**0.1296**	**0.0000**	**38.4683**	**38.4683**	**0.0124**	**0.0000**	**38.7793**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	4.9000e-004	5.8000e-003	1.0000e-005	0.7345	1.0000e-005	0.7345	0.0735	1.0000e-005	0.0735	0.0000	1.2471	1.2471	4.0000e-005	4.0000e-005	1.2603
Total	**8.4000e-004**	**4.9000e-004**	**5.8000e-003**	**1.0000e-005**	**0.7345**	**1.0000e-005**	**0.7345**	**0.0735**	**1.0000e-005**	**0.0735**	**0.0000**	**1.2471**	**1.2471**	**4.0000e-005**	**4.0000e-005**	**1.2603**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0882	0.0000	0.0882	0.0453	0.0000	0.0453	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0306	0.3165	0.2098	4.4000e-004		0.0146	0.0146		0.0134	0.0134	0.0000	38.4683	38.4683	0.0124	0.0000	38.7793
Total	**0.0306**	**0.3165**	**0.2098**	**4.4000e-004**	**0.0882**	**0.0146**	**0.1027**	**0.0453**	**0.0134**	**0.0587**	**0.0000**	**38.4683**	**38.4683**	**0.0124**	**0.0000**	**38.7793**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	4.9000e-004	5.8000e-003	1.0000e-005	0.0686	1.0000e-005	0.0686	7.0500e-003	1.0000e-005	7.0600e-003	0.0000	1.2471	1.2471	4.0000e-005	4.0000e-005	1.2603
Total	**8.4000e-004**	**4.9000e-004**	**5.8000e-003**	**1.0000e-005**	**0.0686**	**1.0000e-005**	**0.0686**	**7.0500e-003**	**1.0000e-005**	**7.0600e-003**	**0.0000**	**1.2471**	**1.2471**	**4.0000e-005**	**4.0000e-005**	**1.2603**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1933	0.0000	0.1933	0.0767	0.0000	0.0767	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0698	0.7248	0.5891	1.3000e-003		0.0299	0.0299		0.0275	0.0275	0.0000	114.5239	114.5239	0.0370	0.0000	115.4499
Total	**0.0698**	**0.7248**	**0.5891**	**1.3000e-003**	**0.1933**	**0.0299**	**0.2232**	**0.0767**	**0.0275**	**0.1043**	**0.0000**	**114.5239**	**114.5239**	**0.0370**	**0.0000**	**115.4499**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-003	1.0000e-003	0.0118	3.0000e-005	1.4903	2.0000e-005	1.4903	0.1492	1.0000e-005	0.1492	0.0000	2.5303	2.5303	9.0000e-005	8.0000e-005	2.5570
Total	**1.7000e-003**	**1.0000e-003**	**0.0118**	**3.0000e-005**	**1.4903**	**2.0000e-005**	**1.4903**	**0.1492**	**1.0000e-005**	**0.1492**	**0.0000**	**2.5303**	**2.5303**	**9.0000e-005**	**8.0000e-005**	**2.5570**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0754	0.0000	0.0754	0.0299	0.0000	0.0299	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0698	0.7248	0.5891	1.3000e-003		0.0299	0.0299		0.0275	0.0275	0.0000	114.5238	114.5238	0.0370	0.0000	115.4498
Total	**0.0698**	**0.7248**	**0.5891**	**1.3000e-003**	**0.0754**	**0.0299**	**0.1053**	**0.0299**	**0.0275**	**0.0574**	**0.0000**	**114.5238**	**114.5238**	**0.0370**	**0.0000**	**115.4498**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-003	1.0000e-003	0.0118	3.0000e-005	0.1392	2.0000e-005	0.1392	0.0143	1.0000e-005	0.0143	0.0000	2.5303	2.5303	9.0000e-005	8.0000e-005	2.5570
Total	**1.7000e-003**	**1.0000e-003**	**0.0118**	**3.0000e-005**	**0.1392**	**2.0000e-005**	**0.1392**	**0.0143**	**1.0000e-005**	**0.0143**	**0.0000**	**2.5303**	**2.5303**	**9.0000e-005**	**8.0000e-005**	**2.5570**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0684	0.6257	0.7066	1.1700e-003		0.0304	0.0304		0.0286	0.0286	0.0000	100.8351	100.8351	0.0240	0.0000	101.4347
Total	**0.0684**	**0.6257**	**0.7066**	**1.1700e-003**		**0.0304**	**0.0304**		**0.0286**	**0.0286**	**0.0000**	**100.8351**	**100.8351**	**0.0240**	**0.0000**	**101.4347**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2000e-004	8.7000e-003	3.7000e-003	5.0000e-005	0.6441	9.0000e-005	0.6442	0.0646	8.0000e-005	0.0647	0.0000	4.9605	4.9605	2.0000e-005	6.8000e-004	5.1648
Worker	0.0546	0.0320	0.3780	8.9000e-004	47.8497	5.2000e-004	47.8503	4.7888	4.8000e-004	4.7893	0.0000	81.2408	81.2408	2.7300e-003	2.6500e-003	82.0986
Total	**0.0550**	**0.0407**	**0.3817**	**9.4000e-004**	**48.4938**	**6.1000e-004**	**48.4944**	**4.8534**	**5.6000e-004**	**4.8539**	**0.0000**	**86.2013**	**86.2013**	**2.7500e-003**	**3.3300e-003**	**87.2634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0684	0.6257	0.7066	1.1700e-003		0.0304	0.0304		0.0286	0.0286	0.0000	100.8349	100.8349	0.0240	0.0000	101.4346
Total	**0.0684**	**0.6257**	**0.7066**	**1.1700e-003**		**0.0304**	**0.0304**		**0.0286**	**0.0286**	**0.0000**	**100.8349**	**100.8349**	**0.0240**	**0.0000**	**101.4346**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2000e-004	8.7000e-003	3.7000e-003	5.0000e-005	0.0606	9.0000e-005	0.0607	6.3600e-003	8.0000e-005	6.4400e-003	0.0000	4.9605	4.9605	2.0000e-005	6.8000e-004	5.1648
Worker	0.0546	0.0320	0.3780	8.9000e-004	4.4688	5.2000e-004	4.4693	0.4593	4.8000e-004	0.4598	0.0000	81.2408	81.2408	2.7300e-003	2.6500e-003	82.0986
Total	**0.0550**	**0.0407**	**0.3817**	**9.4000e-004**	**4.5294**	**6.1000e-004**	**4.5300**	**0.4657**	**5.6000e-004**	**0.4663**	**0.0000**	**86.2013**	**86.2013**	**2.7500e-003**	**3.3300e-003**	**87.2634**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0809	0.7394	0.8892	1.4800e-003		0.0337	0.0337		0.0317	0.0317	0.0000	127.5170	127.5170	0.0302	0.0000	128.2709
Total	**0.0809**	**0.7394**	**0.8892**	**1.4800e-003**		**0.0337**	**0.0337**		**0.0317**	**0.0317**	**0.0000**	**127.5170**	**127.5170**	**0.0302**	**0.0000**	**128.2709**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0110	4.4900e-003	6.0000e-005	0.8144	1.1000e-004	0.8145	0.0817	1.0000e-004	0.0818	0.0000	6.1875	6.1875	2.0000e-005	8.5000e-004	6.4410
Worker	0.0642	0.0359	0.4411	1.0900e-003	60.4997	6.2000e-004	60.5003	6.0548	5.7000e-004	6.0554	0.0000	99.6472	99.6472	3.1200e-003	3.0900e-003	100.6472
Total	**0.0647**	**0.0469**	**0.4456**	**1.1500e-003**	**61.3140**	**7.3000e-004**	**61.3147**	**6.1365**	**6.7000e-004**	**6.1371**	**0.0000**	**105.8347**	**105.8347**	**3.1400e-003**	**3.9400e-003**	**107.0882**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0809	0.7394	0.8892	1.4800e-003		0.0337	0.0337		0.0317	0.0317	0.0000	127.5169	127.5169	0.0302	0.0000	128.2707
Total	**0.0809**	**0.7394**	**0.8892**	**1.4800e-003**		**0.0337**	**0.0337**		**0.0317**	**0.0317**	**0.0000**	**127.5169**	**127.5169**	**0.0302**	**0.0000**	**128.2707**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0110	4.4900e-003	6.0000e-005	0.0766	1.1000e-004	0.0768	8.0400e-003	1.0000e-004	8.1400e-003	0.0000	6.1875	6.1875	2.0000e-005	8.5000e-004	6.4410
Worker	0.0642	0.0359	0.4411	1.0900e-003	5.6501	6.2000e-004	5.6508	0.5808	5.7000e-004	0.5813	0.0000	99.6472	99.6472	3.1200e-003	3.0900e-003	100.6472
Total	**0.0647**	**0.0469**	**0.4456**	**1.1500e-003**	**5.7268**	**7.3000e-004**	**5.7275**	**0.5888**	**6.7000e-004**	**0.5895**	**0.0000**	**105.8347**	**105.8347**	**3.1400e-003**	**3.9400e-003**	**107.0882**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0449	0.4433	0.6344	9.9000e-004		0.0222	0.0222		0.0204	0.0204	0.0000	87.1169	87.1169	0.0282	0.0000	87.8213
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0449**	**0.4433**	**0.6344**	**9.9000e-004**		**0.0222**	**0.0222**		**0.0204**	**0.0204**	**0.0000**	**87.1169**	**87.1169**	**0.0282**	**0.0000**	**87.8213**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6400e-003	1.5500e-003	0.0183	4.0000e-005	2.3153	3.0000e-005	2.3153	0.2317	2.0000e-005	0.2317	0.0000	3.9310	3.9310	1.3000e-004	1.3000e-004	3.9725
Total	**2.6400e-003**	**1.5500e-003**	**0.0183**	**4.0000e-005**	**2.3153**	**3.0000e-005**	**2.3153**	**0.2317**	**2.0000e-005**	**0.2317**	**0.0000**	**3.9310**	**3.9310**	**1.3000e-004**	**1.3000e-004**	**3.9725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0449	0.4433	0.6344	9.9000e-004		0.0222	0.0222		0.0204	0.0204	0.0000	87.1168	87.1168	0.0282	0.0000	87.8212
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0449**	**0.4433**	**0.6344**	**9.9000e-004**		**0.0222**	**0.0222**		**0.0204**	**0.0204**	**0.0000**	**87.1168**	**87.1168**	**0.0282**	**0.0000**	**87.8212**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6400e-003	1.5500e-003	0.0183	4.0000e-005	0.2162	3.0000e-005	0.2163	0.0222	2.0000e-005	0.0223	0.0000	3.9310	3.9310	1.3000e-004	1.3000e-004	3.9725
Total	**2.6400e-003**	**1.5500e-003**	**0.0183**	**4.0000e-005**	**0.2162**	**3.0000e-005**	**0.2163**	**0.0222**	**2.0000e-005**	**0.0223**	**0.0000**	**3.9310**	**3.9310**	**1.3000e-004**	**1.3000e-004**	**3.9725**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0544	0.5239	0.8044	1.2500e-003		0.0258	0.0258		0.0237	0.0237	0.0000	110.1459	110.1459	0.0356	0.0000	111.0365
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0544**	**0.5239**	**0.8044**	**1.2500e-003**		**0.0258**	**0.0258**		**0.0237**	**0.0237**	**0.0000**	**110.1459**	**110.1459**	**0.0356**	**0.0000**	**111.0365**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-003	1.7400e-003	0.0213	5.0000e-005	2.9274	3.0000e-005	2.9274	0.2930	3.0000e-005	0.2930	0.0000	4.8216	4.8216	1.5000e-004	1.5000e-004	4.8700
Total	**3.1000e-003**	**1.7400e-003**	**0.0213**	**5.0000e-005**	**2.9274**	**3.0000e-005**	**2.9274**	**0.2930**	**3.0000e-005**	**0.2930**	**0.0000**	**4.8216**	**4.8216**	**1.5000e-004**	**1.5000e-004**	**4.8700**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0544	0.5239	0.8044	1.2500e-003		0.0258	0.0258		0.0237	0.0237	0.0000	110.1458	110.1458	0.0356	0.0000	111.0364
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0544**	**0.5239**	**0.8044**	**1.2500e-003**		**0.0258**	**0.0258**		**0.0237**	**0.0237**	**0.0000**	**110.1458**	**110.1458**	**0.0356**	**0.0000**	**111.0364**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-003	1.7400e-003	0.0213	5.0000e-005	0.2734	3.0000e-005	0.2734	0.0281	3.0000e-005	0.0281	0.0000	4.8216	4.8216	1.5000e-004	1.5000e-004	4.8700
Total	**3.1000e-003**	**1.7400e-003**	**0.0213**	**5.0000e-005**	**0.2734**	**3.0000e-005**	**0.2734**	**0.0281**	**3.0000e-005**	**0.0281**	**0.0000**	**4.8216**	**4.8216**	**1.5000e-004**	**1.5000e-004**	**4.8700**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.0300e-003	9.5000e-003	0.0655	1.5000e-004	8.0195	1.1000e-004	8.0197	0.8003	1.0000e-004	0.8004	0.0000	14.1759	14.1759	6.0000e-004	6.5000e-004	14.3839
Unmitigated	6.0300e-003	9.5000e-003	0.0655	1.5000e-004	8.0195	1.1000e-004	8.0197	0.8003	1.0000e-004	0.8004	0.0000	14.1759	14.1759	6.0000e-004	6.5000e-004	14.3839

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	6.10	0.00	0.00	21,525	21,525
Refrigerated Warehouse-No Rail	6.10	0.00	0.00	21,525	21,525
Total	12.20	0.00	0.00	43,050	43,050

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.40	9.50	11.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.40	9.50	11.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.40	9.50	11.90	59.00	0.00	41.00	92	5	3
Refrigerated Warehouse-No	16.40	9.50	11.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504
Refrigerated Warehouse-No Rail	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	598.2017	598.2017	0.1039	0.0126	604.5527
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	598.2017	598.2017	0.1039	0.0126	604.5527
NaturalGas Mitigated	0.0486	0.4418	0.3711	2.6500e-003		0.0336	0.0336		0.0336	0.0336	0.0000	480.9912	480.9912	9.2200e-003	8.8200e-003	483.8495
NaturalGas Unmitigated	0.0486	0.4418	0.3711	2.6500e-003		0.0336	0.0336		0.0336	0.0336	0.0000	480.9912	480.9912	9.2200e-003	8.8200e-003	483.8495

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	4.50672e+006	0.0486	0.4418	0.3711	2.6500e-003		0.0336	0.0336		0.0336	0.0336	0.0000	480.9912	480.9912	9.2200e-003	8.8200e-003	483.8495
Total		**0.0486**	**0.4418**	**0.3711**	**2.6500e-003**		**0.0336**	**0.0336**		**0.0336**	**0.0336**	**0.0000**	**480.9912**	**480.9912**	**9.2200e-003**	**8.8200e-003**	**483.8495**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	4.50672e+006	0.0486	0.4418	0.3711	2.6500e-003		0.0336	0.0336		0.0336	0.0336	0.0000	480.9912	480.9912	9.2200e-003	8.8200e-003	483.8495
Total		**0.0486**	**0.4418**	**0.3711**	**2.6500e-003**		**0.0336**	**0.0336**		**0.0336**	**0.0336**	**0.0000**	**480.9912**	**480.9912**	**9.2200e-003**	**8.8200e-003**	**483.8495**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	3.47086e+006	598.2017	0.1039	0.0126	604.5527
Total		**598.2017**	**0.1039**	**0.0126**	**604.5527**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	3.47086e+006	598.2017	0.1039	0.0126	604.5527
Total		**598.2017**	**0.1039**	**0.0126**	**604.5527**

6.0 Area Detail

VEGA 6 SES Solar and Battery Storage Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1114	4.0000e-005	4.7200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.2000e-003	9.2000e-003	2.0000e-005	0.0000	9.8000e-003
Unmitigated	1.1114	4.0000e-005	4.7200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.2000e-003	9.2000e-003	2.0000e-005	0.0000	9.8000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6805					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.4000e-004	4.0000e-005	4.7200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.2000e-003	9.2000e-003	2.0000e-005	0.0000	9.8000e-003
Total	**1.1114**	**4.0000e-005**	**4.7200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.2000e-003**	**9.2000e-003**	**2.0000e-005**	**0.0000**	**9.8000e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6805					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.4000e-004	4.0000e-005	4.7200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.2000e-003	9.2000e-003	2.0000e-005	0.0000	9.8000e-003
Total	**1.1114**	**4.0000e-005**	**4.7200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.2000e-003**	**9.2000e-003**	**2.0000e-005**	**0.0000**	**9.8000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11.9583	2.0800e-003	2.5000e-004	12.0852
Unmitigated	11.9583	2.0800e-003	2.5000e-004	12.0852

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0 / 12.4903	11.9583	2.0800e-003	2.5000e-004	12.0852
Total		**11.9583**	**2.0800e-003**	**2.5000e-004**	**12.0852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0 / 12.4903	11.9583	2.0800e-003	2.5000e-004	12.0852
Total		**11.9583**	**2.0800e-003**	**2.5000e-004**	**12.0852**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Off-Highway Trucks	1	2.00	8	402	0.38	Diesel
Other Construction Equipment	3	8.00	8	172	0.42	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Off-Highway Trucks	5.0000e-004	3.3400e-003	3.2700e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.1000e-004	1.1000e-004	0.0000	1.1673	1.1673	3.8000e-004	0.0000	1.1768
Other Construction Equipment	3.9400e-003	0.0381	0.0476	7.0000e-005		1.9700e-003	1.9700e-003		1.8100e-003	1.8100e-003	0.0000	6.4413	6.4413	2.0800e-003	0.0000	6.4934
Total	**4.4400e-003**	**0.0415**	**0.0509**	**8.0000e-005**		**2.0900e-003**	**2.0900e-003**		**1.9200e-003**	**1.9200e-003**	**0.0000**	**7.6086**	**7.6086**	**2.4600e-003**	**0.0000**	**7.6701**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

CalEEMod Input Template

Project Name:	Ramon Substation Expansion	County: Riverside
Project Location:	Riverside-Salton Sea County	Zip code: 92276 (Thousand Palms)
CEC Climate Zone:	15	Jurisdiction: Salton Sea Air Basin, South Coast AQMD
Land Use Setting:	Rural	
Utility:	Imperial Irrigation District	
Operational Year:	2025	

Land Use

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	SF
Parking	Other Asphalt Surfaces	4	Acre	4	174,240.00

Construction Schedule

Construction Phase Name	Phase Type	Start Date	End Date	# Days/Week	Total Days	# one-way worker trips/day	# one-way vendor trips/day	# Total haul trips	Worker Trip Length	Vendor Trip Length	Haul Trip Length
Site Preparation	Site Preparation	1/2/2024	1/15/2024	5	10	10	2	0	14.6	6.2	20
Grading	Grading	1/16/2024	1/25/2024	5	8	13	2	0	14.6	6.2	20
Structural Facilities	Building Construction	1/26/2024	8/14/2024	5	144	40	29	0	14.6	6.2	20
Paving	Paving	8/15/2024	9/9/2024	5	18	18	2	0	14.6	6.2	20
					Total duration: 180 days			default			

Notes:

Worker, vendor, and haul trip numbers and lengths are default.
Assume work would occur 7am-7pm (8 hours/day) Monday through Friday (5 days/week)
Assume cut/fill is balanced on site so no import or export of soil needed
No landscaping

Assume operations and maintenance would not require any additional employees so CalEEMod is a construction only run.

List of Construction Equipment

Equipment Name	CalEEMod Equipment Name	Count	Hours/Day	HP	Load Factor
Site Preparation					
Dozer	Rubber Tired Dozers	1	8	247	0.4
Backhoe	Tractors/Loaders/Backhoes	2	8	97	0.37
Concrete Saw	Concrete/Industrial Saws	1	6	81	0.73
Grading					
Excavator	Excavators	1	8	158	0.38
Grader	Graders	2	8	187	0.41
Dozer	Rubber Tired Dozers	1	8	247	0.4
Backhoe	Tractors/Loaders/Backhoes	1	8	97	0.37
Structural Facilities					
Crane	Cranes	1	7	231	0.29
Forklift	Forklifts	2	8	89	0.2
Generator	Generator Sets	1	8	84	0.74
Backhoe	Tractors/Loaders/Backhoes	1	7	97	0.37
Welder	Welders	1	8	46	0.45
Paving					
Cement and Mortar Mixers	Cement and Mortar Mixers	2	6	9	0.56
Paver	Pavers	1	8	130	0.42
Paving Equipment	Paving Equipment	2	6	132	0.36
Roller	Rollers	2	6	80	0.38

Localized Emissions

SRA 30 Coachella Valley, 4 acre site, 300m receptor distance (used 200m distance to be conservative)

Localized Emissions Summary

	lbs/day			
	NOx	**CO**	**PM10**	**PM2.5**
Maximum on-site emissions	**18.3**	**11.9**	**4.2**	**2.2**
SCAQMD Localized Threshold	506	9,177	104	34
Exceedance?	**No**	**No**	**No**	**No**

Threshold scaled to 4 acre	NOx	CO	PM10	PM2.5
2 acre threshold	425	7174	89	28
5 acre threshold	547	10178	112	37
Calculated 4 acre threshold	506	9177	104	34

Regional Emissions

lb/day

	ROG	NOx	CO	SO2	Fug PM10	Exh PM10	PM10 Total	Fug PM2.5	Exh PM2.5	PM2.5 Total
Site Preparation - 2024 on-site	1.2176	11.8349	10.3398	0.0195	2.9486	0.537	3.4856	1.5154	0.5007	2.016
Site Preparation - 2024 off-site	0.0361	0.0812	0.366	0.00126	0.1225	0.00101	0.1235	0.0328	0.00095	0.0337
Grading - 2024 on-site	1.7284	18.2902	11.9446	0.0301	3.4258	0.7263	4.152	1.5669	0.6682	2.2351
Grading - 2024 off-site	0.0462	0.0872	0.468	0.00154	0.1558	0.00115	0.157	0.0416	0.00108	0.0427
Structural Facilities - 2024 on-site	1.1255	10.0258	11.1152	0.02	0	0.446	0.446	0	0.423	0.423
Structural Facilities - 2024 off-site	0.1667	0.9678	1.7372	0.00831	0.6111	0.00937	0.6204	0.1659	0.00889	0.1747
Paving - 2024 on-site	1.3197	6.8248	9.9854	0.0158	0	0.3322	0.3322	0	0.3073	0.3073
Paving - 2024 off-site	0.0632	0.0972	0.638	0.00201	0.2114	0.0014	0.2127	0.0563	0.00131	0.0576
Daily Maximum	1.77	18.38	12.85	0.03	3.58	0.73	4.31	1.61	0.67	2.28
SCAQMD Threshold	75	100	550	150			150			55
Exceedance?	No	No	No	No			No			No

Regional Emissions Summary

	lb/day					
Construction Phase	**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Site Preparation	1.3	11.9	10.7	< 0.1	3.6	2.0
Grading	1.8	18.4	12.4	< 0.1	4.3	2.3
Structural Facilities	1.3	11.0	12.9	< 0.1	1.1	0.6
Paving	1.4	6.9	10.6	< 0.1	0.5	0.4
Daily Maximum	**1.8**	**18.4**	**12.9**	**< 0.1**	**4.3**	**2.3**
SCAQMD Threshold	75	100	550	150	150	55
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

GHG Emissions Summary

	MTCO2e/ year
Construction Phase	
Site Preparation	9
Grading	11
Structural Facilities	180
Paving	14
Total	214

Ramon Substation Expansion - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Ramon Substation Expansion

Riverside-Salton Sea County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	4.00	Acre	4.00	174,240.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2025
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - total duration - 180 working days

Off-road Equipment - estimated from similar projects

Grading - assume cut/fill is balanced on site

Off-road Equipment - estimated from similar projects

Off-road Equipment - estimated from similar projects

Off-road Equipment - estimated from similar projects

Demolition - no demolition

Trips and VMT - assume no more than 20 workers on site at a time; added 2 vendor trips in site prepartion, grading, and paving for misc. deliveries; others are default

Construction Off-road Equipment Mitigation - assume water 2x/day per SCAQMD Rule 403

Ramon Substation Expansion - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	144.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	PhaseEndDate	9/2/2024	8/14/2024
tblConstructionPhase	PhaseEndDate	10/16/2023	1/25/2024
tblConstructionPhase	PhaseEndDate	9/26/2024	9/9/2024
tblConstructionPhase	PhaseEndDate	10/4/2023	1/15/2024
tblConstructionPhase	PhaseStartDate	10/17/2023	1/26/2024
tblConstructionPhase	PhaseStartDate	10/5/2023	1/16/2024
tblConstructionPhase	PhaseStartDate	9/3/2024	8/15/2024
tblConstructionPhase	PhaseStartDate	9/28/2023	1/2/2024
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	73.00	40.00

2.0 Emissions Summary

Ramon Substation Expansion - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1176	0.9905	1.1093	2.4100e-003	0.1096	0.0414	0.1510	0.0434	0.0391	0.0824	0.0000	211.3604	211.3604	0.0356	5.3700e-003	213.8497
Maximum	**0.1176**	**0.9905**	**1.1093**	**2.4100e-003**	**0.1096**	**0.0414**	**0.1510**	**0.0434**	**0.0391**	**0.0824**	**0.0000**	**211.3604**	**211.3604**	**0.0356**	**5.3700e-003**	**213.8497**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1176	0.9905	1.1093	2.4100e-003	0.0748	0.0414	0.1162	0.0264	0.0391	0.0655	0.0000	211.3603	211.3603	0.0356	5.3700e-003	213.8495
Maximum	**0.1176**	**0.9905**	**1.1093**	**2.4100e-003**	**0.0748**	**0.0414**	**0.1162**	**0.0264**	**0.0391**	**0.0655**	**0.0000**	**211.3603**	**211.3603**	**0.0356**	**5.3700e-003**	**213.8495**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**31.72**	**0.00**	**23.02**	**39.02**	**0.00**	**20.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Ramon Substation Expansion - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	12-28-2023	3-27-2024	0.4109	0.4109
3	3-28-2024	6-27-2024	0.4037	0.4037
4	6-28-2024	9-27-2024	0.2877	0.2877
		Highest	0.4109	0.4109

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0173**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0173**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2024	1/15/2024	5	10	
2	Grading	Grading	1/16/2024	1/25/2024	5	8	
3	Structural Facilities	Building Construction	1/26/2024	8/14/2024	5	144	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	8/15/2024	9/9/2024	5	18	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 12

Acres of Paving: 4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Concrete/Industrial Saws	1	6.00	81	0.73
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Structural Facilities	Cranes	1	7.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Structural Facilities	Forklifts	2	8.00	89	0.20
Structural Facilities	Generator Sets	1	8.00	84	0.74
Grading	Graders	2	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Structural Facilities	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Structural Facilities	Welders	1	8.00	46	0.45

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Structural Facilities	6	40.00	29.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0328	0.0000	0.0328	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0592	0.0517	1.0000e-004		2.6900e-003	2.6900e-003		2.5000e-003	2.5000e-003	0.0000	8.5049	8.5049	2.1900e-003	0.0000	8.5598
Total	**6.0900e-003**	**0.0592**	**0.0517**	**1.0000e-004**	**0.0328**	**2.6900e-003**	**0.0355**	**0.0168**	**2.5000e-003**	**0.0193**	**0.0000**	**8.5049**	**8.5049**	**2.1900e-003**	**0.0000**	**8.5598**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	3.2000e-004	1.3000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1505	0.1505	0.0000	2.0000e-005	0.1572
Worker	1.5000e-004	1.1000e-004	1.4600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.4020	0.4020	1.0000e-005	1.0000e-005	0.4053
Total	**1.6000e-004**	**4.3000e-004**	**1.5900e-003**	**0.0000**	**6.1000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5525**	**0.5525**	**1.0000e-005**	**3.0000e-005**	**0.5625**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0147	0.0000	0.0147	7.5800e-003	0.0000	7.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0592	0.0517	1.0000e-004		2.6900e-003	2.6900e-003		2.5000e-003	2.5000e-003	0.0000	8.5049	8.5049	2.1900e-003	0.0000	8.5598
Total	**6.0900e-003**	**0.0592**	**0.0517**	**1.0000e-004**	**0.0147**	**2.6900e-003**	**0.0174**	**7.5800e-003**	**2.5000e-003**	**0.0101**	**0.0000**	**8.5049**	**8.5049**	**2.1900e-003**	**0.0000**	**8.5598**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	3.2000e-004	1.3000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1505	0.1505	0.0000	2.0000e-005	0.1572
Worker	1.5000e-004	1.1000e-004	1.4600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.4020	0.4020	1.0000e-005	1.0000e-005	0.4053
Total	**1.6000e-004**	**4.3000e-004**	**1.5900e-003**	**0.0000**	**6.1000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5525**	**0.5525**	**1.0000e-005**	**3.0000e-005**	**0.5625**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0305	0.0000	0.0305	0.0139	0.0000	0.0139	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9100e-003	0.0732	0.0478	1.2000e-004		2.9100e-003	2.9100e-003		2.6700e-003	2.6700e-003	0.0000	10.5597	10.5597	3.4200e-003	0.0000	10.6451
Total	**6.9100e-003**	**0.0732**	**0.0478**	**1.2000e-004**	**0.0305**	**2.9100e-003**	**0.0334**	**0.0139**	**2.6700e-003**	**0.0166**	**0.0000**	**10.5597**	**10.5597**	**3.4200e-003**	**0.0000**	**10.6451**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.6000e-004	1.1000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1204	0.1204	0.0000	2.0000e-005	0.1258
Worker	1.6000e-004	1.1000e-004	1.5100e-003	0.0000	5.7000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4181	0.4181	1.0000e-005	1.0000e-005	0.4215
Total	**1.7000e-004**	**3.7000e-004**	**1.6200e-003**	**0.0000**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5385**	**0.5385**	**1.0000e-005**	**3.0000e-005**	**0.5473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0137	0.0000	0.0137	6.2700e-003	0.0000	6.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9100e-003	0.0732	0.0478	1.2000e-004		2.9100e-003	2.9100e-003		2.6700e-003	2.6700e-003	0.0000	10.5597	10.5597	3.4200e-003	0.0000	10.6451
Total	**6.9100e-003**	**0.0732**	**0.0478**	**1.2000e-004**	**0.0137**	**2.9100e-003**	**0.0166**	**6.2700e-003**	**2.6700e-003**	**8.9400e-003**	**0.0000**	**10.5597**	**10.5597**	**3.4200e-003**	**0.0000**	**10.6451**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.6000e-004	1.1000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1204	0.1204	0.0000	2.0000e-005	0.1258
Worker	1.6000e-004	1.1000e-004	1.5100e-003	0.0000	5.7000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4181	0.4181	1.0000e-005	1.0000e-005	0.4215
Total	**1.7000e-004**	**3.7000e-004**	**1.6200e-003**	**0.0000**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.5385**	**0.5385**	**1.0000e-005**	**3.0000e-005**	**0.5473**

3.4 Structural Facilities - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0810	0.7219	0.8003	1.4400e-003		0.0321	0.0321		0.0305	0.0305	0.0000	122.7689	122.7689	0.0252	0.0000	123.3986
Total	**0.0810**	**0.7219**	**0.8003**	**1.4400e-003**		**0.0321**	**0.0321**		**0.0305**	**0.0305**	**0.0000**	**122.7689**	**122.7689**	**0.0252**	**0.0000**	**123.3986**

Ramon Substation Expansion - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Structural Facilities - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0670	0.0276	3.3000e-004	0.0119	5.3000e-004	0.0124	3.4200e-003	5.1000e-004	3.9300e-003	0.0000	31.4290	31.4290	3.4000e-004	4.6400e-003	32.8214
Worker	8.6800e-003	6.1300e-003	0.0839	2.5000e-004	0.0314	1.4000e-004	0.0316	8.3500e-003	1.3000e-004	8.4800e-003	0.0000	23.1550	23.1550	5.4000e-004	5.9000e-004	23.3446
Total	**0.0108**	**0.0732**	**0.1115**	**5.8000e-004**	**0.0433**	**6.7000e-004**	**0.0440**	**0.0118**	**6.4000e-004**	**0.0124**	**0.0000**	**54.5841**	**54.5841**	**8.8000e-004**	**5.2300e-003**	**56.1660**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0810	0.7219	0.8003	1.4400e-003		0.0321	0.0321		0.0305	0.0305	0.0000	122.7687	122.7687	0.0252	0.0000	123.3985
Total	**0.0810**	**0.7219**	**0.8003**	**1.4400e-003**		**0.0321**	**0.0321**		**0.0305**	**0.0305**	**0.0000**	**122.7687**	**122.7687**	**0.0252**	**0.0000**	**123.3985**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Structural Facilities - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0670	0.0276	3.3000e-004	0.0119	5.3000e-004	0.0124	3.4200e-003	5.1000e-004	3.9300e-003	0.0000	31.4290	31.4290	3.4000e-004	4.6400e-003	32.8214
Worker	8.6800e-003	6.1300e-003	0.0839	2.5000e-004	0.0314	1.4000e-004	0.0316	8.3500e-003	1.3000e-004	8.4800e-003	0.0000	23.1550	23.1550	5.4000e-004	5.9000e-004	23.3446
Total	**0.0108**	**0.0732**	**0.1115**	**5.8000e-004**	**0.0433**	**6.7000e-004**	**0.0440**	**0.0118**	**6.4000e-004**	**0.0124**	**0.0000**	**54.5841**	**54.5841**	**8.8000e-004**	**5.2300e-003**	**56.1660**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6400e-003	0.0614	0.0899	1.4000e-004		2.9900e-003	2.9900e-003		2.7700e-003	2.7700e-003	0.0000	12.2785	12.2785	3.8400e-003	0.0000	12.3743
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0119**	**0.0614**	**0.0899**	**1.4000e-004**		**2.9900e-003**	**2.9900e-003**		**2.7700e-003**	**2.7700e-003**	**0.0000**	**12.2785**	**12.2785**	**3.8400e-003**	**0.0000**	**12.3743**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	5.8000e-004	2.4000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.2709	0.2709	0.0000	4.0000e-005	0.2829
Worker	4.9000e-004	3.4000e-004	4.7200e-003	1.0000e-005	1.7700e-003	1.0000e-005	1.7800e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3025	1.3025	3.0000e-005	3.0000e-005	1.3131
Total	**5.1000e-004**	**9.2000e-004**	**4.9600e-003**	**1.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8900e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.5734**	**1.5734**	**3.0000e-005**	**7.0000e-005**	**1.5961**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6400e-003	0.0614	0.0899	1.4000e-004		2.9900e-003	2.9900e-003		2.7700e-003	2.7700e-003	0.0000	12.2784	12.2784	3.8400e-003	0.0000	12.3743
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0119**	**0.0614**	**0.0899**	**1.4000e-004**		**2.9900e-003**	**2.9900e-003**		**2.7700e-003**	**2.7700e-003**	**0.0000**	**12.2784**	**12.2784**	**3.8400e-003**	**0.0000**	**12.3743**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	5.8000e-004	2.4000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.2709	0.2709	0.0000	4.0000e-005	0.2829
Worker	4.9000e-004	3.4000e-004	4.7200e-003	1.0000e-005	1.7700e-003	1.0000e-005	1.7800e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3025	1.3025	3.0000e-005	3.0000e-005	1.3131
Total	**5.1000e-004**	**9.2000e-004**	**4.9600e-003**	**1.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8900e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.5734**	**1.5734**	**3.0000e-005**	**7.0000e-005**	**1.5961**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.80	6.20	6.20	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Ramon Substation Expansion - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Ramon Substation Expansion - Riverside-Salton Sea County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Unmitigated	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0113					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	**0.0173**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0113					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	**0.0173**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Ramon Substation Expansion

Riverside-Salton Sea County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	4.00	Acre	4.00	174,240.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2025
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - total duration - 180 working days

Off-road Equipment - estimated from similar projects

Grading - assume cut/fill is balanced on site

Off-road Equipment - estimated from similar projects

Off-road Equipment - estimated from similar projects

Off-road Equipment - estimated from similar projects

Demolition - no demolition

Trips and VMT - assume no more than 20 workers on site at a time; added 2 vendor trips in site prepartion, grading, and paving for misc. deliveries; others are default

Construction Off-road Equipment Mitigation - assume water 2x/day per SCAQMD Rule 403

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	144.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	PhaseEndDate	9/2/2024	8/14/2024
tblConstructionPhase	PhaseEndDate	10/16/2023	1/25/2024
tblConstructionPhase	PhaseEndDate	9/26/2024	9/9/2024
tblConstructionPhase	PhaseEndDate	10/4/2023	1/15/2024
tblConstructionPhase	PhaseStartDate	10/17/2023	1/26/2024
tblConstructionPhase	PhaseStartDate	10/5/2023	1/16/2024
tblConstructionPhase	PhaseStartDate	9/3/2024	8/15/2024
tblConstructionPhase	PhaseStartDate	9/28/2023	1/2/2024
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	73.00	40.00

2.0 Emissions Summary

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.7746	18.3774	12.8524	0.0316	7.7687	0.7274	8.4961	3.5236	0.6692	4.1928	0.0000	3,067.4137	3,067.4137	0.9442	0.0796	3,093.3179
Maximum	**1.7746**	**18.3774**	**12.8524**	**0.0316**	**7.7687**	**0.7274**	**8.4961**	**3.5236**	**0.6692**	**4.1928**	**0.0000**	**3,067.4137**	**3,067.4137**	**0.9442**	**0.0796**	**3,093.3179**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.7746	18.3774	12.8524	0.0316	3.5816	0.7274	4.3090	1.6085	0.6692	2.2777	0.0000	3,067.4137	3,067.4137	0.9442	0.0796	3,093.3179
Maximum	**1.7746**	**18.3774**	**12.8524**	**0.0316**	**3.5816**	**0.7274**	**4.3090**	**1.6085**	**0.6692**	**2.2777**	**0.0000**	**3,067.4137**	**3,067.4137**	**0.9442**	**0.0796**	**3,093.3179**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.90**	**0.00**	**49.28**	**54.35**	**0.00**	**45.68**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0949	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0949**	**0.0000**	**4.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**0.0000**	**9.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0949	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0949**	**0.0000**	**4.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**0.0000**	**9.3000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2024	1/15/2024	5	10	
2	Grading	Grading	1/16/2024	1/25/2024	5	8	
3	Structural Facilities	Building Construction	1/26/2024	8/14/2024	5	144	
4	Paving	Paving	8/15/2024	9/9/2024	5	18	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 12

Acres of Paving: 4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Concrete/Industrial Saws	1	6.00	81	0.73
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Structural Facilities	Cranes	1	7.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Structural Facilities	Forklifts	2	8.00	89	0.20
Structural Facilities	Generator Sets	1	8.00	84	0.74
Grading	Graders	2	8.00	187	0.41

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Structural Facilities	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Structural Facilities	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Structural Facilities	6	40.00	29.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.2176	11.8349	10.3398	0.0195		0.5370	0.5370		0.5007	0.5007		1,875.0130	1,875.0130	0.4838		1,887.1074
Total	**1.2176**	**11.8349**	**10.3398**	**0.0195**	**6.5523**	**0.5370**	**7.0893**	**3.3675**	**0.5007**	**3.8682**		**1,875.0130**	**1,875.0130**	**0.4838**		**1,887.1074**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0612	0.0260	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8000e-003		33.1461	33.1461	3.6000e-004	4.8900e-003	34.6137
Worker	0.0339	0.0200	0.3400	9.5000e-004	0.1110	5.0000e-004	0.1115	0.0294	4.6000e-004	0.0299		95.5689	95.5689	2.0700e-003	2.1700e-003	96.2670
Total	**0.0361**	**0.0812**	**0.3660**	**1.2600e-003**	**0.1225**	**1.0100e-003**	**0.1235**	**0.0328**	**9.5000e-004**	**0.0337**		**128.7150**	**128.7150**	**2.4300e-003**	**7.0600e-003**	**130.8807**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	1.2176	11.8349	10.3398	0.0195		0.5370	0.5370		0.5007	0.5007	0.0000	1,875.0130	1,875.0130	0.4838		1,887.1073
Total	**1.2176**	**11.8349**	**10.3398**	**0.0195**	**2.9486**	**0.5370**	**3.4856**	**1.5154**	**0.5007**	**2.0160**	**0.0000**	**1,875.0130**	**1,875.0130**	**0.4838**		**1,887.1073**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0612	0.0260	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8000e-003		33.1461	33.1461	3.6000e-004	4.8900e-003	34.6137
Worker	0.0339	0.0200	0.3400	9.5000e-004	0.1110	5.0000e-004	0.1115	0.0294	4.6000e-004	0.0299		95.5689	95.5689	2.0700e-003	2.1700e-003	96.2670
Total	**0.0361**	**0.0812**	**0.3660**	**1.2600e-003**	**0.1225**	**1.0100e-003**	**0.1235**	**0.0328**	**9.5000e-004**	**0.0337**		**128.7150**	**128.7150**	**2.4300e-003**	**7.0600e-003**	**130.8807**

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6128	0.0000	7.6128	3.4820	0.0000	3.4820			0.0000			0.0000
Off-Road	1.7284	18.2902	11.9446	0.0301		0.7263	0.7263		0.6682	0.6682		2,910.0281	2,910.0281	0.9412		2,933.5571
Total	**1.7284**	**18.2902**	**11.9446**	**0.0301**	**7.6128**	**0.7263**	**8.3391**	**3.4820**	**0.6682**	**4.1502**		**2,910.0281**	**2,910.0281**	**0.9412**		**2,933.5571**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0612	0.0260	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8000e-003		33.1461	33.1461	3.6000e-004	4.8900e-003	34.6137
Worker	0.0441	0.0260	0.4420	1.2300e-003	0.1443	6.4000e-004	0.1450	0.0383	5.9000e-004	0.0389		124.2396	124.2396	2.7000e-003	2.8200e-003	125.1471
Total	**0.0462**	**0.0872**	**0.4680**	**1.5400e-003**	**0.1558**	**1.1500e-003**	**0.1570**	**0.0416**	**1.0800e-003**	**0.0427**		**157.3857**	**157.3857**	**3.0600e-003**	**7.7100e-003**	**159.7608**

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.4258	0.0000	3.4258	1.5669	0.0000	1.5669			0.0000			0.0000
Off-Road	1.7284	18.2902	11.9446	0.0301		0.7263	0.7263		0.6682	0.6682	0.0000	2,910.0281	2,910.0281	0.9412		2,933.5571
Total	**1.7284**	**18.2902**	**11.9446**	**0.0301**	**3.4258**	**0.7263**	**4.1520**	**1.5669**	**0.6682**	**2.2351**	**0.0000**	**2,910.0281**	**2,910.0281**	**0.9412**		**2,933.5571**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0612	0.0260	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8000e-003		33.1461	33.1461	3.6000e-004	4.8900e-003	34.6137
Worker	0.0441	0.0260	0.4420	1.2300e-003	0.1443	6.4000e-004	0.1450	0.0383	5.9000e-004	0.0389		124.2396	124.2396	2.7000e-003	2.8200e-003	125.1471
Total	**0.0462**	**0.0872**	**0.4680**	**1.5400e-003**	**0.1558**	**1.1500e-003**	**0.1570**	**0.0416**	**1.0800e-003**	**0.0427**		**157.3857**	**157.3857**	**3.0600e-003**	**7.7100e-003**	**159.7608**

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Structural Facilities - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1255	10.0258	11.1152	0.0200		0.4460	0.4460		0.4230	0.4230		1,879.5763	1,879.5763	0.3857		1,889.2183
Total	**1.1255**	**10.0258**	**11.1152**	**0.0200**		**0.4460**	**0.4460**		**0.4230**	**0.4230**		**1,879.5763**	**1,879.5763**	**0.3857**		**1,889.2183**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0311	0.8879	0.3773	4.5300e-003	0.1670	7.3900e-003	0.1744	0.0481	7.0700e-003	0.0552		480.6183	480.6183	5.2300e-003	0.0710	501.8987
Worker	0.1356	0.0800	1.3599	3.7800e-003	0.4441	1.9800e-003	0.4461	0.1178	1.8200e-003	0.1196		382.2756	382.2756	8.2900e-003	8.6700e-003	385.0678
Total	**0.1667**	**0.9678**	**1.7372**	**8.3100e-003**	**0.6111**	**9.3700e-003**	**0.6204**	**0.1659**	**8.8900e-003**	**0.1747**		**862.8939**	**862.8939**	**0.0135**	**0.0796**	**886.9666**

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Structural Facilities - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1255	10.0258	11.1152	0.0200		0.4460	0.4460		0.4230	0.4230	0.0000	1,879.5763	1,879.5763	0.3857		1,889.2182
Total	**1.1255**	**10.0258**	**11.1152**	**0.0200**		**0.4460**	**0.4460**		**0.4230**	**0.4230**	**0.0000**	**1,879.5763**	**1,879.5763**	**0.3857**		**1,889.2182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0311	0.8879	0.3773	4.5300e-003	0.1670	7.3900e-003	0.1744	0.0481	7.0700e-003	0.0552		480.6183	480.6183	5.2300e-003	0.0710	501.8987
Worker	0.1356	0.0800	1.3599	3.7800e-003	0.4441	1.9800e-003	0.4461	0.1178	1.8200e-003	0.1196		382.2756	382.2756	8.2900e-003	8.6700e-003	385.0678
Total	**0.1667**	**0.9678**	**1.7372**	**8.3100e-003**	**0.6111**	**9.3700e-003**	**0.6204**	**0.1659**	**8.8900e-003**	**0.1747**		**862.8939**	**862.8939**	**0.0135**	**0.0796**	**886.9666**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7375	6.8248	9.9854	0.0158		0.3322	0.3322		0.3073	0.3073		1,503.8538	1,503.8538	0.4697		1,515.5972
Paving	0.5822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3197**	**6.8248**	**9.9854**	**0.0158**		**0.3322**	**0.3322**		**0.3073**	**0.3073**		**1,503.8538**	**1,503.8538**	**0.4697**		**1,515.5972**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0612	0.0260	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8000e-003		33.1461	33.1461	3.6000e-004	4.8900e-003	34.6137
Worker	0.0610	0.0360	0.6120	1.7000e-003	0.1998	8.9000e-004	0.2007	0.0530	8.2000e-004	0.0538		172.0240	172.0240	3.7300e-003	3.9000e-003	173.2805
Total	**0.0632**	**0.0972**	**0.6380**	**2.0100e-003**	**0.2114**	**1.4000e-003**	**0.2127**	**0.0563**	**1.3100e-003**	**0.0576**		**205.1701**	**205.1701**	**4.0900e-003**	**8.7900e-003**	**207.8942**

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7375	6.8248	9.9854	0.0158		0.3322	0.3322		0.3073	0.3073	0.0000	1,503.8538	1,503.8538	0.4697		1,515.5972
Paving	0.5822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3197**	**6.8248**	**9.9854**	**0.0158**		**0.3322**	**0.3322**		**0.3073**	**0.3073**	**0.0000**	**1,503.8538**	**1,503.8538**	**0.4697**		**1,515.5972**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0612	0.0260	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8000e-003		33.1461	33.1461	3.6000e-004	4.8900e-003	34.6137
Worker	0.0610	0.0360	0.6120	1.7000e-003	0.1998	8.9000e-004	0.2007	0.0530	8.2000e-004	0.0538		172.0240	172.0240	3.7300e-003	3.9000e-003	173.2805
Total	**0.0632**	**0.0972**	**0.6380**	**2.0100e-003**	**0.2114**	**1.4000e-003**	**0.2127**	**0.0563**	**1.3100e-003**	**0.0576**		**205.1701**	**205.1701**	**4.0900e-003**	**8.7900e-003**	**207.8942**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.80	6.20	6.20	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0949	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Unmitigated	0.0949	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004

Ramon Substation Expansion - Riverside-Salton Sea County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0332					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0617					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Total	**0.0950**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**8.8000e-004**	**8.8000e-004**	**0.0000**		**9.3000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0332					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0617					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Total	**0.0950**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**8.8000e-004**	**8.8000e-004**	**0.0000**		**9.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Ramon Substation Expansion

Riverside-Salton Sea County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	4.00	Acre	4.00	174,240.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2025
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - total duration - 180 working days

Off-road Equipment - estimated from similar projects

Grading - assume cut/fill is balanced on site

Off-road Equipment - estimated from similar projects

Off-road Equipment - estimated from similar projects

Off-road Equipment - estimated from similar projects

Demolition - no demolition

Trips and VMT - assume no more than 20 workers on site at a time; added 2 vendor trips in site prepartion, grading, and paving for misc. deliveries; others are default

Construction Off-road Equipment Mitigation - assume water 2x/day per SCAQMD Rule 403

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	144.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	PhaseEndDate	9/2/2024	8/14/2024
tblConstructionPhase	PhaseEndDate	10/16/2023	1/25/2024
tblConstructionPhase	PhaseEndDate	9/26/2024	9/9/2024
tblConstructionPhase	PhaseEndDate	10/4/2023	1/15/2024
tblConstructionPhase	PhaseStartDate	10/17/2023	1/26/2024
tblConstructionPhase	PhaseStartDate	10/5/2023	1/16/2024
tblConstructionPhase	PhaseStartDate	9/3/2024	8/15/2024
tblConstructionPhase	PhaseStartDate	9/28/2023	1/2/2024
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	73.00	40.00

2.0 Emissions Summary

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.7718	18.3821	12.6109	0.0315	7.7687	0.7274	8.4961	3.5236	0.6692	4.1928	0.0000	3,055.8608	3,055.8608	0.9442	0.0801	3,081.7894
Maximum	**1.7718**	**18.3821**	**12.6109**	**0.0315**	**7.7687**	**0.7274**	**8.4961**	**3.5236**	**0.6692**	**4.1928**	**0.0000**	**3,055.8608**	**3,055.8608**	**0.9442**	**0.0801**	**3,081.7894**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.7718	18.3821	12.6109	0.0315	3.5816	0.7274	4.3090	1.6085	0.6692	2.2777	0.0000	3,055.8608	3,055.8608	0.9442	0.0801	3,081.7894
Maximum	**1.7718**	**18.3821**	**12.6109**	**0.0315**	**3.5816**	**0.7274**	**4.3090**	**1.6085**	**0.6692**	**2.2777**	**0.0000**	**3,055.8608**	**3,055.8608**	**0.9442**	**0.0801**	**3,081.7894**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.90**	**0.00**	**49.28**	**54.35**	**0.00**	**45.68**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0949	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0949**	**0.0000**	**4.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**0.0000**	**9.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0949	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0949**	**0.0000**	**4.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**0.0000**	**9.3000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2024	1/15/2024	5	10	
2	Grading	Grading	1/16/2024	1/25/2024	5	8	
3	Structural Facilities	Building Construction	1/26/2024	8/14/2024	5	144	
4	Paving	Paving	8/15/2024	9/9/2024	5	18	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 12

Acres of Paving: 4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Concrete/Industrial Saws	1	6.00	81	0.73
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Structural Facilities	Cranes	1	7.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Structural Facilities	Forklifts	2	8.00	89	0.20
Structural Facilities	Generator Sets	1	8.00	84	0.74
Grading	Graders	2	8.00	187	0.41

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Structural Facilities	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Structural Facilities	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Structural Facilities	6	40.00	29.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	2.00	0.00	14.60	6.20	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.2176	11.8349	10.3398	0.0195		0.5370	0.5370		0.5007	0.5007		1,875.0130	1,875.0130	0.4838		1,887.1074
Total	**1.2176**	**11.8349**	**10.3398**	**0.0195**	**6.5523**	**0.5370**	**7.0893**	**3.3675**	**0.5007**	**3.8682**		**1,875.0130**	**1,875.0130**	**0.4838**		**1,887.1074**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9800e-003	0.0650	0.0269	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8100e-003		33.2373	33.2373	3.5000e-004	4.9100e-003	34.7099
Worker	0.0319	0.0207	0.2763	8.6000e-004	0.1110	5.0000e-004	0.1115	0.0294	4.6000e-004	0.0299		86.6119	86.6119	2.0700e-003	2.2200e-003	87.3249
Total	**0.0338**	**0.0857**	**0.3032**	**1.1700e-003**	**0.1225**	**1.0100e-003**	**0.1235**	**0.0328**	**9.5000e-004**	**0.0337**		**119.8492**	**119.8492**	**2.4200e-003**	**7.1300e-003**	**122.0348**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	1.2176	11.8349	10.3398	0.0195		0.5370	0.5370		0.5007	0.5007	0.0000	1,875.0130	1,875.0130	0.4838		1,887.1073
Total	**1.2176**	**11.8349**	**10.3398**	**0.0195**	**2.9486**	**0.5370**	**3.4856**	**1.5154**	**0.5007**	**2.0160**	**0.0000**	**1,875.0130**	**1,875.0130**	**0.4838**		**1,887.1073**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9800e-003	0.0650	0.0269	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8100e-003		33.2373	33.2373	3.5000e-004	4.9100e-003	34.7099
Worker	0.0319	0.0207	0.2763	8.6000e-004	0.1110	5.0000e-004	0.1115	0.0294	4.6000e-004	0.0299		86.6119	86.6119	2.0700e-003	2.2200e-003	87.3249
Total	**0.0338**	**0.0857**	**0.3032**	**1.1700e-003**	**0.1225**	**1.0100e-003**	**0.1235**	**0.0328**	**9.5000e-004**	**0.0337**		**119.8492**	**119.8492**	**2.4200e-003**	**7.1300e-003**	**122.0348**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6128	0.0000	7.6128	3.4820	0.0000	3.4820			0.0000			0.0000
Off-Road	1.7284	18.2902	11.9446	0.0301		0.7263	0.7263		0.6682	0.6682		2,910.0281	2,910.0281	0.9412		2,933.5571
Total	**1.7284**	**18.2902**	**11.9446**	**0.0301**	**7.6128**	**0.7263**	**8.3391**	**3.4820**	**0.6682**	**4.1502**		**2,910.0281**	**2,910.0281**	**0.9412**		**2,933.5571**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9800e-003	0.0650	0.0269	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8100e-003		33.2373	33.2373	3.5000e-004	4.9100e-003	34.7099
Worker	0.0414	0.0270	0.3592	1.1100e-003	0.1443	6.4000e-004	0.1450	0.0383	5.9000e-004	0.0389		112.5955	112.5955	2.6900e-003	2.8800e-003	113.5224
Total	**0.0434**	**0.0919**	**0.3861**	**1.4200e-003**	**0.1558**	**1.1500e-003**	**0.1570**	**0.0416**	**1.0800e-003**	**0.0427**		**145.8328**	**145.8328**	**3.0400e-003**	**7.7900e-003**	**148.2323**

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.4258	0.0000	3.4258	1.5669	0.0000	1.5669			0.0000			0.0000
Off-Road	1.7284	18.2902	11.9446	0.0301		0.7263	0.7263		0.6682	0.6682	0.0000	2,910.0281	2,910.0281	0.9412		2,933.5571
Total	**1.7284**	**18.2902**	**11.9446**	**0.0301**	**3.4258**	**0.7263**	**4.1520**	**1.5669**	**0.6682**	**2.2351**	**0.0000**	**2,910.0281**	**2,910.0281**	**0.9412**		**2,933.5571**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9800e-003	0.0650	0.0269	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8100e-003		33.2373	33.2373	3.5000e-004	4.9100e-003	34.7099
Worker	0.0414	0.0270	0.3592	1.1100e-003	0.1443	6.4000e-004	0.1450	0.0383	5.9000e-004	0.0389		112.5955	112.5955	2.6900e-003	2.8800e-003	113.5224
Total	**0.0434**	**0.0919**	**0.3861**	**1.4200e-003**	**0.1558**	**1.1500e-003**	**0.1570**	**0.0416**	**1.0800e-003**	**0.0427**		**145.8328**	**145.8328**	**3.0400e-003**	**7.7900e-003**	**148.2323**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Structural Facilities - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1255	10.0258	11.1152	0.0200		0.4460	0.4460		0.4230	0.4230		1,879.5763	1,879.5763	0.3857		1,889.2183
Total	**1.1255**	**10.0258**	**11.1152**	**0.0200**		**0.4460**	**0.4460**		**0.4230**	**0.4230**		**1,879.5763**	**1,879.5763**	**0.3857**		**1,889.2183**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0287	0.9421	0.3905	4.5400e-003	0.1670	7.4100e-003	0.1744	0.0481	7.0900e-003	0.0552		481.9405	481.9405	5.1300e-003	0.0712	503.2939
Worker	0.1274	0.0829	1.1052	3.4300e-003	0.4441	1.9800e-003	0.4461	0.1178	1.8200e-003	0.1196		346.4476	346.4476	8.2900e-003	8.8800e-003	349.2996
Total	**0.1561**	**1.0250**	**1.4956**	**7.9700e-003**	**0.6111**	**9.3900e-003**	**0.6204**	**0.1659**	**8.9100e-003**	**0.1748**		**828.3881**	**828.3881**	**0.0134**	**0.0801**	**852.5934**

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Structural Facilities - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1255	10.0258	11.1152	0.0200		0.4460	0.4460		0.4230	0.4230	0.0000	1,879.5763	1,879.5763	0.3857		1,889.2182
Total	**1.1255**	**10.0258**	**11.1152**	**0.0200**		**0.4460**	**0.4460**		**0.4230**	**0.4230**	**0.0000**	**1,879.5763**	**1,879.5763**	**0.3857**		**1,889.2182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0287	0.9421	0.3905	4.5400e-003	0.1670	7.4100e-003	0.1744	0.0481	7.0900e-003	0.0552		481.9405	481.9405	5.1300e-003	0.0712	503.2939
Worker	0.1274	0.0829	1.1052	3.4300e-003	0.4441	1.9800e-003	0.4461	0.1178	1.8200e-003	0.1196		346.4476	346.4476	8.2900e-003	8.8800e-003	349.2996
Total	**0.1561**	**1.0250**	**1.4956**	**7.9700e-003**	**0.6111**	**9.3900e-003**	**0.6204**	**0.1659**	**8.9100e-003**	**0.1748**		**828.3881**	**828.3881**	**0.0134**	**0.0801**	**852.5934**

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7375	6.8248	9.9854	0.0158		0.3322	0.3322		0.3073	0.3073		1,503.8538	1,503.8538	0.4697		1,515.5972
Paving	0.5822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3197**	**6.8248**	**9.9854**	**0.0158**		**0.3322**	**0.3322**		**0.3073**	**0.3073**		**1,503.8538**	**1,503.8538**	**0.4697**		**1,515.5972**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9800e-003	0.0650	0.0269	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8100e-003		33.2373	33.2373	3.5000e-004	4.9100e-003	34.7099
Worker	0.0573	0.0373	0.4973	1.5400e-003	0.1998	8.9000e-004	0.2007	0.0530	8.2000e-004	0.0538		155.9014	155.9014	3.7300e-003	3.9900e-003	157.1848
Total	**0.0593**	**0.1023**	**0.5243**	**1.8500e-003**	**0.2114**	**1.4000e-003**	**0.2128**	**0.0563**	**1.3100e-003**	**0.0576**		**189.1387**	**189.1387**	**4.0800e-003**	**8.9000e-003**	**191.8947**

Ramon Substation Expansion - Riverside-Salton Sea County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7375	6.8248	9.9854	0.0158		0.3322	0.3322		0.3073	0.3073	0.0000	1,503.8538	1,503.8538	0.4697		1,515.5972
Paving	0.5822					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3197**	**6.8248**	**9.9854**	**0.0158**		**0.3322**	**0.3322**		**0.3073**	**0.3073**	**0.0000**	**1,503.8538**	**1,503.8538**	**0.4697**		**1,515.5972**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9800e-003	0.0650	0.0269	3.1000e-004	0.0115	5.1000e-004	0.0120	3.3200e-003	4.9000e-004	3.8100e-003		33.2373	33.2373	3.5000e-004	4.9100e-003	34.7099
Worker	0.0573	0.0373	0.4973	1.5400e-003	0.1998	8.9000e-004	0.2007	0.0530	8.2000e-004	0.0538		155.9014	155.9014	3.7300e-003	3.9900e-003	157.1848
Total	**0.0593**	**0.1023**	**0.5243**	**1.8500e-003**	**0.2114**	**1.4000e-003**	**0.2128**	**0.0563**	**1.3100e-003**	**0.0576**		**189.1387**	**189.1387**	**4.0800e-003**	**8.9000e-003**	**191.8947**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.80	6.20	6.20	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0949	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Unmitigated	0.0949	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0332					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0617					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Total	**0.0950**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**8.8000e-004**	**8.8000e-004**	**0.0000**		**9.3000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0332					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0617					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.8000e-004	8.8000e-004	0.0000		9.3000e-004
Total	**0.0950**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**8.8000e-004**	**8.8000e-004**	**0.0000**		**9.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Biological Technical Report

Vega SES 6 Solar Project

Imperial County, California

Prepared for:

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December 2022

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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LIST OF FIGURES

LIST OF ATTACHMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

AOU	American Ornithologists' Union
BCC	Bird of Conservation Concern
BLM	Bureau of Land Management
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CNPSEI	CNPS Electronic Inventory
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DRECP	Desert Renewable Energy Conservation Plan
ESA	Endangered Species Act
gen-tie	generator intertie
GIS	Geographic Information System
GPS	Global Positioning System
HCP	Habitat Conservation Plan
MBTA	Migratory Bird Treaty Act
MW	Megawatt
NPDES	National Pollutant Discharge Elimination
NPPA	Native Plant Protection Act
iPaC	Information for Planning and Consultation
NRCS	Natural Resources Conservation Service
OHV	Off-highway vehicle
Project	Vega SES 6 Solar Project
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSAR	Society for the Study of Amphibians and Reptiles
SSC	Species of Special Concern
sUAS	Small unmanned aircraft system
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

USGS	U.S. Geological Survey

1.0 INTRODUCTION

The Vega SES 6 Solar Project (Project) is an 80-megawatt (MW) direct current and 320 MW-hour battery storage utility-scale solar project located in Imperial County, California. The Proposed Project is located on approximately 283 acres of vacant land on a single parcel in Imperial County, California (APN 034-160-002). ECORP Consulting, Inc. conducted a literature review, small unmanned aircraft system (sUAS) survey, and biological reconnaissance survey of the Project site to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wildlife species, and, as required under the California Environmental Quality Act (CEQA), to determine whether Project-related impacts could occur to sensitive biological resources.

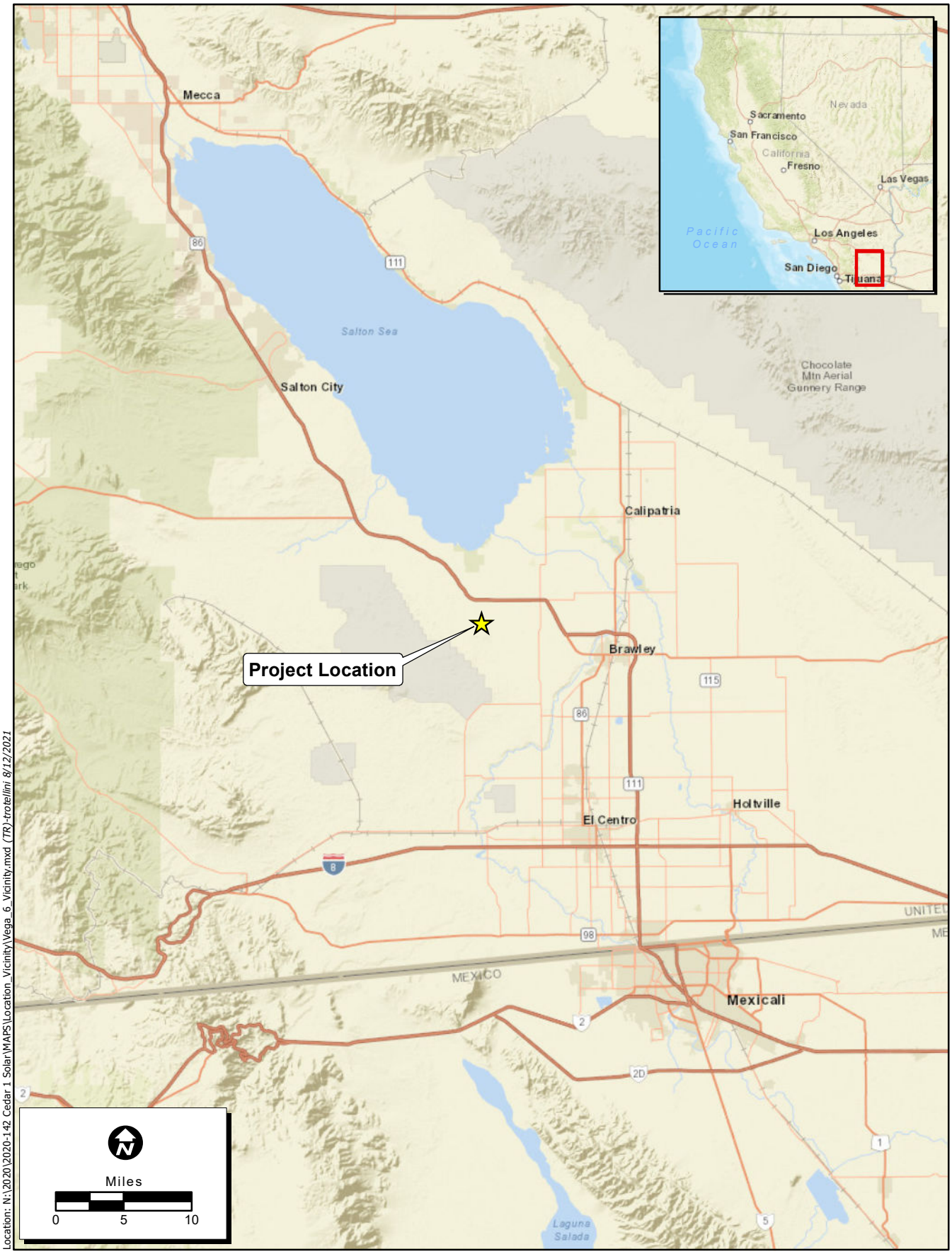
1.1 Purpose of the Report

This report was prepared to describe biological resources of the Project Area and to support Project review under CEQA.. Assessment of potential occurrences of special-status plants and animals is based on habitat, geographic and elevational range, and data from field surveys conducted by ECORP in 2020 and 2021. For the purposes of this report, the term *Project Area* refers to the areas proposed to be directly affected by implementation of the Project and corresponds to the client-supplied Project boundary. The Project Area limits encompass the parcel and proposed generator intertie (gen-tie) alignment. The term *Survey Area* refers to the Project Area and a 500-foot buffer around the Project Area boundaries, potentially subject to indirect impacts.

1.2 Project Location and Description

The Proposed Project would include construction of a solar energy generation facility, battery storage, groundwater supply well, and an approximately 4-mile gen-tie line. The Project Area is approximately five miles southwest of the community of Westmorland, California and 1.5 miles south of State Route 78 (Figure 1. *Project Vicinity*). The Project site is located along Garvey Road and 0.50 mile west of the Westside Main Canal (Figure 2. *Project Location*). The Project site is located within Sections 20, 21, 22, 23, 25, and 26 of Township 13 South, Range 12 East as depicted on the Westmorland West, CA and Kane Spring, CA, U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles (USGS 1992).

Topography is relatively flat, with elevations ranging between 39 meters (129 feet) and 6 meters (21 feet) below sea level. Adjacent land uses include Open Space/Bureau of Land Management (BLM) land to the west and south, and active agriculture to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the site.



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Map Date: 8/12/2021

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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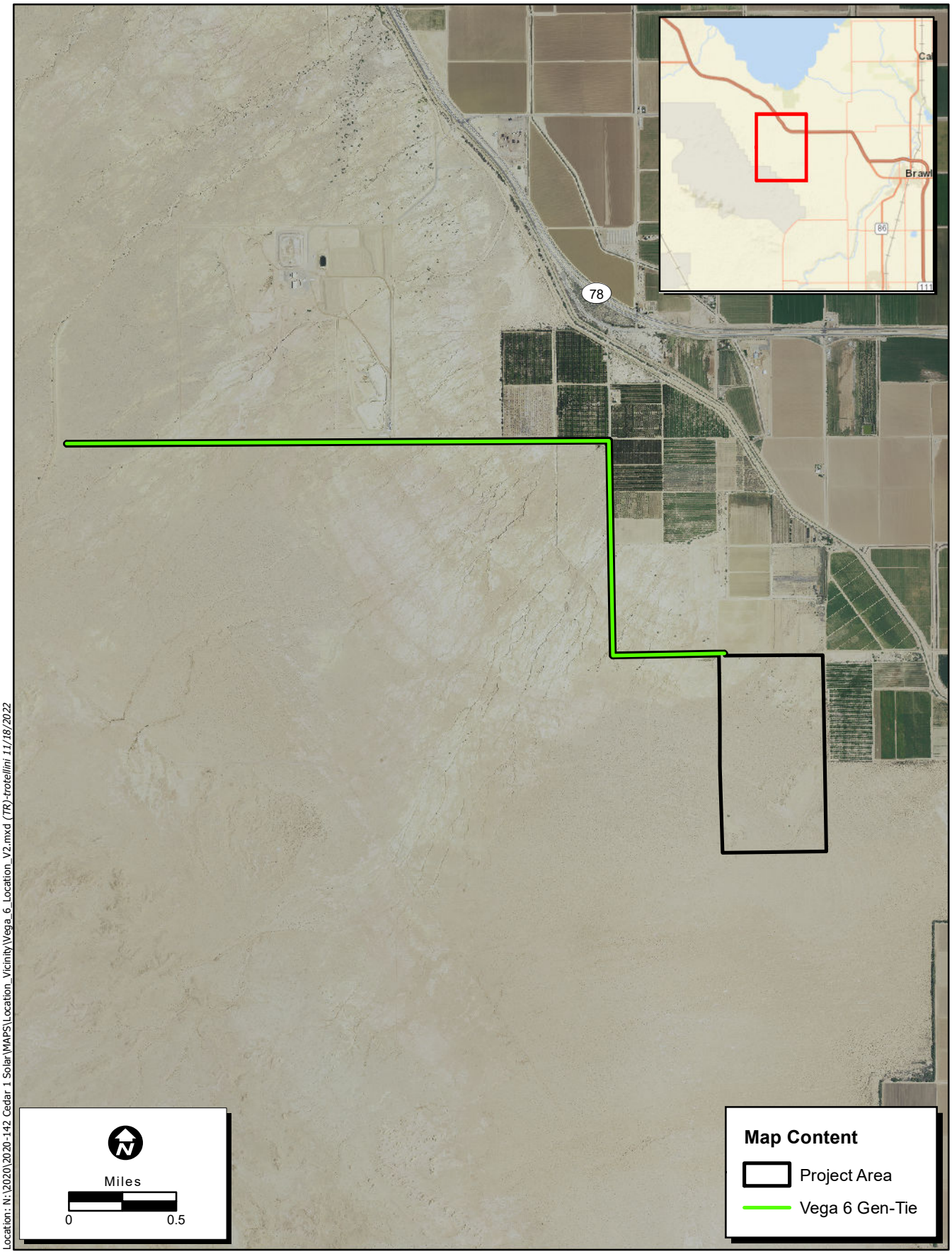
Figure 1. Project Vicinity

2020-142 Vega SES 3



Location: N:\2020\2020-142 Cedar 1 Solar\MAPS\Location_Vicinity\Vega_6_Location_V2.mxd (TR)-trotellini 11/18/2022

Map Date: 11/18/2022

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, NAIP (2020)

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Figure 2. Project Location

2020-145 Vega SES 6

2.0 REGULATORY CONSIDERATIONS

The biological reconnaissance survey was conducted to identify potential constraints and to ensure compliance with state and federal regulations regarding listed, protected, and sensitive species could be achieved. The regulations are detailed below.

2.1 Federal Regulations

2.1.1 Endangered Species Act

The Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a Habitat Conservation Plan (HCP) is developed.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. 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.

2.1.3 Clean Water Act

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground

water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (USEPA) acts as a cooperating agency to set policy, guidance, and criteria for use in evaluation permit applications and also reviews USACE permit applications.

The USACE regulates "fill" or dredging of fill material within its jurisdictional features. "Fill material" means any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the State Water Resources Control Board (SWRCB), administered by each of nine California Regional Water Quality Control Boards (RWQCB).

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California ESA generally parallels the main provisions of the ESA but, unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under federal or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA

of 1984 (California Fish and Game Code § 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.4 Porter Cologne Water Quality Control Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)].

Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050[e]). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

On April 2, 2019, the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (referred to as the Procedures) for inclusion in the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Resolution No. 2019-0015). The new Procedures include:

- definition of wetlands and aquatic resources that are Waters of the State,
- description of application requirements for individual orders (not general orders) for water quality certification, or waste discharge requirements,
- description of information required in compensatory mitigation plans, and
- definition of exemptions to application procedures.

The Office of Administrative Law approved the procedures on August 28, 2019, and the rule went into effect May 28, 2020.

2.2.5 California Fish and Game Code

Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement (SAA). Often, projects that require an SAA also require a permit from

the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the SAA may overlap.

Migratory Birds

The CDFW enforces the protection of nongame native birds in §§ 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California nongame native birds' nests and also make it unlawful to take these birds. All raptor species are protected from "take" pursuant to California Fish and Game Code § 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.6 Desert Renewable Energy Conservation Plan Land Use Plan Amendment

The Desert Renewable Energy Conservation Plan (DRECP) is designed to provide effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. The DRECP Area contains both federal and non-federal California desert land. Some of these lands are designated as California Desert Conservation Areas. The federal portion of the plan area was released by the BLM as a Land Use Plan Amendment. The DRECP Land Use Plan Amendment supports the conservation goals of the DRECP and organizes land into ecoregions and subregions with specific management goals, objectives, allowable uses, and management actions for biological and cultural resources. The BLM designates Areas of Critical Environmental Concern where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources. The BLM also designates Renewable Energy Development Focus Areas which are on BLM-administered lands within which solar, wind, and geothermal renewable energy development and associated activities are allowable uses and that have been determined to be of low or lower resource conflict. The intent is to incentivize and streamline such development in these areas.

2.2.7 Conservation and Open Space Element

Imperial County created the Conservation and Open Space Element plan to provide details and measures for management and preservation of biological resources as well as various other resources (i.e., cultural, soils, minerals). This plan focuses on protecting scarce resources and preventing wasteful exploitation, neglect, and destruction of California's natural resources. The plan outlines areas with sensitive habitat and sensitive species, also labelled "Resource Areas". Open space easements and protection of riparian habitat, rock outcrops, California fan palm oases, and wildlife corridors are also discussed in the plan. As it currently stands, the open space element follows CEQA guidelines with special focus on its scarce resources.

2.2.8 California Environmental Quality Act Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that

would normally be considered significant. Based on these examples, impacts to biological resources would normally be 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 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 CDFW or USFWS;
- have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP.

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.

3.0 METHODS

3.1 Literature Review

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature review using the CDFW's California Natural Diversity Data Base (CNDDB; CDFW 2021a) and the California Native Plant Society (CNPS) Electronic Inventory (CNPSEI; CNPS 2021) to determine the special-status plant and wildlife species that have been documented in the vicinity of the Project site. ECORP searched CNDDB and CNPSEI records within the Project site boundaries as depicted on the USGS 7.5-minute Westmorland West (Calipatria SW) and Kane Spring topographic quadrangles, and the surrounding topographic quadrangles: Kane Spring NE, Obsidian Butte, Niland, Westmorland, Superstition Mountain, Brawley NW, and Brawley. The CNDDB and CNPSEI contain records of reported occurrences of federally or state-listed endangered, threatened, proposed endangered or threatened species, California Species of Special Concern (SSC), or

other special-status species or habitat that may occur within or in the vicinity of the Project. Additional information was gathered from the following sources and includes, but is not limited to:

- USFWS Critical Habitat Portal and Information for Planning and Consultation (IPaC) Trust Resources List (USFWS 2021a);
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) *Soil Survey Geographic Database* (NRCS 2021a) and *Web Soil Survey* (NRCS 2021b);
- *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2021b);
- *Special Animals List* (CDFW 2021c);
- *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012);
- *The Manual of California Vegetation*, 2nd Edition (Sawyer et al. 2009);
- BLM Special Status Plant Species (BLM 2015); and
- various online websites (e.g., CalFlora 2021).

A desktop review of the National Wetlands Inventory (USFWS 2021b) and the corresponding USGS topographic maps was also conducted to determine if there were any blue line streams or drainages in the Survey Area that might potentially fall under the jurisdiction of either federal or state agencies.

3.2 Field Survey

3.2.1 Small Unmanned Aircraft System Survey and Vegetation Mapping

Due to the size of the area and limited road access, an initial survey of the parcel utilizing a sUAS was conducted to quickly assess current site conditions and gather high-resolution imagery. Upon arrival at the site, an initial field reconnaissance was conducted by the drone pilot to obtain an understanding of the site topography, access, vegetation densities, and staging areas for controlling the aerial flights. The drone was programmed to do a systematic flight over the land near the Imperial Valley substation and the land near the New River to collect high-resolution aerial photographs of these areas. The photos collected were then combined into a single orthomosaic image that was incorporated into mapping files in a Geographic Information System (GIS).

The information gathered from the reconnaissance survey, along with the sUAS/drone imagery and additional satellite aerial imagery (USDA 2018; Google Earth 2018; ESRI 2020) was used by biologists to accurately map the vegetation communities. Vegetation classifications were in accordance with *A Manual of California Vegetation* (Sawyer et al. 2009). Vegetation communities that did not fit within the Sawyer classification system were described following Holland (1986). Areas of the site that had already been graded, developed, or disturbed were mapped as such. Acreages of each vegetation community were calculated based on GIS data collected during the sUAS survey.

3.2.2 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted by walking the entire Survey Area to determine the vegetation communities and wildlife habitats on the Project site. Private property and inaccessible areas within the buffer were surveyed utilizing 8x42 binoculars. The biologists documented the plant and animal species present in the Survey Area and the conditions within the Survey Area were assessed for their potential to provide habitat for special-status plant and wildlife species, including those from the literature review. Data were recorded on submeter Global Positioning System (GPS) devices, data sheets, and maps. In instances where a special-status species was observed, the date, species, location and habitat, and GPS coordinates were recorded. The locations of special-status species observations were recorded using a handheld submeter GPS in North American Datum 1983, Universal Transverse Mercator coordinates, Zone 11S. Photographs were also taken during the survey to provide visual representation of the various vegetation communities within the Project site. The Project site was also examined to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife throughout the region.

Plant and wildlife species, including any special-status species that were observed during the survey, were recorded. Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). Wildlife nomenclature follows that of *The American Ornithologists' Union (AOU) Checklist of North American Birds* (AOU 2021), the Society for the Study of Amphibians and Reptiles (SSAR 2017), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

3.2.3 Aquatic Resources Delineation

An aquatic resources delineation was conducted by ECORP delineation specialists in conjunction with the biological reconnaissance survey, the results of which are presented under separate cover (ECORP 2022).

3.3 Potential for Occurrence Determinations

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 Survey Area was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

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

Special-status species reported for the region in the literature review or for which suitable habitat occurs on the Survey Area were assessed for their potential to occur within the Survey Area based on the following guidelines:

Present: The species was observed onsite during a site visit or focused survey.

High: Habitat (including soils and elevation factors) for the species occurs within the Survey Area and a known occurrence has recently been recorded (within the last 20 years) within five miles of the area.

Moderate: Habitat (including soils and elevation factors) for the species occurs within the Survey Area and a documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Survey Area; or a recently documented observation occurs within five miles of the area and marginal or limited amounts of habitat occurs in the Project site.

Low: Limited or marginal habitat for the species occurs within the Survey Area and a recently documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Survey Area; or suitable habitat strongly associated with the species occurs onsite, but no records or only historic records were found within the database search.

Presumed Absent: Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist onsite; or the known geographic range of the species does not include the Survey Area.

Note: Location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that particular species.

4.0 RESULTS

The results of the literature review and field surveys, including site characteristics, vegetation communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors) are summarized below.

4.1 Literature Review

4.1.1 Special-Status Plants and Wildlife

Special-status plants and wildlife species reported for the region in the literature review or for which suitable habitat occurs were evaluated for their potential to occur within the Project Area or in the buffer areas within the Survey Area where indirect impacts could occur. Of all available records, a total of 11 special-status plant species and 30 special-status wildlife species were identified as those with the potential for occurrence within the vicinity of the Project Area (Attachments B and C).

4.1.2 U.S. Fish and Wildlife Service Designated Critical Habitat

The Project Area is not located within any USFWS-designated critical habitat. The closest designated critical habitat is for Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*) located approximately 24 miles to the northeast of the Project Area, and desert tortoise (*Gopherus agassizii*) critical habitat located approximately 34 miles to the northeast of the Project Area.

4.2 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted on September 29 to 30, 2020 and August 3 to 5, 2021, by ECORP biologists Christina Clark, Greg Hampton, Caroline Garcia, and Christina Torres. Summarized below are the results of the biological reconnaissance survey, including site characteristics, plants and plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during the survey are summarized in Table 1.

Table 1. Weather Conditions During the Survey

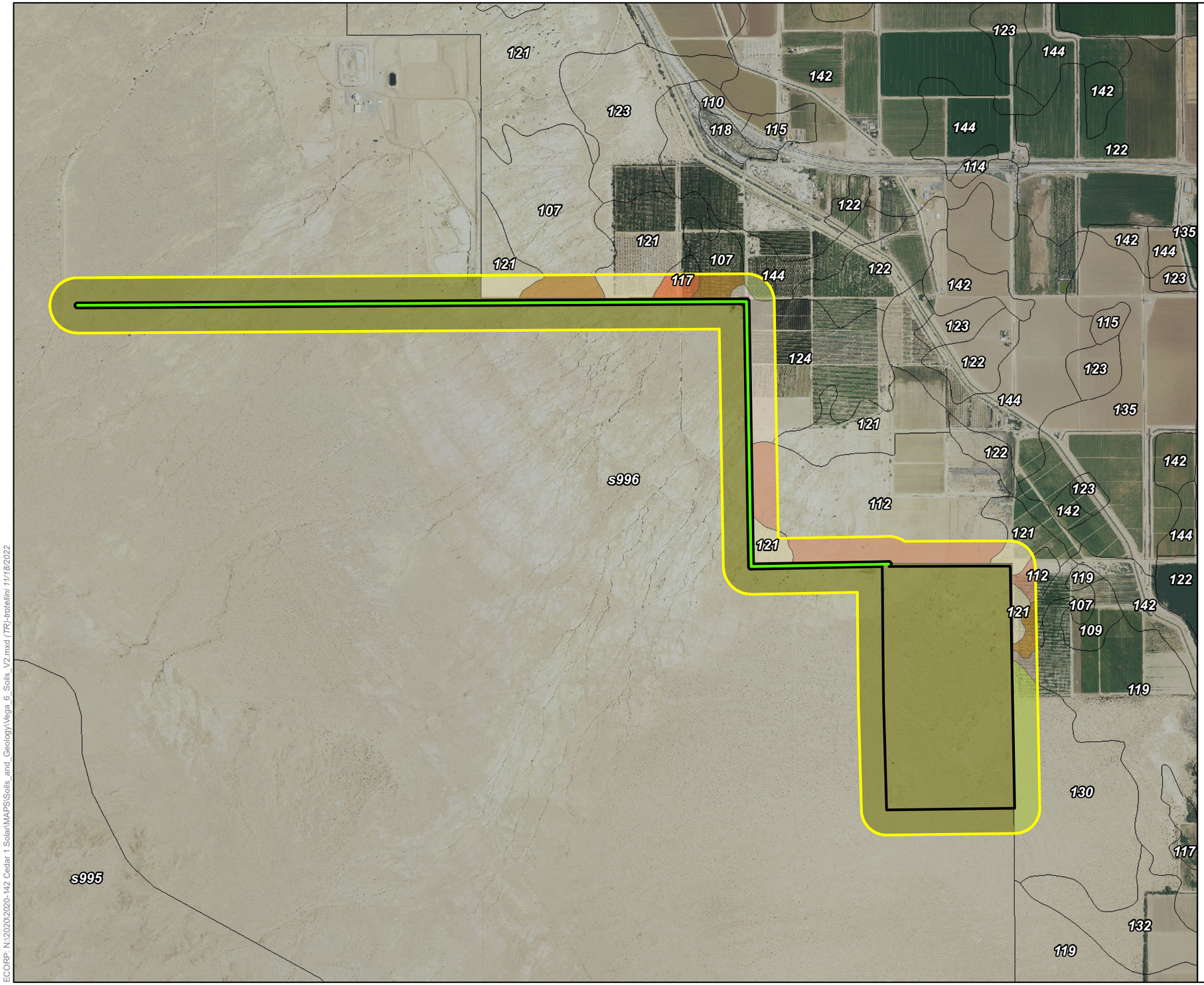
Date	Time		Temperature (˚F)		Cloud Cover (%)		Wind Speed (mph)	
	Start	End	Start	End	Start	End	Start	End
09/29/2020	0635	1425	70	102	0	0	3-5	3-5
09/30/2020	0630	1600	72	108	0	0	2-3	0-3
8/3/2021	0645	1350	87	115	0	0	0-3	3-5
8/4/2021	0530	1400	86	119	0	0	0-4	3-5
8/5/2021	0530	1023	83	99	0	0	8-13	3-8

4.2.1 Property Characteristics

The Project Area consists of vacant, undeveloped land, and is bordered by open space/BLM land to the west and south, and active agriculture to the north and east. The Project Area contains creosote bush scrub, a good portion of which has been disturbed by substantial amounts of trash dumping, bullet casings, and unauthorized off-highway vehicle (OHV) use. The gen-tie line traverses mostly undeveloped land. Representative site photographs are included in Attachment A.

Topography throughout the parcel is relatively flat, with vegetated mounds present throughout the northern portion of the parcel and man-made berms present at the southern portion of the parcel. A soils analysis search was conducted using NRCS soil survey data (NRCS 2021a). The Project falls within portions of the Anza Borrego Area soil survey in which there is no digital data available therefore the Digital General Soil Map of the United States database (STATSGO2; NRCS 2021b) was searched for this area.

Of the data available, 15 soil series were identified within the Survey Area (Figure 3. *Natural Resources Conservation Service Soil Types*). These include:



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Map Date: 8/12/2021

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Scale in Feet
0 2,000

Figure 3. Natural Resources Conservation Service Soil Types

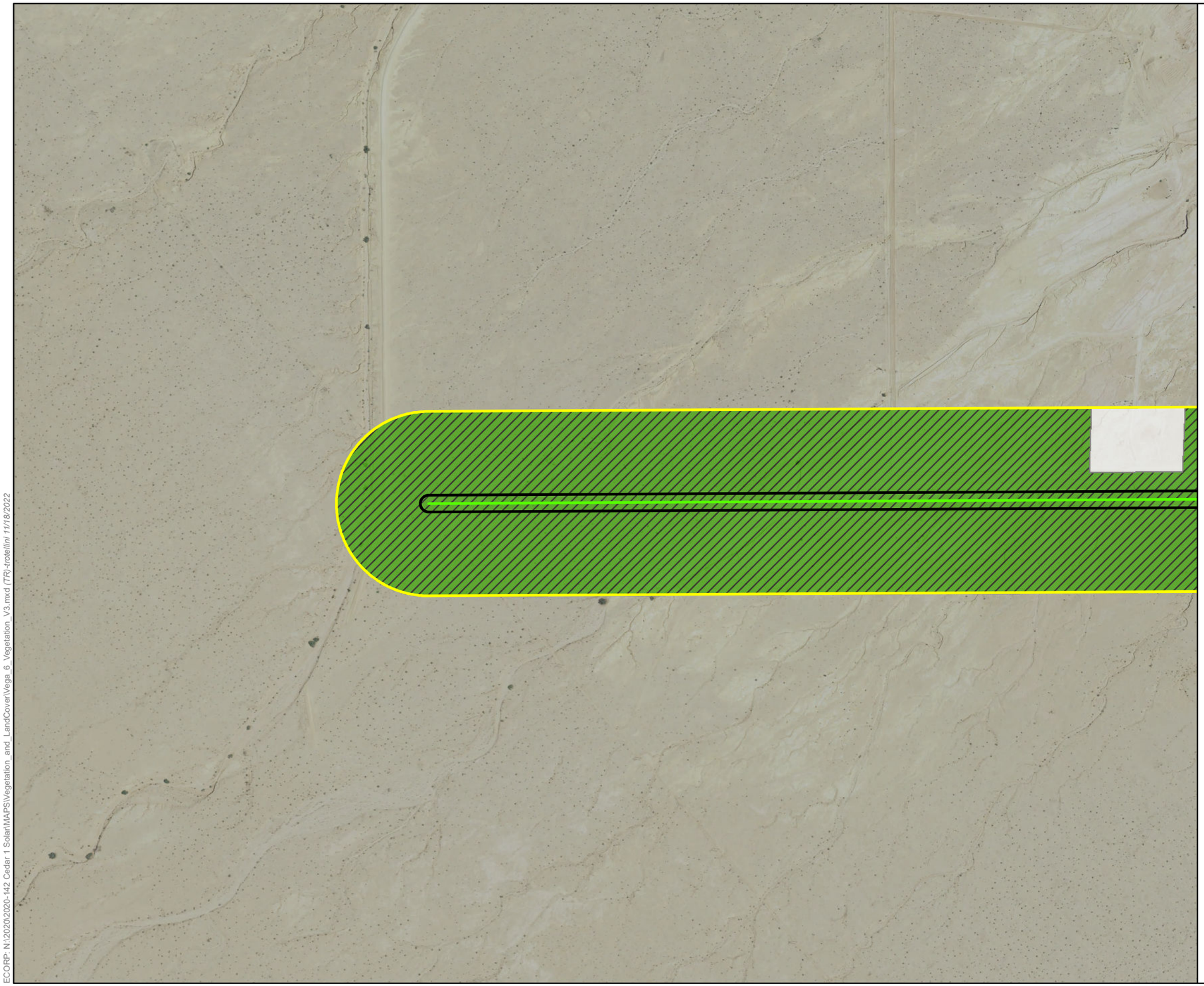
2020-145 Vega SES 6

- 107 – Glenbar complex
- 109 – Holtville silty clay
- 112 – Imperial silty clay
- 117 – Indio loam
- 118 – Indio loam, wet
- 119 – Indio-Vint complex
- 121 – Meloland fine sand
- 122 – Meloland very fine sandy loam, wet
- 123 – Meloland and Holtville loams, wet
- 124 - Niland gravelly sand
- 130 - Rositas sand, 0 to 2 percent slopes
- 135 - Rositas fine sand, wet, 0 to 2 percent slopes
- 142 – Vint loamy very fine sand, wet
- 144- Vint and Indio very fine sandy loams, wet
- s996 – Vint-Meloland-Indio

The Niland gravelly sand (124) map units contain hydric minor components (NRCS 2021c). A summary of characteristics based on official series descriptions for each of the soil series mapped is provided under separate cover in the aquatic resources delineation report (ECORP 2022).

4.2.2 Vegetation Communities/Land Use

The majority of the Project Area consists of creosote bush scrub, disturbed creosote bush scrub, and agriculture. The location of each vegetation community and land cover in the Survey Area is described in detail below and presented on Figure 4. *Vegetation Communities and Land Cover*. Acreage of each habitat and vegetation community in the Project Area, where direct impacts would occur, are shown in Table 2. Representative photographs of the habitats within the Survey Area are included in Attachment A.



Map Features

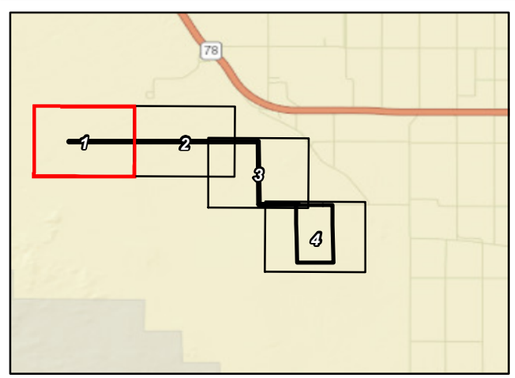
- Project Area
- 500' Buffer
- Vega 6 Gen-Tie

Vegetation and Land Cover Types

- Disturbed Creosote Bush Scrub
- Disturbed

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 8/31/2021

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Scale in Feet
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Figure 4. Vegetation Communities and Land Cover
Sheet 1 of 4
2020-145 Vega SES 6

Map Features

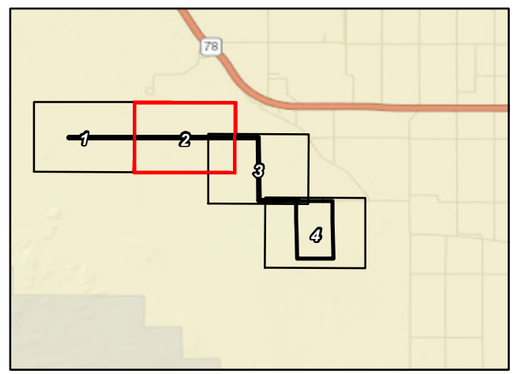
- Project Area
- 500' Buffer
- Vega 6 Gen-Tie

Vegetation and Land Cover Types

- Active Agriculture
- Disturbed Creosote Bush Scrub
- Disturbed
- Urban/Developed
- Urban/Developed - Dirt Road

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 8/31/2021

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Scale in Feet
0 600

Figure 4. Vegetation Communities and Land Cover
Sheet 2 of 4
2020-145 Vega SES 6

Map Features

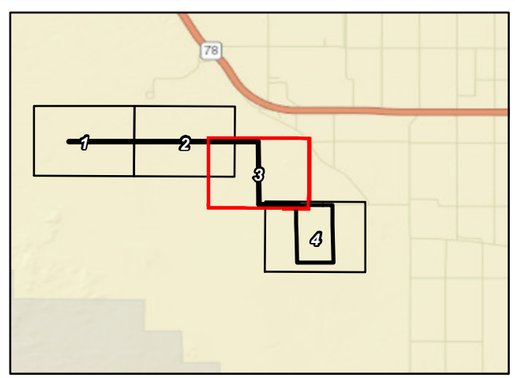
- Project Area
- 500' Buffer
- Vega 6 Gen-Tie

Vegetation and Land Cover Types

- Active Agriculture
- Fallow Agriculture
- Creosote Bush Scrub
- Disturbed Creosote Bush Scrub
- Disturbed Tamarisk Thickets
- Disturbed
- Urban/Developed - Dirt Road

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 8/31/2021

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Scale in Feet
0 600

Figure 4. Vegetation Communities and Land Cover
Sheet 3 of 4
2020-145 Vega SES 6

Map Features

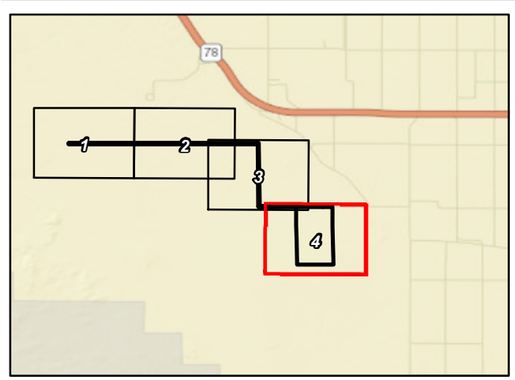
- Project Area
- 500' Buffer
- Vega 6 Gen-Tie

Vegetation and Land Cover Types

- Active Agriculture
- Fallow Agriculture
- Creosote Bush Scrub
- Disturbed Creosote Bush Scrub
- Disturbed Fourwing Saltbush Scrub
- Disturbed Tamarisk Thickets
- Disturbed
- Urban/Developed - Dirt Road

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 8/31/2021

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Scale in Feet
0 600

Figure 4. Vegetation Communities and Land Cover
Sheet 4 of 4
2020-145 Vega SES 6

Table 2. Vegetation Communities and Land Cover Types in Project Area	
Vegetation Communities and Land Cover Types	**Acres**
Active Agriculture	2.088
Fallow Agriculture	0.122
Creosote Bush Scrub	183.163
Disturbed Creosote Bush Scrub	139.541
Disturbed Tamarisk Thickets	1.948
Disturbed	0.454
Urban/Developed - Dirt Roads	5.081
Total	**332.398**

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 is dominant in the parcel and western portion of the gen-tie alignment. This community has sparser vegetation overall. Other species that were observed within this community included mesquite (*Prosopis* sp.), burrobush (*Ambrosia dumosa*), narrow leaved cryptantha (*Cryptantha angustifolia*), alkali goldenbush (*Isocoma acradenia*), velvet turtleback (*Psathyrotes ramosissima*), cryptantha sp. (*Cryptantha* sp.), brittlebush (*Encelia farinosa*). and desert plantain (*Plantago ovata*). Earthen mounds dominated by mesquite were also present within this vegetation community in the northeastern portion of the parcel.

Disturbed Creosote Bush Scrub (Disturbed *Larrea tridentata* Shrubland Alliance)

Disturbed creosote bush scrub is creosote bush scrub that has been previously altered. On the Project, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few creosote bush shrubs. Other plant species observed included scattered individuals of tamarisk (*Tamarix* sp.) within ephemeral drainages.

Disturbed Tamarisk Thickets (Disturbed *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. Disturbed tamarisk thickets are tamarisk thickets that have been previously altered. In the Project Area, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few tamarisk shrubs. Other plant species observed included scattered individuals of alkali goldenbush.

Other Land Cover Types

Active Agriculture

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. This land cover was observed to the east of the parcel. Common crops observed were alfalfa (*Meticago sativa*), lemon (*Citrus* x *limon*), date palm (*Phoenix dactylifera*), and squash (*Cucurbita* sp.).

Fallow Agriculture

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 periodically along the gen-tie alignment and north of the proposed solar field parcel. These areas were adjacent to active agriculture and consisted primarily of tilled land with no vegetation. One area of fallow agriculture appeared to be vegetated with remnant sorghum (*Sorghum* sp.).

Disturbed

Disturbed land includes areas where the native vegetation community has been heavily influenced by human actions, such as grading, trash dumping, equipment staging, and OHV use, but lack development. Disturbed land is not a vegetation classification, but rather a land cover type and is not restricted by elevation. Within the Project Area, the disturbed lands consisted primarily of bare ground with quailbush, arrow weed, saltgrass, hairy crab grass (*Digitaria sanguinalis*), Mediterranean grass, mustard, and Saharan mustard (*Brassica tournefortii*) at low cover. Some area exhibited regrowth of native species such as creosote bush.

Urban/Developed

Urban/Developed areas do not constitute a vegetation classification, but rather a land cover type. Areas mapped as developed have been constructed upon or otherwise physically altered to an extent that natural vegetation communities are no longer supported. This land cover consisted of private residences and farming operations (not including the agricultural fields) and compacted dirt roads.

Vegetation Communities within the Survey Area

Additional vegetation communities were observed within the buffer, but not within the Project Area. These communities are described in detail below. No impacts to these vegetation communities are expected as a result of Project-related activities.

Disturbed Fourwing Saltbush Scrub (Disturbed *Atriplex canescens* Shrubland Alliance)

Fourwing saltbush scrub is characterized by fourwing saltbush as a dominant within the shrub layer. The shrub canopy is open or intermittent, while the herbaceous layer can be variable, with seasonal herbs and nonnative grasses. It is found within playas, shores, lake deposits, dissected alluvial fans, or channel beds.

Disturbed fourwing saltbush scrub is fourwing saltbush scrub that has been previously altered. In the Survey Area, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few fourwing saltbush shrubs. Other plant species observed included scattered individuals of alkali goldenbush.

4.2.3 Wildlife Observed

The Project Area provided disturbed monotypic habitat for wildlife species; overall bird activity was observed to be low during the surveys. Two reptile species, the zebra-tailed lizard (*Callisaurus draconoides*) and common side-blotched lizard (*Uta stansburiana*) were observed during the surveys.

Twenty-one bird species were observed during the reconnaissance survey: Gambel's quail (*Callipepla gambelii),* turkey vulture (*Cathartes aura),* California horned lark (*Eremophila alpestris* ssp*. actia),* peregrine falcon (*Falco peregrinus),* greater roadrunner (*Geococcyx californianus*), black phoebe (*Sayornis nigricans),* European starling (*Sturnus vulgaris),* mourning dove (*Zenaida macroura),* white-crowned sparrow (*Zonotrichia leucophry*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus hudsonius*), Abert's towhee *(Melozone aberti*), great egret (*Ardea alba*), green heron (*Butorides virescens*), white-winged dove (*Zenaida asiatica*), northern mockingbird (*Mimus polyglottos*), killdeer (*Charadrius vociferus*), cliff swallow (*Petrochelidon pyrrhonota*), Eurasian collared-dove (*Streptopelia decaocto*), loggerhead shrike (*Lanius ludovicianus*) and verdin (*Auriparus flaviceps*). Five mammal species were observed, or signs of the species were observed: black-tailed jackrabbit (*Lepus californicus),* round-tailed ground squirrel (*Xerospermophilus tereticaudus*), desert cottontail (*Sylvilagus audubonii)* raccoon (*Procyon lotor*), and coyote (*Canis latrans*). Native ant species such as harvester ants were also observed within the Project Area.

4.3 Special-Status Species Assessment

The literature review resulted in 11 special-status plant and 30 special-status wildlife species that have historically been recorded in the vicinity of the Project or that are highly associated with habitat that occurs within the Project Area. The majority of the Project Area consists of creosote bush scrub and disturbed creosote bush scrub habitat. Special-status plants were evaluated for their potential to occur within the Project limits where impacts could occur. Special-status wildlife were evaluated for their potential to occur within the Survey Area, a broader area that includes the Project Area and buffer, where direct or indirect impacts could occur. Potential for Occurrence tables are included in Attachments B and C.

4.3.1 Plants

Twelve special-status plant species have been recorded within five miles of the Project Area, according to the CNDDB (CDFW 2021a), IPaC (USFWS 2021a), and CNPSEI (CNPS 2021). Of all available records, 11 special-status plant species were identified as having the potential for occurrence within the vicinity of the Project Area. Descriptions of the CNPS designations, also known as California Rare Plant Rankings (CRPR), are found in Table 3 and a list of the special-status plant species identified in the literature review is presented below (CNPS 2021).

Table 3. CNPS Status Designations

List Designation	Meaning
1A	Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
2A	Plants Presumed Extirpated in California, But Common Elsewhere
2B	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3	Plants about which we need more information; a review list
4	Plants of limited distribution; a watch list
List 1B, 2, and 4 extension meanings:	
.1	Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
.2	Moderately threatened in California (20 to 80 percent occurrences threatened / moderate degree and immediacy of threat)
.3	Not very threatened in California (less than 20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known)

Note: According to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code (California Department of Fish and Game [CDFG] 1984). This interpretation is inconsistent with other definitions.

Plant Species with Low Potential to Occur

The following species were found to have a low potential to occur in the Project Area because limited habitat for the species occurs within the Project Area and a known occurrence has been reported in the database or suitable habitat strongly associated with the species occurs within the Project Area, but no records were found within five miles of the site:

- Salton milk-vetch (*Astragalus crotalariae*), CRPR 4.3
- Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*), CNPS 2B.2
- gravel milk-vetch (*Astragalus sabulonum*), CRPR 2B.2
- Emory's crucifixion-thorn (*Castela emoryi*), CRPR 2B.2
- Abrams' spurge (*Euphorbia abramsiana*), CRPR 2B.2
- flat-seeded spurge (*Euphorbia platysperma*), CRPR 1B.2
- ribbed cryptantha (*Johnstonella costata*), CRPR 4.3
- Torrey's box-thorn (*Lycium torreyi*), CRPR 4.2
- sand food (*Pholisma sonorae*), CRPR 1B.2

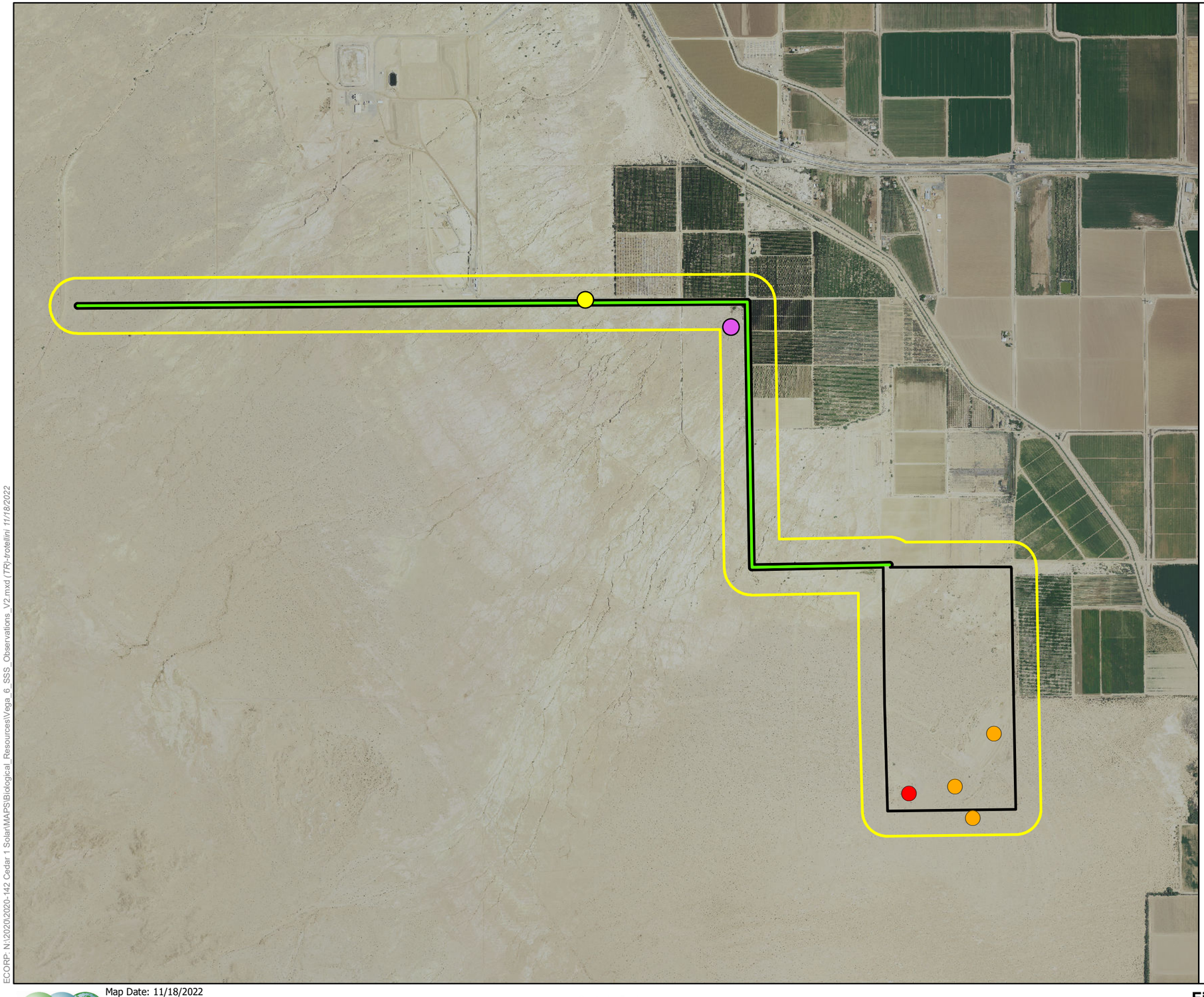
- Thurber's pilostyles (*Pilostyles thurberi*), CRPR 4.3
- Orcutt's woody-aster (*Xylorhiza orcuttii*), CRPR 1B.2

4.3.2 Wildlife

The literature search documented 30 special-status wildlife species in the vicinity of the Project Area, four of which are federally or state listed. Of the 30 special-status wildlife species identified in the literature review, four were found to be present within the Survey Area, four were found to have a high potential to occur, four were found to have a moderate potential to occur, and eight were found to have a low potential to occur; the remaining 10 species are presumed absent from the Survey Area. Frequent mechanical disturbances onsite and the presence of anthropogenic influences onsite likely preclude these species from occurring on or adjacent to the site. Descriptions of the federal and state wildlife designations are found in Table 4, and a brief natural history and discussion of the special-status wildlife species that have a high or moderate potential to occur within the Survey Area is provided below. Special-status wildlife species observed during the reconnaissance survey are depicted on Figure 5. *Special-Status Species Observations*.

Table 4. Wildlife Status Designations

List Designation	Meaning
Federal Designation	**Jurisdiction under USFWS**
END	Federally listed as Endangered
THR	Federally listed as Threatened
CAN	Federal Candidate Species
FSC	Federal Species of Concern
FPD	Federal Proposed for Delisting
BCC	Bird of Conservation Concern
Federal Designation	**Jurisdiction under BLM**
S	BLM Sensitive
State Designation	**Jurisdiction under CDFW**
END	State listed as Endangered
THR	State listed as Threatened
SSC	California Species of Special Concern
FP	Fully Protected Species
WL	Watch List



Map Features

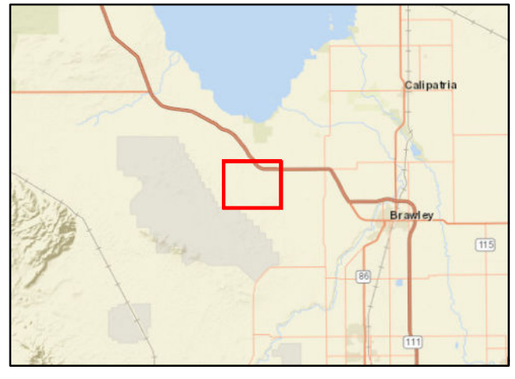
- Project Area
- 500' Buffer
- Vega 6 Gen-Tie

Special Status Species Observations

- Loggerhead Shrike (*Lanius ludovicianus*)
- Northern Harrier (*Circus hudsonius*)
- Horned Lark (*Eremophila alpestris*)
- Peregrine Falcon (*Falco peregrinus*)

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



ECORP: N:\2020\2020-142 Cedar 1 Solar\MAPS\Biological_Resources\Vega_6_SSS_Observations_V2.mxd (TR)-trofellini 11/18/2022

Map Date: 11/18/2022

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 2,000

Figure 5. Special-Status Species Observations

2020-145 Vega SES 6

Special-Status Wildlife Species Present

The following species were observed on the site during the reconnaissance survey:

- California horned lark is a CDFW WL species. It occurs in bare, open areas dominated by low vegetation or widely scattered shrubs, including prairies, deserts, and plowed fields. It nests in a hollow on the ground. The creosote bush scrub and disturbed creosote bush scrub throughout the site and within the buffer provides both foraging and nesting potential habitat. Approximately 12 individuals were observed foraging within the disturbed creosote bush scrub and disturbed areas of the southern portion of the parcel. No CNDDB records occur within five miles of the site.
- Loggerhead shrike is a CDFW SSC. This species prefers open country with scattered shrubs and trees. They frequent agricultural fields, abandoned orchards, desert scrublands, and riparian areas. The site provides both foraging and nesting habitat. One individual was observed perching and vocalizing on tamarisk alongside a dirt irrigation canal adjacent to agricultural fields in the Survey Area. No CNDDB records occur within five miles of the site.
- Northern harrier is a USFWS Bird of Conservation Concern (BCC) and a CDFW SSC. This species is typically found in open habitats with dense ground cover including grasslands, agricultural fields, and marshes. Northern harriers nest on the ground, preferring wetland habitat for cover. The site provides foraging habitat but does not provide nesting habitat. One individual was observed during the habitat assessment near the proposed gen-tie line. No CNDDB records occur within five miles of the site.
- Peregrine falcon is a CDFW Fully Protected species. This species inhabits a wide range of habitats from wetlands, deserts, forests and islands. In California, breeding habitats include a variety of locations from cliffs in uninhabited areas to tall buildings or bridges within the urban landscape. The site provides foraging habitat but does not provide nesting habitat. One individual was observed flying over the creosote bush scrub habitat of the southern end of the solar field parcel. No CNDDB records occur within five miles of the site.

Special-Status Wildlife Species with a High Potential to Occur

Four species were found to have high potential to occur within the Project Area due to the presence of suitable habitat for the species occurring on the site and a known occurrence that has been recorded within five miles of the Project Area:

- Flat-tailed horned lizard (*Phrynosoma mcallii*) is a CDFW SSC, a BLM sensitive species, and an Imperial County Species of Conservation Focus. This species is most commonly found on sandy flats and valleys within desert scrub habitat with little or no windblown sand. They can also be found on salt flats and gravelly soils. The creosote bush scrub habitat provides suitable habitat for the flat-tailed horned lizard. Three recent CNDDB records of six total occur within five miles of the site with the closest being approximately 3.5 miles south from 2009. None were observed during the reconnaissance survey, but suitable habitat was confirmed. Harvester ants (*Pogonomyrmex* sp.) were present, which are a food source for flat-tailed horned lizard.

- Black-tailed gnatcatcher (*Polioptila melanura*) is a CDFW WL species. This species remains in pairs all year, defending permanent territories. Black-tailed gnatcatchers prefer dry washes or desert brush with varied growth of mesquite, acacias, and paloverdes, but are also known to inhabit tamarisk scrub. The creosote bush scrub, disturbed creosote bush scrub, and disturbed tamarisk thicket habitats are suitable for this species. One historic CNDDB record occurs within five miles of the site.

- Burrowing owl (*Athene cunicularia*) is a USFWS BCC, a CDFW SSC, a BLM sensitive species, and Imperial County Species of Conservation Focus. It is typically found in dry open areas with few trees and short grasses; it is also found in vacant lots near human habitation. It uses uninhabited mammal burrows for roosts and nests, often in close proximity to ground squirrel colonies. It primarily feeds on large insects and small mammals but will also eat birds and amphibians. The creosote bush scrub, disturbed creosote bush scrub, disturbed areas, berms of the irrigation canals, and agricultural areas provides potential habitat throughout the Survey Area. Ground squirrel burrows that could be utilized by owls were detected within the parcel. No owl sign was detected at the burrow entrances. Twenty-five recent CNDDB records occur within five miles of the site with the closest being less than one mile away.

- Palm Springs pocket mouse (*Perognathus longimembris* ssp. *bangsi*) is a CDFW SSC and a BLM sensitive species. It inhabits a variety of habitats including creosote bush scrub, desert scrub, and grasslands, generally occurring on loosely packed or sandy soils with sparse to moderately dense vegetative cover. One recent CNDDB record occurs approximately 2.75 miles southeast of the site. It was found in 2007 where the habitat consisted of creosote bush scrub with very sandy soils. Small rodent burrows were observed within creosote bush scrub habitat onsite during biological surveys. There is suitable habitat and soils within the creosote bush scrub of the parcel and buffer.

Special-Status Wildlife Species with a Moderate Potential to Occur

Four species were found to have moderate potential to occur on the Project site because habitat (including soils and elevation factors) for the species occurs on the Project site and a known occurrence exists within the database search, but not within five miles of the Project; or a known occurrence exists within five miles of the site and marginal or limited amounts of habitat occurs on the Project site:

- Mountain plover (*Charadrius montanus*) is a USFWS BCC, a CDFW SSC, and a BLM sensitive species. This species is most commonly found in grassy semi-desert with scattered saltbush, sage, prickly pear, and yucca. It is also found in fallow or recently plowed agricultural fields and in overgrazed landscapes that mimic their natural shortgrass habitat. Five recent CNDDB records occur within five miles of the site with one record from 2011 less than 2 miles from the site. Agricultural lands along the parcel and gen-tie lines provide suitable habitat for this species.

- Crissal thrasher (*Toxostoma crissale*) is a CDFW SSC and a BLM sensitive species. It inhabits desert scrub and riparian brush with dense mesquite thickets often near streams or washes. The tamarisk thickets well as creosote bush scrub provides suitable habitat for this species. Two historic CNDDB records within five miles of the site, one of which overlaps with the gen-tie line.

- Yuma hispid cotton rat (*Sigmodon hispidus eremicus*) is a CDFW SSC. This species is generally associated with mesic habitats near drainage ditches, streams, and sloughs but also occurs in open fields or on the borders of open fields where there is dense grass habitat or agricultural fields. There is potential for this species to occur within vegetated agricultural irrigation channels that run adjacent to the gen-tie line and agriculture fields within the buffer where they can utilize runways through dense herbaceous growth along the channels. Two recent CNDDB records occur within five miles of the site from 2008 with the closest being approximately 2 miles northeast of the Project Area. This species was found in a lateral drain canal.
- American badger (*Taxidea taxus*) is a CDFW SSC. It inhabits open habitats with friable soil such as grasslands, brushlands with sparse ground cover, open chaparral, and sometimes riparian zones. One recent CNDDB record from 2017 occurs within five miles of the site on military land. It was noted to be within creosote bush habitat. Moderately suitable habitat exists within the creosote bush scrub habitats of the parcel and gen-tie line.

Wildlife Species with Low Potential to Occur

Eight species were found to have a low potential to occur on the Project site because limited habitat for the species occurs on the site and a known occurrence has been reported in the database or suitable habitat strongly associated with the species occurs on the site, but no records were within five miles of site or were not found in the database search:

- Colorado Desert fringe-toed lizard (*Uma notata*), a CDFW SSC and a BLM sensitive;
- Gila woodpecker (*Melanerpes uropygialis*), USFWS BCC, state listed (endangered), and BLM sensitive;
- California black rail (*Laterallus jamaicensis* ssp. *coturniculus*), state listed (threatened), CDFW FP and BLM sensitive;
- Yuma Ridgway's rail (*Rallus obsoletus* ssp. *yumanensis*), federally listed (endangered), state listed (threatened), and CDFW FP;
- white-faced ibis (*Plegadis chihi*), CDFW WL;
- short-eared owl (*Asio flammeus*), USFWS BCC and CDFW SSC;
- California leaf-nosed bat (*Macrotus californicus*), CDFW SSC; and
- western yellow bat (*Lasiurus xanthinus*), CDFW SSC.

Wildlife Species Presumed Absent

The following 10 species are presumed absent from the Project due to the lack of suitable habitat:

- desert pupfish (*Cyprinodon macularius*), federally listed (endangered) and state listed (endangered);
- black skimmer (*Rynchops niger*), USFWS BCC and CDFW SSC;

- gray-headed junco (*Junco hyemalis* ssp. *caniceps*), CDFW WL;
- brown pelican (*Pelecanus occidentalis*), CDFW FP, and BLM sensitive;
- western mastiff bat (*Eumops perotis* ssp. *californicus*), CDFW SSC and BLM sensitive;
- pocketed free-tailed bat (*Nyctinomops femorosaccus*), CDFW SSC;
- big free-tailed bat (*Nyctinomops macrotis*), CDFW SSC;
- Mexican long-tongued bat (*Choeronycteris mexicana*), CDFW SSC;
- pallid bat (*Antrozous pallidus*), CDFW SSC and BLM sensitive; and
- Townsend's big-eared bat (*Corynorhinus townsendii*), CDFW SSC and BLM sensitive.

4.4 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

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

The Project Area was assessed for its ability to function as a wildlife corridor. The parcel and western portion of the gen-tie line currently provide wildlife movement opportunities because they consist of open and relatively unimpeded land. However, it 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 vicinity and the Project's proximity to agricultural areas. The Project Area is also mostly surrounded by additional open unimpeded land, functioning as a single contiguous block of habitat rather than a corridor. The area within the Project boundaries is exposed and does not contain any major features that would be considered critical movement corridors for wildlife. Although the dirt roads and desert washes located within the Project boundaries are likely utilized by wildlife moving through the area, these features would not be considered necessary linkages between conserved natural habitat areas or critical for wildlife movement because of the nearby open space surrounding the Project. Existing development in the vicinity of the Project and presence of anthropogenic uses throughout the area (e.g., trash dumping, OHV use) further limit ability for wildlife to use the Project for travel and regional movement.

5.0 PROJECT IMPACTS

Implementation of the Project has potential to affect agriculture, creosote bush scrub, disturbed creosote bush scrub, fallow agricultural land, and disturbed tamarisk thickets. These communities may provide suitable nesting and foraging habitat for passerines, including black-tailed gnatcatcher and loggerhead shrike; raptors including northern harrier, peregrine falcon, and burrowing owl; raptor foraging habitat; and habitat for flat-tailed horned lizard and Palm Springs pocket mouse. The following recommendations would be required to determine if the Project would result in significant impacts to vegetation communities, special-status plant and wildlife species, jurisdictional waters, and wildlife movement corridors.

5.1.1 Special-Status Species

Special-Status Plants

The literature review identified 11 special-status plant species that could occur in the vicinity of the Project Area but, due to lack of suitable habitat and soils as well as the site's current condition of being heavily disturbed and developed, all of the special-status plant species identified in the literature review were determined to have low potential of occurring within the Project Area. None of these species are federally or state listed. If these special-status plant species were to be present on the site, they would likely occur in low numbers due to the limiting factors listed above (anthropogenic and mechanical disturbances, urban development, and lack of connectivity) and Project-related impacts would not contribute to the overall decline of populations for these species and therefore not considered significant.

Special-Status Wildlife

The literature review identified 30 special-status wildlife species that occur near the Project site, but 10 of the 30 special-status wildlife species identified in the literature review were presumed absent from the Project site due to the lack of habitat or the Project occurring outside the known range of these species. Construction of the Project will not contribute to the overall decline of any of the special-status wildlife species that have been presumed absent from the site, and no impacts to these species are anticipated to result from this Project.

Four special-status wildlife species were found to be present within the Project Area and adjacent habitat: California horned lark, loggerhead shrike, northern harrier, and peregrine falcon. These species were observed within a variety of habitats within the Survey Area. 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 Area. The Project Area provides nesting habitat for ground-nesting species as well as species that nest in various scrub habitats. Direct impacts to nesting avian species include injury, mortality, loss of young, and nest failure. Indirect impacts include loss of foraging and nesting habitat for passerine and raptor species, increase in noise and human activities, and potential introduction of invasive or nonnative species. Implementation of **BIO-3**, **BIO-5**, and **BIO-7** are recommended to minimize, avoid, and mitigate for potential impacts.

Four special-status wildlife species were found to have a high potential to occur within the Project Area and adjacent habitats: flat-tailed horned lizard, black-tailed gnatcatcher, burrowing owl, and Palm Springs pocket mouse. The creosote bush scrub in the Project Area and buffer provides habitat for flat-tailed horned lizard. Implementation of **BIO-1** and **BIO-7** are recommended to minimize and mitigate for potential impacts. The various scrub habitats and tamarisk thickets provides foraging and nesting habitat for black-tailed gnatcatcher. Implementation of **BIO-3**, **BIO-5**, and **BIO-7** are recommended to minimize, avoid, and mitigate for potential impacts.

Burrowing owl has a high potential to occur on the Project Area and buffer due to the number of previously documented occurrences and suitable habitat on the Project. Suitable burrowing owl burrows and burrow structures were identified during the survey. Although no burrowing owl were observed or burrows with sign identified at the time of the survey, due to the mobile nature of the species it is possible that burrowing owl could use the site prior to the start of Project activities. If burrowing owl are found to be using or nesting on the Project prior to the start of construction due to a change in potential burrow presence, direct impacts in the form of ground disturbance, vegetation removal, habitat loss, and mortality and indirect impacts from construction noise and vibrations may occur. Potential Project-related direct impacts to these species could be significant and occur in the form of injury, mortality, and loss of active nests or young. Indirect impacts could occur in the form of habitat loss, increased human and vehicular activity, ground disturbances, noise, and increased dust. Implementation of **BIO-2** is recommended to mitigate for potential impacts.

Palm Springs pocket mouse has a high potential to occur in the creosote bush scrub habitat of the Project Area. Consultation with a small mammal expert of southern California, Stephen Montgomery, resulted in agreement that habitat and range supports Palm Springs pocket mouse. Furthermore, a search of the VertNet biodiversity database (VertNet 2019), confirmed that the only pocket mouse occurrences recorded for the area are Palm Springs pocket mouse. No other *Longimembris* pocket mouse species have been recorded in the area. However, there is a low number of occurrences overall likely due to lack of studies in the area. There is potential for Project-related impacts to be significant if this species occurs in the Project Area in the form of direct mortality and destruction of habitat. Implementation of **BIO-8** is recommended to mitigate for potential impacts.

Four special-status wildlife species were found to have a moderate potential to occur within the Project Area: mountain plover, Crissal thrasher, Yuma hispid cotton rat, and American badger. Direct impacts to these species could occur in the form of injury, mortality, and the loss of nests or young. Indirect impacts could occur in the form of habitat loss, increased human and vehicular activity, ground vibrations, noise, and increased dust. Implementation of **BIO-1**, **BIO-3**, **BIO-5**, **BIO-6 and BIO-7** is recommended to mitigate for potential impacts.

5.1.2 Riparian Habitat or Sensitive Natural Communities

The Project Area is comprised of creosote bush scrub, disturbed creosote bush scrub, active and fallow agriculture, disturbed tamarisk thickets, disturbed land, and urban/developed land, which would be directly impacted by the Project. In-kind mitigation, up to a 3:1 ratio, may be required by CDFW to offset

impacts to riparian habitat and would include the disturbed tamarisk thickets. Implementation of **BIO-4**, **BIO-5**, and **BIO-6** is recommended to reduce potential impacts to a less-than-significant level.

5.1.3 State or Federally Protected Wetlands and Waters

The results of the aquatic resources delineation and discussion of potential impacts on state or federally protected wetlands or Waters of the U.S. are discussed in the Aquatic Resources Delineation Report (ECORP 2022), prepared under separate cover. Implementation of **BIO-4**, **BIO-5**, and **BIO-6** is recommended to mitigate for potential significant impacts.

5.1.4 Wildlife Corridors and Nursery Sites

Portions of the Project Area and gen-tie alignment are located adjacent to areas containing existing disturbances (i.e., roads and active agricultural land). A majority of this area does not contain suitable vegetation or cover to support wildlife movement in the form of a corridor. The parcel and the western segment of the gen-tie are adjacent to open space/BLM land but overall these areas are disturbed and do not support wildlife movement opportunities connecting the area to large, undeveloped natural areas to the southwest. Wildlife would choose instead to use the more suitable and less disturbed creosote bush scrub to the west within BLM land as a wildlife movement area. No native nursery sites were identified within the Project Area. Therefore, no impacts to wildlife corridors or nursery sites are expected to occur from the development of the Project.

5.1.5 Habitat Conservation Plans and Natural Community Conservation Plans

The western and southern buffer of the parcel falls within the DRECP Area with a conservation designation of California Desert National Conserved Lands. None of the Survey Area falls within Areas of Environmental Concern (DRECP 2021). Portions of the western alignment of the gen-tie falls within BLM Renewable Energy Development Focus Areas. If habitat within the California Desert National Conserved Lands area of the Project is to be impacted, implementation of **BIO-7** is recommended to minimize for potential significant impacts. The Project will follow the guidelines in Imperial County's Conservation and Open Space Element and meet the requirements outlined in the plan. Consultation with BLM, County of Imperial Department of Planning and Development, USFWS, and CDFW would be required should listed plant or wildlife species be found to occur.

6.0 RECOMMENDATIONS AND MITIGATION MEASURES

The following recommendations have been developed in accordance with CEQA (see Section 5) but should not be considered mitigation measures at this point in the Project planning process. These actions are recommended prior to Project implementation:

BIO-1 **Biological Monitoring:** A qualified biologist should be present to monitor all ground-disturbing in vegetated areas and vegetation-clearing activities conducted for the Project. During each monitoring day, the biological monitor should perform clearance survey "sweeps" at the start of each work day that vegetation clearing takes place to minimize impacts on special-status species with potential to occur (including, but not limited to, special-status or nesting bird species, flat-tailed horned lizard, and American badger). The

monitor will be responsible for ensuring that impacts to special-status species, nesting birds, and active nests will be avoided to the greatest extent possible. Biological monitoring should take place until the Project Area has been completely cleared of any vegetation. If an active nest is identified, the biological monitor should establish an appropriate disturbance-limit buffer around the nest using flagging or staking. Construction activities should not occur within any disturbance limit buffer zones until the nest is deemed no longer active by the biologist. If special-status wildlife species are detected during biological monitoring activities, then consultation with the USFWS or CDFW should be conducted and a mitigation plan should be developed to avoid and offset impacts to these species. Mitigation measures may consist of work restrictions or additional biological monitoring activities after ground-disturbing activities are complete.

BIO-2 **Preconstruction Surveys for Burrowing Owl:** Preconstruction surveys for burrowing owl should be conducted within the areas assessed as having burrowing owl potential of the Project Area and adjacent areas prior to the start of ground-disturbing activities. The surveys should follow the methods described in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Two surveys should be conducted, with the first survey being conducted between 30 and 14 days before initial ground disturbance (grading, grubbing, and construction), and the second survey being conducted no more than 24 hours prior to initial ground disturbance. If burrowing owls or suitable burrowing owl burrows with sign (e.g., whitewash, pellets, feathers, prey remains) are identified in the Project Area during the survey and impacts to those features are unavoidable, consultation with the CDFW should be conducted and the methods described in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) for avoidance or passive relocation should be followed.

BIO-3 **Preconstruction 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 preconstruction nesting-bird survey should be conducted by a qualified avian biologist to ensure that active bird nests, including those for the northern harrier, loggerhead shrike, black-tailed gnatcatcher, and burrowing owl, will not be disturbed or destroyed. The survey should be completed no more than 3 days prior to initial ground disturbance. The nesting-bird survey should include the Project Area 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 should establish an appropriately sized disturbance limit buffer around the nest using flagging or staking. Construction activities should not occur within any disturbance limit buffer zones until the nest is deemed inactive by the qualified biologist.

BIO-4 **Aquatic Resources Regulatory Permitting:** If Project-related impacts will occur to areas under the jurisdiction of the USACE, CDFW, or RWQCB, a regulatory permit with those agencies is needed prior to the impact occurring. Permitting includes preparation and submittal of a Preconstruction 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. 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 Project must also identify and approve mitigation through the respective agencies. Mitigation can include onsite or offsite options or could include 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-5 **Riparian Habitat or Sensitive Habitat Avoidance:** To the greatest extent possible, plans should avoid impacts to disturbed tamarisk thicket habitats 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-significant threshold.

BIO-6 **Minimization of Impacts to Wetland/Riparian Habitat:** New structures should not be placed within 50 feet of wetland or riparian habitat boundaries. A construction buffer of 300 feet should be established around the wetlands and riparian habitats during bird breeding season (February 1 to August 31). Prior to construction, fencing should be installed approximately 10 feet from the wetland and riparian habitat boundaries within 50 feet of the Project. Fencing should be easily visible to construction personnel.

BIO-7 **Minimization of Impacts to Sensitive Species on BLM Land:** All vehicles should stay on designated roads within BLM land to minimize impacts to habitat. Coordination with a qualified biologist should occur prior to the staging of equipment and placement of temporary or permanent structures within BLM land. Additionally, a biologist should demarcate temporary and permanent work spaces in the field prior to the commencement of construction-related activities. Construction plans should incorporate measures to minimize and avoid impacts to habitats within this area. To control for introduction of invasive plant species, tires should be cleaned prior to entering BLM lands.

BIO-8 **Minimization of Impacts to Palm Springs Pocket Mouse:** Habitats on the parcel and parts of the gen-tie line are suitable for the Palm Springs pocket mouse; presence could be assumed based on proximity of records and recommendations from small mammal experts that were consulted. If presence is assumed, consultation to develop suitable mitigation measures or in-kind mitigation to offset impacts with the CDFW may need to occur. If presence is not assumed, protocol surveys to determine presence or absence of Palm Springs pocket mouse are recommended. A preconstruction small mammal trapping survey shall be conducted for Palm Springs pocket mouse within suitable habitat in all areas of potential permanent and temporary disturbance lead by qualified biologists that are permitted to trap and handle small mammals under Memorandums of Understanding and Scientific Collection Permits with CDFW. Should Palm Springs pocket mouse individuals be

identified during the preconstruction survey, consultation to develop suitable mitigation measures with the CDFW would need to occur. If the Project Area is found to be absent of Palm Springs pocket mouse, no further mitigation is required.

The following best management practices are not mitigation measures pursuant to CEQA but are recommended to further reduce impacts to special-status species that have potential to occur on the property:

- Confine all work activities to a predetermined work area. Stay on previously designated roads or if not possible, create one way in and one way out roads during construction.
- To prevent inadvertent entrapment of wildlife during the construction phase of the Project, all excavated, steep-walled holes or trenches more than 2 feet deep should be covered at the close of each working day with plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen fill or wooden planks should be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals.
- Wildlife are often attracted to burrow- or den-like structures such as pipes and may enter stored pipes and become trapped or injured. To prevent wildlife use of these structures, all construction pipes, culverts, or similar structures with a diameter of 4 inches or greater should be capped while stored on the site.
- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or Project Area.
- Use of rodenticides and herbicides on the Project Area should be restricted. This is necessary to prevent primary or secondary poisoning of wildlife, including burrowing owl and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the USEPA, California Department of Food and Agriculture, and other state and federal legislation. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to burrowing owl.

7.0 REFERENCES

American Ornithologist' Union (AOU). 2021. Check-list of North American Birds. Available online: http://www.aou.org.

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, California. 1400 pp.

Bradley, R.D., L.K. Ammerman, R.J. Baker, L.C. Bradley, J.A Cook, R.C. Dowler, C. Jones, D.J Schmidly, F.B. Stangl, Jr., R.A. Van Den Bussche, B. Wursig. 2014. Revised Checklist of North American Mammals North of Mexico. Museum of Texas Tech University.

Bureau of Land Management (BLM). 2016. Desert Renewable Energy Conservation Plan Land Use Plan Amendment.

CalFlora: Information on California plants for education, research and conservation. [Web application]. 2021. Berkeley, California: The CalFlora Database [a non-profit organization]. Available online: https://www.calflora.org.

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. Dated March 7, 2012.

_____. 1984. California Endangered Species Act. California Code of Regulations, Title 14, Chapter 5, Section 460. California Office of Administrative Law. Sacramento, CA.

California Department of Fish and Wildlife (CDFW). 2021a. California Native Diversity Database. Rarefind 5 [computer program]. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife. Accessed on July 27, 2021.

_____. 2021b. Special Animals List. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife.

_____. 2021c. State and Federally Listed Endangered and Threatened Animals of California. Sacramento (CA): State of California, Natural Resources Agency, Department of Fish and Wildlife. Dated July 2021.

_____. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. Sacramento, California.

California Native Plant Society (CNPS). 2021. Inventory of Rare and Endangered Plants (online edition, v7-08c). Rare Plant Scientific Advisory Committee. California Native Plant Society. Sacramento, CA. Available online: https://www.cnps.org/inventory.

_____. 2001. CNPS Botanical Survey Guidelines. California Native Plant Society. Sacramento, CA. Available online: https://cnps.org/wp-content/uploads/ 2018/03/cnps_survey_guidelines.pdf.

County of Imperial, Planning and Development Services Department. 2006. Imperial County Conservation and Open Space Element, El Centro, CA.

Desert Renewable Energy Conservation Plan (DRECP). 2021. Desert Renewable Energy Conservation Plan Gateway Data Basin. Available online: https://drecp.databasin.org/maps/4a5c4f9527f14b7198053bd467f315e7/active/#. Accessed on August 2, 2021.

ECORP Consulting, Inc. (ECORP). 2021. *Aquatic Resources Delineation Report for the Vega SES 6 Project*. Prepared for Apex Energy Solutions, LLC. San Diego, California. August 2021.

ESRI. "Topographic" [basemap]. Scale Not Given. "World Imagery". Accessed November 30, 2020. https://ecorpmapping.maps.arcgis.com/home/item.html?id=0563aff34bdf4e0caa51bba3c69817d9.

Google Earth. 2018. https://www.google.com/maps/@34.6457,-116.99432,30433m/data=!3m1!1e3. Dated April 4, 2018.

Holland, R. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Department of Fish and Game, Sacramento, CA.

National Science Foundation. 2019. VertNet. September 29, 2016. Available online: http://www.vertnet.org/index.html. Accessed on August 23, 2021.

Natural Resources Conservation Service (NRCS). 2021a. Online Web Soil Survey. U.S. Department of Agriculture. Available online: http://websoilsurvey.nrcs.usda.gov. Accessed on July 30, 2021.

_____. 2021b. Web Soil Survey. STATSGO2 Database. Available online: https://websoilsurvey.nrcs.usda.gov/. Accessed on July 30, 2021.

_____. 2021c. Soil Data Access Hydric Soils List. Available online: https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed August 16, 2021.

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A Manual of California Vegetation, 2nd ed. California Native Plant Society, Sacramento, CA.

Skinner, M.W., and B.M. Pavlik, eds. 1994. Inventory of rare and endangered vascular plants of California. CNPS Special Publication No. 1 (Fifth Edition). Sacramento. CA. vi + 338 pp.

Society for the Study of Amphibians and Reptiles (SSAR). 2017. Scientific and Standard English Names of Amphibians and Reptiles of North American North of Mexico, With Comments Regarding Confidence in our Understanding. Eighth Edition. Committee on Standard English and Scientific Names.

U.S. Army Corps of Engineers (USACE). 1996. 1996 National List of Vascular Plant Species That Occur in Wetlands. Available online: https://mde.maryland.gov/programs/Water/WetlandsandWaterways/DocumentsandInformation/Documents/www.usace.army.mil/CECW/Documents/cecwo/reg/plants/l96_intro.pdf.

U.S. Department of Agriculture (USDA). 2018. The Farm Service Agency: National Agriculture Imagery Program. Accessed July 2021.

U.S. Fish and Wildlife Service (USFWS). 2021a. National Wetland Inventory. Available online: https://www.fws.gov/wetlands/data/ Mapper.html. Accessed on August 2, 2021.

_____. 2021b. IPAC Trust Resources List. http://ecos.fws.gov/ipac/. Accessed on July 27, 2021.

_____. 1996. USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants.

_____. 1918. Migratory Bird Treaty Act of 1918. Section 16 of the U.S. Code (703-712), as amended 1989.

U.S. Geological Survey (USGS). 1992. "Westmorland West and Kane Spring, California" 7.5-minute Quadrangle. U.S. Department of the Interior.

LIST OF ATTACHMENTS

ATTACHMENT A

Representative Site Photographs

Photo 1. Creosote bush scrub within the northern portion of the proposed solar field parcel of the Project Area; photo facing west. September 29, 2020.

Photo 2. Disturbed habitat within the southeastern portion of the gen-tie line; photo facing east. August 5, 2021.

Photo 3. Disturbed tamarisk thickets within the western portion of the gen-tie line; photo facing southwest. August 3, 2021.

Photo 4. Vegetated mounds of creosote bush scrub habitat within the middle portion of the proposed solar field parcel; photo facing west. August 4, 2021.

Photo 5. Creosote bush scrub (foreground) and active agriculture (background) within the western portion of the gen-tie line; photo facing east. August 5, 2021.

Photo 6. Disturbed creosote bush scrub in the western portion of the gen-tie line; photo facing northeast. August 4, 2021.

Photo 7. Disturbed habitat alongside a dirt road that runs north-south at the eastern perimeter of the proposed solar field parcel; photo facing south. August 4, 2021.

Photo 8. Disturbed fourwing saltbush scrub in the buffer of the proposed solar field parcel; photo facing south. August 3, 2021.

ATTACHMENT B

Special-Status Plant Potential for Occurrence Table

Special-Status Plant Species with Potential to Occur within the Project Area				
Scientific Name **Common Name**	**Status**	**Blooming Period/ Elevation Range (meters)**	**Habitat**	**Potential to Occur in the Project site**
Astragalus crotalariae Salton milk-vetch	**USFWS**: None **CDFW**: None **CRPR**: 4.3 **BLM**: None	Jan-Apr (-60 - 250)	Sonoran desert scrub	**Low:** Habitat for this species occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.
Astragalus insularis var. *harwoodii* Harwood's milk-vetch	**USFWS**: None **CDFW**: None **CRPR**: 2B.2 **BLM**: None	Jan-May (0 – 710)	Desert dunes Mojavean desert scrub	**Low:** Limited habitat occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.
Astragalus sabulonum gravel milk-vetch	**USFWS**: None **CDFW**: None **CRPR**: 2B.2 **BLM**: None	Feb-Jun (-60 - 930)	Desert dunes Mojavean desert scrub Sonoran desert scrub	**Low:** Habitat for this species occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.
Castela emoryi Emory's crucifixion-thorn	**USFWS**: None **CDFW**: None **CRPR**: 2B.2 **BLM**: None	Jun-Jul (90 - 725)	Mojavean desert scrub Playas Sonoran desert scrub	**Low:** Limited habitat occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.
Euphorbia abramsiana Abrams' spurge	**USFWS**: None **CDFW**: None **CRPR**: 2B.2 **BLM**: None	Sep-Nov (-5 - 1310)	Mojavean desert scrub Sonoran desert scrub	**Low:** Habitat for this species occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.
Euphorbia platysperma flat-seeded spurge	**USFWS**: None **CDFW**: None **CRPR**: 1B.2 **BLM**: Sensitive	Feb-Sep (65 - 100)	Desert dunes Sonoran desert scrub	**Low:** Limited habitat occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.
Johnstonella costata ribbed cryptantha	**USFWS**: None **CDFW**: None **CRPR**: 4.3 **BLM**: None	Feb-May (-60 - 500)	Desert dunes Mojavean desert scrub Sonoran desert scrub	**Low:** Habitat for this species occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database..

Special-Status Plant Species with Potential to Occur within the Project Area				
Scientific Name **Common Name**	**Status**	**Blooming Period/ Elevation Range (meters)**	**Habitat**	**Potential to Occur in the Project site**
Lycium torreyi Torrey's box-thorn	**USFWS**: None **CDFW**: None **CRPR**: 4.2 **BLM**: None	Mar-Jun (-50 - 1220)	Mojavean desert scrub Sonoran desert scrub	**Low:** Marginally suitable habitat for this species occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.
Pholisma sonorae sand food	**USFWS**: None **CDFW**: None **CRPR**: 1B.2 **BLM**: Sensitive	Apr-Jun (0 – 200)	Desert dunes Sonoran desert scrub	**Low:** Marginally suitable habitat for this species occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.
Pilostyles thurberi Thurber's pilostyles	**USFWS**: None **CDFW**: None **CRPR**: 4.3 **BLM**: None	Dec-Apr (0 - 365)	Sonoran desert scrub	**Low:** Marginally suitable habitat for the species occurs in the Project site and 4 historic CNDDB records occur within five miles with the closest record being from 1985 and approximately 4.6 miles away.
Xylorhiza orcuttii Orcutt's woody-aster	**USFWS**: None **CDFW**: None **CRPR**: 1B.2 **BLM**: None	Mar-Apr (0-365)	Sonoran desert scrub	**Low:** Marginally suitable habitat for this species occurs within the Project site. No CNDDB record within 5 miles of site. Known occurrence within CNPS quadrat database.

California Native Plant Society (CNPS) Rare Plant Ranks:
1B: Plants rare, threatened, and endangered in California and elsewhere.
2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
4: Plants of limited distribution; a watch list.

CNPS Threat Ranks:
0.1: Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2: Fairly threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat)
0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Sources:
California Natural Diversity Data Base (CNDDB) (CDFW 2021a)
CNPS Rare and Endangered Plant Inventory (CNPS 2021)
Calflora Information on California Plants (Calflora 2021)
IPaC (USFWS 2021b)
Special Status Plants (BLM 2015)

ATTACHMENT C

Special-Status Wildlife Potential for Occurrence Table

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	**Status**		**Habitat Requirements**	**Potential for Occurrence**
VERTEBRATES				
OSTEICHTHYES (BONY FISH)				
CYPRINODONTIDAE (killifishes)				
Cyprinodon macularius desert pupfish	USFWS: CDFW: BLM:	**END** **END** -	Species historically occurred in several springs, seeps and slow-moving streams in the Salton Sink Basin. Desert pupfish are now relegated to remnants of their former habitats, which generally are too harsh for most introduced species to exist.	**Presumed absent.** No suitable habitat is present within the site or buffer. Seven recent CNDDB records (of 8 total) occur within 5 miles of the site found in drains and lateral canals near the Salton Sea. The closest record is approximately 3.8 miles north of the site. Generally, this species is constrained to agricultural drains and pond features near the terminus of drains which does not apply to the site. Furthermore the canal within the Survey Area is too distant from known populations.
REPTILES				
PHRYNOSOMATIDAE (spiny lizards)				
Phrynosoma mcallii flat-tailed horned lizard	USFWS: CDFW: BLM:	none SSC S	Desert scrub on sandy flats and valleys with little or no windblown sand, salt flats, and areas with gravelly soils.	**High.** Suitable habitat in the creosote bush scrub habitat of the site and gen-tie line. Harvester ants observed on-site which is a food source for this species. Three recent CNDDB records of 6 total within 5 miles of the site with the closest being 3.5 miles south from 2009.
Uma notata Colorado Desert fringe-toed lizard	USFWS: CDFW: BLM:	none SSC S	Dunes, washes, banks of rivers, and flats with sandy hammocks formed at the base of vegetation. Prefers arid areas, sparsely vegetated with fine windblown sand. Requires fine, loose sand for burrowing.	**Low.** Limited suitable habitat for this species is present on the site within the creosote bush scrub habitat as a majority of the soil is not fine, wind-blown sand. There is one recent CNDDB record that occur within 5 miles of the site from 2018. Found in creosote scrub on sandy/hardpan substrate.
BIRDS				
ACCIPITRIDAE (hawks, kites, harriers, and eagles)				
Circus hudsonius northern harrier (nesting)	USFWS: CDFW: BLM:	none SSC -	Undisturbed tracts of grasslands and wetlands with low, thick vegetation. Prefers to breed in dry upland habitats, old fields, grazed meadows, drained marshlands, and high-desert shrubsteppe. Also found in pasturelands, croplands, and open floodplains.	**Present.** There was one sighting of northern harrier along the gen-tie line. No CNDDB records occur within 5 miles of the site.
ALAUDIDAE (larks)				
Eremophila alpestris* ssp. *actia California horned lark	USFWS: CDFW: BLM:	none WL -	Bare open areas dominated by low vegetation or widely scattered shrubs, includes prairies, deserts, and plowed fields. Nests in a hollow on the ground.	**Present.** This species was observed within open disturbed areas in the southern portion of the site.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	**Status**		**Habitat Requirements**	**Potential for Occurrence**
CHARADRIIDAE (plovers and relatives)				
Charadrius montanus mountain plover (wintering)	USFWS: CDFW: BLM:	BCC SSC S	Shortgrass prairie, especially where blue grama, buffalo grass, and western wheat grass are dominant; and in grassy semidesert with scattered saltbush, sage, prickly pear, and yucca, at elevations ranging from 2,100 to 10,663 feet. Also found in fallow or recently plowed agricultural fields and in overgrazed landscapes that mimic their natural shortgrass habitat.	**Moderate**. Suitable habitat is present in the agricultural fields within the Survey Area. Five recent CNDDB records occur within 5 miles of the site with one record from 2011 less than 2 miles from the site.
FALCONIDAE (falcons and caracaras)				
Falco peregrinus anatum peregrine falcon (nesting)	USFWS: CDFW: BLM:	none FP -	Inhabits a wide range of habitats from wetlands, deserts, forests and islands. In California, breeding habitats include a variety of locations from cliffs in uninhabited areas to tall buildings or bridges within the urban landscape.	**Present.** This species was observed flying over the creosote bush scrub habitat of the southern end of the solar field parcel. There is suitable foraging habitat for this species present in the creosote bush scrub habitat, riparian habitat associated with drainages, and adjacent agricultural land within the Survey Area. There is no suitable nesting habitat within the Survey Area. No CNDDB records within 5 miles of the site.
LANIIDAE (shrikes)				
Lanius ludovicianus loggerhead shrike (nesting)	USFWS: CDFW: BLM:	none SSC -	Open country, with scattered shrubs and trees or other perches for hunting; includes agricultural fields, deserts, grasslands, savanna, and chaparral. Nests 2.5 to 4 feet off ground in thorny vegetation.	**Present.** This species was observed in disturbed tamarisk thickets adjacent to the gen-tie line. There is suitable habitat for this species present in the creosote bush scrub habitat, riparian habitat associated with drainages, and adjacent agricultural land within the Survey Area. No CNDDB records within 5 miles of the site.
LARIDAE (gulls, terns, and skimmers)				
Rynchops niger black skimmer (nesting colony)	USFWS: CDFW: BLM:	BCC SSC -	Coastal areas, usually around sandy beaches and islands, and large inland lakes in California.	**Presumed absent.** Unlikely to occur on-site due to absence of habitat. One historic CNDDB record occurs within 5 miles of the site near the Salton Sea.
MIMIDAE (mockingbirds and thrashers)				
Toxostoma crissale Crissal thrasher	USFWS: CDFW: BLM:	none SSC S	Dense desert and foothill scrub, and riparian brush.	**Moderate.** Suitable habitat exists within the Survey Area in the form of riparian habitat. Two historic CNDDB records within 5 miles of the site, one of which overlaps with the Project Area.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	**Status**		**Habitat Requirements**	**Potential for Occurrence**
PASSERELLIDAE (sparrows)				
Junco hyemalis* ssp. *caniceps gray-headed junco (nesting)	USFWS: CDFW: BLM:	none WL -	Openings and edges of coniferous and mixed woodlands. In winter, frequents fields, roadsides, parks, and suburban gardens.	**Presumed absent.** No suitable habitat is present within the site or buffer due to lack of woodland habitat. One historic CNDDB record occurs within 5 miles of the site.
PELICANIDAE (pelicans)				
Pelecanus occidentalis brown pelican (nesting colony & communal roosts)	USFWS: CDFW: BLM:	none FP S	Found in estuaries and coastal marine habitats.	**Presumed absent.** No suitable habitat is present within the site or buffer. One CNDDB record occurs within 5 miles of the site at the Salton Sea.
PICIDAE (woodpeckers)				
Melanerpes uropygialis Gila woodpecker	USFWS: CDFW: BLM:	BCC **END** S	Arid environments, especially deserts and dry forests of the southwestern U.S. and adjacent Mexico, usually below elevations of 3,300 feet. Most common in low swales and arroyos, including riparian corridors with cottonwood, willow, and mesquite. Nests in cacti and other tree species.	**Low.** Unlikely to occur on-site due to absence of riparian woodland habitat and large cacti. Two historic CNDDB record occurs within 5 miles of the site.
POLIOPTILIDAE (gnatcatchers)				
Polioptila melanura black-tailed gnatcatcher	USFWS: CDFW: BLM:	none WL **-**	Semiarid and desert thorn scrub habitats. This species is well adapted to dry habitats and tend to be most common in areas with less than 8 inches of annual rainfall. They often live far from streams and other bodies of water.	**High.** Desert scrub habitat within the site is suitable for this species. One historic CNDDB record occurs within 5 miles of the site.
RALLIDAE (rails)				
Laterallus jamaicensis* ssp. *coturniculus California black rail	USFWS: CDFW: BLM:	none **THR,** FP S	Riparian marshes, coastal prairies, saltmarshes, and impounded wetlands. All of its habitats have stable shallow water, usually just 1.2 inches deep at most.	**Low.** There is marginal presence of riparian marshes, coastal prairies, saltmarshes, and impounded wetlands within the site or buffer. Two recent CNDDB records occur within 5 miles of the site from 2009. This species was found within the Sonny Bond Salton Sea National Wildlife Refuge and emergent wetland near the mouth of New River.
Rallus obsoletus* ssp. *yumanensis Yuma Ridgway's rail	USFWS: CDFW: BLM:	**END** **THR,** FP -	Consistently found in freshwater marshes that are composed of cattail and bulrush. This emergent vegetation averages greater than 6 feet tall. Water depth tends to be around 3.5 inches deep. Range extends from Nevada, California, and Arizona to Baja California and Sonora Mexico.	**Low.** There is marginal suitable habitat for this species present. Two recent CNDDB records from 2009 occur within 5 miles of the site. This species was found within the Sonny Bond Salton Sea National Wildlife Refuge.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	**Status**		**Habitat Requirements**	**Potential for Occurrence**
THRESKIORNITHIDAE (ibises and spoonbills)				
Plegadis chihi white-faced ibis (nesting colony)	USFWS: CDFW: BLM:	none WL -	Fresh water marshes, irrigated land, tules. Favors shallow water, as in marshes, flooded pastures, and irrigated fields. Sometimes in damp meadows with no standing water.	**Low.** Unlikely to occur on-site due to absence of habitat but there is potential for adjacent irrigated agricultural lands to become flooded enough to attract this species. One historic CNDDB record occurs within 5 miles of the site near the Salton Sea. Glossy ibis were observed approximately 3 miles east of the Project site in a flooded agricultural field during the biological surveys.
STRIGIDAE (owls)				
Asio flammeus short-eared owl (nesting)	USFWS: CDFW: BLM:	BCC SSC -	Grasslands, agricultural fields, meadows, and open areas, where they perch in low trees or on the ground.	**Low.** Wintering range extends to area, however there is limited suitable habitat on site and within the buffer. One historic CNDDB record occurs within 5 miles of the site.
Athene cunicularia burrowing owl (burrow sites & some wintering sites)	USFWS: CDFW: BLM:	BCC SSC S	Open grasslands including prairies, plains, and savannah, or vacant lots and airports. Nests in abandoned dirt burrows.	**High.** The disturbed areas of the Project site and agricultural areas adjacent to the gen-tie line provides habitat. Soils in these areas are friable and suitable for burrowing. Additionally, ground squirrel burrow complexes were documented within the Project Area. 25 recent CNDDB records occur within 5 miles of the site with the closest being less than 1 mile away.
MAMMALS				
MOLOSSIDAE (free-tailed bats)				
Eumops perotis* ssp. *californicus western mastiff bat	USFWS: CDFW: BLM:	none SSC S	Roosts high above ground in rock and cliff crevices, shallow caves, and rarely in buildings. Occurs in arid and semiarid regions including rocky canyon habitats.	**Presumed absent.** No suitable roosting habitat within site or in buffer. No CNDDB records within 5 miles of the site.
Nyctinomops femorosaccus pocketed free-tailed bat	USFWS: CDFW: BLM:	none SSC -	Roosts in crevices of outcrops and cliffs, shallow caves, and buildings. Found along rugged canyons, high cliffs, and semiarid rock outcroppings.	**Presumed absent.** No suitable roosting habitat within site or in buffer. No CNDDB records within 5 miles of the site.
Nyctinomops macrotis big free-tailed bat	USFWS: CDFW: BLM:	none SSC -	Roosts in cliff crevices, and less often in buildings, caves, and tree cavities. Occurs in rocky areas of rugged and hilly country including woodlands, evergreen forests, river floodplain-arroyo habitats, and desert scrub.	**Presumed absent.** No suitable roosting habitat within site or in buffer. One historic CNDDB record (1987) within 5 miles of the site.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	**Status**		**Habitat Requirements**	**Potential for Occurrence**
PHYLLOSTOMIDAE (leaf-nosed bats)				
Choeronycteris mexicana Mexican long-tongued bat	USFWS: CDFW: BLM:	none SSC -	Roosts in caves, rock fissures, old mines, and rarely in buildings. Found in desert shrublands, tropical deciduous forests, deep mountain canyons with riparian vegetation, oak-conifer woodlands and forests.	**Presumed absent.** No suitable roosting habitat within site or in buffer; however, there is suitable foraging habitat. No CNDDB records within 5 miles of the site.
Macrotus californicus California leaf-nosed bat	USFWS: CDFW: BLM:	none SSC -	Roosts in caves, abandoned mines, or natural rock fissures in canyons during the day. May roost in buildings, under bridges, or in porches during the night. Found in lowland desert scrub. Foraging usually takes place in dry desert washes.	**Low.** No suitable roosting habitat within site or in buffer; however, there is suitable foraging habitat. No CNDDB records within 5 miles of the site.
VESPERTILIONIDAE (evening bats)				
Antrozous pallidus pallid bat	USFWS: CDFW: BLM:	none SSC S	Roosts in rock crevices, caves, mines, buildings, bridges, and in trees. Generally, in mountainous areas, lowland desert scrub, arid grasslands near water and rocky outcrops, and open woodlands.	**Presumed absent.** No suitable roosting habitat within the site and buffer; however, desert scrub provides suitable foraging habitat. No CNDDB records within 5 miles of the site.
Corynorhinus townsendii Townsend's big-eared bat	USFWS: CDFW: BLM:	none SSC S	Roosts in mines, caves, buildings, or other crevices, sometimes trees. Usually requires large crevices. Most common in moist areas or those with access to water.	**Presumed absent.** There is limited suitable roosting habitat within the site and buffer. No CNDDB records within 5 miles of the site.
Lasiurus xanthinus western yellow bat	USFWS: CDFW: BLM:	none SSC -	Roosts in trees, particularly palms, in desert wash, desert riparian, valley foothill riparian, and palm oasis habitats.	**Low.** There is limited suitable roosting habitat within the site and buffer but there is potential in the palms of the orchards and agricultural areas adjacent to the gen-tie line. One historic CNDDB record occurs within 5 miles of the site.
CRICETIDAE (New World rats and mice)				
Sigmodon hispidus* ssp. *eremicus Yuma hispid cotton rat	USFWS: CDFW: BLM:	none SSC -	Inhabits a variety of habitats, but generally associated with drainage ditches, canals, and seeps vegetated with plants such as arrow weed, saltgrass, common reed, cattails, sedges, tamarisk, heliotrope, and annual grasses. They utilize runways through dense herbaceous growth and nests are built of woven grass. Noted presence in moist agricultural fields.	**Moderate.** There is marginally suitable habitat alongside the irrigation channels adjacent to agricultural fields within the Survey Area. Two recent CNDDB records occur within 5 miles of the site from 2008 with the closest being approximately 2 miles northeast of the Project Area. The species was found in a lateral drain canal.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	**Status**		**Habitat Requirements**	**Potential for Occurrence**
HETEROMYIDAE (kangaroo rats, pocket mice, and kangaroo mice)				
Perognathus longimembris* ssp. *bangsi Palm Springs pocket mouse	USFWS: CDFW: BLM:	none SSC S	Inhabits a variety of habitats including creosote scrub, desert scrub, and grasslands, generally occurring on loosely packed or sandy soils with sparse to moderately dense vegetative cover.	**High.** There is suitable habitat and soils within the site and buffer. One recent CNDDB record occurs approximately 2.75 miles southeast of the site. It was found in 2007 where the habitat consisted of creosote bush scrub with very sandy soils. Small rodent burrows were observed within creosote bush scrub habitat on-site during biological surveys.
MUSTELIDAE (weasels and relatives)				
Taxidea taxus American badger	USFWS: CDFW: BLM:	none SSC -	Open habitats with friable soil such as grasslands, brushlands with sparse ground cover, open chaparral, and sometimes riparian zones.	**Moderate**. Moderately suitable habitat exists along the gen-tie line. One recent CNDDB record from 2017 occurs within 5 miles of the site on military land. Noted to be within creosote bush habitat.

Federal Designations:
(Federal Endangered Species Act, USFWS)

END: Federally-listed, Endangered
THR: Federally-listed, Threatened
CAN: Federal Candidate Species
FSC: Federal Species of Concern
FPD: Federal Proposed for Delisting
BCC: Bird of Conservation Concern

Bureau of Land Management (BLM)
S: Sensitive

State Designations:
(California Endangered Species Act, CDFW)

END: State-listed, Endangered
THR: State-listed, Threatened
CAN: State Candidate Species
SSC: California Species of Special Concern
FP: Fully Protected Species
WL: Watch List

Biological Resources Report

Ramon Substation Expansion

Thousand Palms, California

August 3, 2023

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1 Introduction

This report integrates information collected from a variety of literature sources and a field survey to describe the biological resources within the vicinity of the Ramon Substation (project) located in an unincorporated portion of Riverside County, California (Figure 1). The Imperial Irrigation District (IID) is proposing improvements to the existing Ramon Substation as part of the VEGA SES 6 Solar and Battery Storage Project (VEGA 6) in unincorporated Imperial County, CA.

Energy generated by the VEGA 6 project will be transmitted to IID's existing 161 kV "L" Line, with ultimate delivery to IID's Ramon Substation in Riverside County. IID has identified that upgrades to the Ramon Substation will be required in order to accommodate several planned utility-scale projects, including the VEGA 6 project. Implementation of the proposed project would require upgrades to the existing IID Ramon Substation. The upgrades would involve an expansion of the existing developed area of the substation, generally expanding to include 4 additional acres of a currently undisturbed area at the substation site.

1.1 Project Location

The proposed project is located east of Palm Springs near the City of Thousand Palms, approximately 2.1 miles east of Interstate 10 (I-10) and immediately north of Ramon Road (Figure 1). The project is located in Section 16 of Township 4 South, Range 6 East of the United States Geological Survey (USGS) 7.5-minute series *Myoma, California* topographic quadrangle. The project is located within the boundaries of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), adjacent to the Thousand Palms Conservation Area. The CVMSHCP covers approximately 240,000 acres of land in Coachella Valley with the purpose to balance growth while conserving sensitive habitats and species.

1.2 Project Description

Ramon Substation Improvements

The IID owns and operates the existing Ramon Substation. The Ramon Substation is located on a single parcel (Assessor Parcel Number 651-230-015) in unincorporated Riverside County, generally northeast of Cathedral City, north of the I-10 Freeway. The existing substation currently occupies approximately 6.7 acres of the 11.26-acre parcel, and contains equipment typically associated with electrical substations including power lines, transformers, and switching gear. Access to the existing substation is provided by Ramon Road, which is immediately south of the existing substation.

Upgrades to the existing Ramon Substation are proposed which would add additional capacity to the substation in order to accommodate electricity generated by planned utility-scale solar projects, which would tie into the substation, and then energy converted would be added to the electrical grid. This includes, but is not limited to, the proposed VEGA 6 solar energy project. The VEGA 6 solar energy project is located in an unincorporated portion of Imperial County.

The upgrades would involve an expansion of the existing developed area of the substation, generally expanding to include 4 additional acres of a currently undisturbed area at the substation site. During construction, access to the proposed expansion area would be through the existing substation site, via existing dirt roads located on the west and east of the existing substation, or a combination thereof.

IID CEQA Responsible Agency

The IID is a Responsible Agency as defined by CEQA Guideline Section 15381 as it relates to the proposed Ramon Substation improvements. In this capacity, the IID has the discretionary authority to approve improvements to the existing Ramon Substation, and would utilize the information contained in the VEGA 6 Environmental Impact Report, as prepared by the County of Imperial as the CEQA Lead Agency, as the CEQA clearance for the substation improvements.

Figure 1. Project Location Map

2 Regulatory Background

The proposed project is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

2.1 Federal

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways, both of which require consultation with the United States Fish and Wildlife Service (USFWS), which administers the FESA for all terrestrial species. The first pathway, a Section 10(a) incidental take permit, applies to situations where a non-federal governmental entity must resolve potential adverse impacts to species protected under the FESA. The second pathway, a Section 7 consultation, applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations Part 10, including feathers, or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 Code of Federal Regulations 21).

All raptors and their nests are protected from take or disturbance under the MBTA (16 United States Code [USC], Section 703 et seq.).The golden eagle and bald eagle are also afforded additional protection under the Eagle Protection Act, amended in 1973 (16 United States Code, Section 669 et seq.).

2.1.3 Clean Water Act – Section 404

Section 404 of the Clean Water Act (CWA) establishes a program for the United States Army Corps of Engineers (USACE) 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 Section 404 permit or authorization to use an existing USACE nationwide permit must be obtained if any portion of an activity will result in dredge or fill effects on a river or stream that has been determined to be jurisdictional under Section 404 of the CWA. When applying for a permit, a company or organization

must show that they would avoid wetlands where practicable, minimize wetland effects, or provide compensation for any unavoidable destruction of wetlands.

Waters of the United States

Pursuant to Section 404 of the CWA, USACE regulates the discharge (temporary or permanent) of dredged or fill material into waters of the U.S. (WOUS) including wetlands.

There have been multiple Supreme Court decisions and regulatory definitions over the past several years concerning the proper standard for how to determine whether a wetland or stream that is not navigable in fact is properly considered a WOUS. Most recently, on May 25, 2023, the U.S. Supreme Court on May 25, issued its opinion in Sackett v. Environmental Protection Agency, 598 U.S. (*Sackett*). The opinion addresses the definition of WOUS pursuant to the Clean Water Act (CWA), 33 U.S.C. Section 1251 et seq. and defines the geographic reach of the U.S. Army Corps of Engineers' and the U.S. Environmental Protection Agency's (EPA) authority in regulating streams, wetlands and other water bodies under the CWA.

Sackett In light of *Sackett*, the agencies announced that they are developing a rule to amend the final "Revised Definition of 'Waters of the United States'" rule (see definition below), published in the Federal Register on January 18, 2023, to be consistent with the U.S. Supreme Court's May 25, 2023 decision in *Sackett*. and intend to issue a final rule by September 1, 2023. In the meantime, the agencies will interpret the phrase "waters of the United States" consistent with the Supreme Court's decision in *Sackett*.

The prior definitions and regulatory guidance to identify WOUS in California were the pre-2015 definitions which included significant nexus evaluations for adjacent wetlands, as described in the Rapanos guidance. The Supreme Court ruling in *Sackett* effectively nullifies the use of the Rapanos significant nexus evaluation in future JDs. Under the *Sackett* ruling, WOUS only include navigable waters, impoundments of navigable waters, relatively permanent tributaries of navigable waters, and contiguous or adjoining wetlands (*Sackett v. Environmental Protection Agency*, 2023). Ephemeral streams and other water bodies that are not relatively permanent, and wetlands or aquatic habitats that do not have a continuous surface connection with a relatively permanent water (RPW) or navigable water (i.e., isolated wetlands) would not be federally jurisdictional and would not be considered WOUS considering the Court's ruling.

Revised Definition of 'Waters of the United States' Rule (January 2023)

On January 18, 2023, EPA published the final "Revised Definition of 'Waters of the United States' Rule", which became effective on March 20, 2023. This rule establishes a clear and reasonable definition of waters of the United States, which is founded upon the familiar 1986 regulations, with amendments informed by the Clean Water Act and statute as a whole, the scientific record, relevant Supreme Court precedent, and the agencies' expertise. The rule returns the definition of "waters of the United States" to that which existed prior to 2015. The Revised Definition Rule defines the term waters of the "United States" in USACE regulations at 33 Code of Federal Regulations Part 328.3(a) as:

- Traditional Navigable Waters, the territorial seas, and interstate waters (paragraph (a)(1) waters)
- Impoundments of "waters of the United States" (paragraph (a)(2) waters)

- Tributaries to traditional navigable waters, the territorial seas, interstate waters or paragraph (a)(2) impoundments when the tributaries meet either relatively permanent standard or the significant nexus standard ("jurisdictional tributaries");
- Wetlands adjacent to paragraph (a)(1) waters; wetlands adjacent to and with a continuous surface connection to relatively permanent paragraph (a)(2) impoundments or jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard; and wetlands adjacent to paragraph (a)(2) impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard ("jurisdictional adjacent wetlands" and
- Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (a)(4) that meet either the relatively permanent standard or the significant nexus standard ("paragraph (a)(5) waters").

Paragraph (b) of the Revised Definition Rule identifies specific exclusions to waters of the United States, including:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

The limits of USACE jurisdiction in non-tidal waters extends to the ordinary high water mark (OHWM) which is defined at 33 CFR 328.3(e) as:

> "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank,

shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

In practice, examples of a discharge of fill material may include, but are not limited to, grading, placing riprap for erosion control, pouring concrete, and stockpiling excavated material into waters of the U.S. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, performing certain drainage channel maintenance activities, constructing temporary mining and farm/forest roads, and excavating without stockpiling.

Since an Approved Jurisdictional Determination (AJD) will not be processed by the USACE until guidance for the Sackett ruling is issued, and then likely take several months or more based on USACE backlog, other options for project proponents to advance may include a Preliminary Jurisdictional Determination (PJD) or relying on professional opinions and legal counsel. Under a PJD, the USACE will verify delineations and assume all, or the majority of, the aquatic features are WOUS for permitting purposes. Advancing a project without USACE guidance, an AJD or PJD / Section 404 permit is a compliance risk that each client should consider with legal counsel, when based on professional judgement, and weighing the likely schedule ramifications.

Wetlands

The term wetlands (a subset of WOUS) is defined at 33 Code of Federal Regulations 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987, USACE published a manual to guide its field personnel in determining jurisdictional wetland boundaries, followed by the Arid West Supplement in 2008 (USACE 2008a). The methodology set forth in the 1987 *Wetland Delineation Manual* and *Arid West Supplement* generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics.

While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:

1. The plant community must be determined to by hydrophytic based on: the dominance test applied using the 50/20 rule,[1] or, where the vegetation fails the dominance test and wetland hydrology and hydric soils are present, vegetation is determined to be hydrophytic using the Prevalence Index test[2] based upon the indicator status (i.e., rated as facultative or wetter) in the *National List of Plant Species that Occur in Wetlands* [USACE 2020]);
2. Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., redoximorphic features with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
3. Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for a sufficient period to cause: the formation of hydric soils and establishment of a

[1] If a particular species accounts for more than 50 percent of the total coverage of vegetation in the stratum, or for at least 20 percent of the total coverage in the stratum which the species was found, that species is defined as dominant.

[2] A Prevalence Index is calculated using wetland indicator status and relative abundance for each vascular plant species present.

hydrophytic plant community. A positive test for wetland hydrology is based on the presence of one primary or two secondary indicators.

2.1.4 Clean Water Act – Section 401

In California, the State Water Resources Control Board (SWRCB) and nine RWQCBs regulate activities within state and federal waters under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. SWRCB is responsible for setting statewide policy, coordinating and supporting RWQCB efforts, and reviewing petitions that contest RWQCB actions. Each RWQCB is semiautonomous and has the authority to set water quality standards, issue Section 401 certifications and waste discharge requirements, and take enforcement action for projects occurring within its boundary. However, when a project crosses multiple RWQCB jurisdictional boundaries, SWRCB becomes the regulating agency that issues project permits.

Section 401 specifies that certification from the state is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into WOUS. A federal permit or license cannot be issued that may result in a discharge to WOUS unless certification under Section 401 of the CWA is granted or waived by the EPA, state, or tribe where the discharge would originate (SWRCB 2014). The Project is located within the boundaries of the Colorado (Region 7) RWQCB, which would have the authority to grant, grant with conditions, deny, or waive water quality certification for the Project.

Under Section 401, all activities regulated at the federal level by USACE are also regulated at the state level. Therefore, state jurisdiction usually includes all waters or tributaries to waters that are determined to be WOUS and, similar to WOUS, are typically delineated at the OHWM.

2.2 State

2.2.1 California Endangered Species Act

Sections 2050 through 2098 of the California Fish and Game Code outline the protection provided to California's rare, endangered, and threatened species. Section 2080 of the Fish and Game Code prohibits the taking of plants and animals listed under the California Endangered Species Act (CESA). Section 2081 established an incidental take permit program for state-listed species. In addition, the Native Plant Protection Act of 1977 (Fish and Game Code Section 1900 et seq.) gives the California Department of Fish and Wildlife (CDFW) authority to designate state endangered, threatened, and rare plants and provides specific protection measures for designated populations.

CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish, pursuant to Fish and Game Code Sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited, and CDFW cannot authorize their take in association with a general project except under the provisions of a Natural Communities Conservation Plan, 2081.7 or a Memorandum of Understanding for scientific purposes.

The CDFW has also identified many "Species of Special Concern" (SSC). Species with this status have limited distribution or the extent of their habitats has been reduced substantially such that their populations may be threatened. Thus, their populations are monitored and they may receive special attention during the environmental review process. While they do not have statutory protection, they may be considered rare under the California Environmental Quality Act (CEQA) and are thereby warranted specific protection measures. Unlike the FESA, CESA does not list invertebrate species.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. The CEQA Guidelines Section 15065 (“Mandatory Findings of Significance”) identifies a substantial reduction in numbers of a rare or endangered species as a significant effect. CEQA Guidelines Section 15380 (“Rare or Endangered Species”) provides for the assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Plant species that are not state or federally listed, but that occur on the California Native Plant Society’s (CNPS) California Rare Plant Rank Lists 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants are rare, threatened, or endangered in California and elsewhere), 2A (plants presumed extirpated in California but common elsewhere), and 2B (plants rare, threatened, or endangered in California but more common elsewhere) would typically be considered under the CEQA.

The CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, eggs, and nests include Sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

2.2.2 Lake and Streambed Alteration Program

The CDFW regulates water resources under Sections 1600 et seq. of the California Fish and Game Code. The CDFW has the authority to grant Streambed Alteration Agreements under Section 1602, which states:

> *An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.*

CDFW jurisdiction includes ephemeral, intermittent and perennial watercourses and extends to the top of the bank of a stream or lake if unvegetated or to the limit of the adjacent riparian habitat located contiguous to the watercourse if the stream or lake is vegetated.

Proposed actions that require a Streambed Alteration Agreements may also require a permit from USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreements may overlap.

2.2.3 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires that each of the nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The RWQCB’s jurisdiction includes federally protected waters, as well as areas that meet the definition of “waters of the state.” Waters of the state are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. RWQCB has the discretion to take jurisdiction over areas not federally regulated under Section 401, provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by RWQCB.

2.2.4 California Environmental Quality Act

CEQA requires state and local agencies to identify impacts on the environment that might be caused by their actions. Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. The CEQA Guidelines Section 15065 (Mandatory Findings of Significance) identifies a substantial reduction in numbers of a rare or endangered species as a significant impact. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for the assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. For example, plant species that are not federally or state listed but that occur on the California Native Plant Society's (CNPS) California Rare Plant Rank Lists 1 and 2 would typically be considered under CEQA. Plant populations of species meeting the California Rare Plant Rank List 3 and 4 designations that are locally significant may also warrant consideration under CEQA.

2.3 Local

2.3.1 Coachella Valley Multiple Species Habitat Conservation Plan

The Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) received its California state permit in September 2008 and its federal permit in October 2008. The CVMSHCP is a comprehensive habitat conservation-planning program focusing on preservation of species and their associated habitats within the Coachella Valley region of Riverside County. Signatories to the CVMSHCP include the cities of Cathedral City, Coachella, Desert Hot Springs (I-10 annexation area only), Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, Rancho Mirage as well as Coachella Valley Water District, Imperial Irrigation District, Coachella Valley Association of Governments, and Caltrans. The intent of the CVMSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the CVMSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the CVMSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach.

The CVMSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species. Through agreements with the USFWS and the CDFW, the CVMSHCP designates approximately 27 special-status animal and plant species that receive some level of coverage under the plan. Of the 27 covered species designated under the CVMSHCP, the majority of these species have no additional survey/ conservation requirements. In addition, the CVMSHCP provides mitigation for project-specific impacts to these species so that the impacts would be reduced to below a level of significance pursuant to CEQA. Beyond the fully covered species, there are species with additional survey/conservation requirements (Coachella Valley Conservation Commission 2016).

Each participating city or local jurisdiction within the Coachella Valley region will impose a development mitigation fee for new development projects within its jurisdiction. As of July 1, 2023, the current fees for development are:

- $1,625 for 0 to 8 residential units per acre
- $675 for 8.1 to 14 residential units per acre
- $300 for more than 14 residential units per acre
- $7,225 per acre for commercial/industrial

3 Methodology

3.1 Literature Review

A literature review was conducted to determine the existence or potential occurrence of special-status plant and animal species on the project footprint and in the project vicinity. Database records for the *La Quinta, West Berdoo Canyon, Keys View, Myoma, East Deception Canyon, Indio, Seven Palms Valley, Rancho Mirage and Cathedral City, California* USGS 7.5-minute series quadrangles were searched on May 31, 2023 using the CDFW Natural Diversity Data Base *Rarefind 5* online application (version 5, dated April 30, 2023) and the California Native Plant Society's *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2023. V9.5, http://www.cnps.org/inventory). A USFWS Information for Planning and Conservation (IPaC) Trust Resource Report was generated for the project footprint on June 5, 2023. Appendix A includes the CNDDB, CNPS, and IPaC records search results. Soils within the Project area were identified using the Natural Resources Conservation Service's (NRCS) Web Soil Survey (USDA 2023).

3.2 Field Surveys

HDR Biologist Aaron Newton and Ronell Santos conducted a site visit on June 16, 2023 in order to identify general site conditions, vegetation communities, and suitability of habitat for various special-status species. The biological survey area (BSA), project footprint plus 500-foot buffer, was surveyed by foot and binoculars were used to aid in the identification of species, potential nest locations, and foraging areas (Figure 2). All wildlife and plant species encountered during the field surveys were identified and recorded. Plant nomenclature follows Jepson Flora Project (Jepson eFlora 2021). The Calflora online database (Calflora 2023) was also used as a tool to assist with plant identification.

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Figure 2. Project Footprint and BSA

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4 Results

4.1 Environmental Setting

4.1.1 Existing and Adjacent Land Use

The project footprint has a General Plan land use designation of general residential. The surrounding land use designations include general residential and one-family dwellings. The project footprint currently consists of a disturbed area north of the existing Ramon substation, sparsely vegetated with low growing creosote bushes in sandy soils. Two large electrical transmission poles are located within the footprint and dumped materials can be found scattered throughout the southern end of the footprint. A small human encampment was also observed during the field visit.

4.1.2 Soils

The online NRCS Web Soil Survey was referenced to identify potential hydric soils occurring within the BSA (USDA NRCS 2023). The following soils are mapped within the BSA.

- **Carsitas:** The soils of the Carsitas series are characterized by very deep, somewhat excessively drained soils formed in alluvium. Carsitas series soils are on 0 to 30 percent slopes on alluvial fans, fan aprons, valley fills, and in drainageways at elevations of -220 to 2,625 feet. Carsitas series soils within the project footprint include Carsitas gravelly sand, 0 to 9 percent slopes.
- **Myoma:** The Myoma series are characterized by somewhat excessively drained soils with rapid permeability. They are nearly level to rolling at elevations of -200 to 1,800 feet. Myoma series soils within the Project footprint include Myoma fine sand, 0 to 5 percent slopes.

4.1.3 Hydrology

The BSA is located within the Upper Whitewater River watershed, approximately 201,200 acres in size, which is located within the larger Whitewater River Hydrologic Unit (HUC-8 # 180100201). The major surface water within the watershed includes the Whitewater River and originates within the summit of Mount San Gorgonio in the San Bernardino Mountains. The river travels southeast joining with three other tributaries before ultimately draining into the Salton Sea at the southeastern end of the Coachella Valley (Riverside County Watershed Protection 2020).

4.1.4 Vegetation Communities and Other Land Types

Based on a review of historic aerial photographs [Historic Aerials (1959-2020) and Google Earth (1996-2023)] the survey area was cleared of vegetation prior to May 2002 for the creation of the existing Ramon Substation and associated transmission line poles and portions been routinely disturbed since that time.

Vegetation onsite consisted of three land cover types with the predominant land cover type as Developed/Ornamental. A description of each vegetation community occurring within the BSA is provided below and depicted in Figure 3. All botanical species observed are listed in Appendix B. Photographs of the site from the June 16, 2023 visit are included in Figure 4.

Developed/Ornamental

Developed/Ornamental land is comprised of areas of intensive use with much of the land constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is highly modified and characterized by permanent or semi-permanent structures, pavement, unvegetated areas, and landscaped areas that require irrigation. Developed/Ornamental areas typically provide high value or function for human use but provide little habitat value to wildlife. Ornamental plantings can provide some use for wildlife movement or use by species adapted to human presence.

Within the BSA, Developed/Ornamental land includes paved roads, electric substations, areas where non-native ornamental species and landscaping have been installed, and bare ground with compacted soils that no longer support vegetation. A total of 17.15 acres of Developed/Ornamental land occur within the BSA. A strip of land just north of Ramon Road, in front of the substation has planted ornamental vegetation, approximately 1.56 acres of land.

Creosote Bush Scrub (*Larrea tridentata* Alliance)

Within the Creosote Bush Scrub community (*Larrea tridentata* Alliance), creosote bush is dominant in the shrub canopy with several sub-dominant desert shrub species such as four-wing saltbush (*Atriplex canescens*), burrobrush (*Ambrosia salsola*), brittlebush (*Encelia farinosa*), and Mediterranean grass (*Schismus barbatus*).

Within the BSA, Creosote Bush Scrub occurs primarily in the north and east of the existing Ramon Substation and covers a total of 35.02 acres of the BSA.

Disturbed-Creosote Bush Scrub (*Larrea tridentata* Alliance)

The disturbed-Creosote Bush Scrub community (*Larrea tridentata* Alliance) is composed of similar species as Creosote Bush Scrub but receives regular disturbance from offroad activity and illegal dumping. The vegetation community is dominated by creosote bush with sub-dominant desert shrub species such as four-wing saltbush (*Atriplex canescens*), burrobrush (*Ambrosia salsola*), brittlebush (*Encelia farinosa*), and Mediterranean grass (*Schismus barbatus*).

Within the BSA, disturbed-Creosote Bush Scrub occurs to the north of the existing Ramon Substation and covers a total of 11.57 acres of the BSA.

Special-Status Vegetation Communities

Special status natural communities are those that are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status plants or animals occurring in those habitats. Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents.

None of the vegetation communities within the project footprint is considered sensitive or of special concern.

Figure 3. Vegetation Communities and Other Land Cover Types in the BSA

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4.1.5 Plant Species

Special-status plant species include plants that meet one or more of the following criteria:

- Listed or proposed for listing as threatened or endangered under the Federal ESA or candidates for possible future listing as threatened or endangered under the ESA (50 CFR Section 17.12)
- Listed or candidates for listing by the State of California as threatened or endangered under the California ESA (Fish Game Code Section 2050 et seq.)
- Listed as rare under the California Native Plant Protection Act (Fish and Game Code Section 1900 et seq.); a plant is rare when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens (Fish and Game Code Section 1901)
- Meet the definition of rare or endangered under CEQA Guidelines Section 15380, subdivisions (b) and (d), including:
    - Plants considered by CDFW to be “rare, threatened or endangered in California.” This includes plants tracked by the CNDDB and the CNPS as California Rare Plant Rank 1 or 2
    - Plants that may warrant consideration on the basis of declining trends, recent taxonomic information, or other factors; this may include plants tracked by the CNDDB and CNPS as California Rare Plant Rank 3 or 4
- Considered locally significant plants (i.e., plants that are not rare from a statewide perspective but are rare or uncommon in a local context such as within a county or region [CEQA Guidelines, Section 15125, subd. (c)], or as designated in local or regional plans, policies, or ordinances [3.2.6 CEQA]); examples include plants that are at the outer limits of their known geographic range or plants occurring on an atypical soil type

A full list of rare plants occurrences within the surrounding nine quadrangles can be found in Appendix A. A list of all plants observed on site can be found in Appendix B.

Federally and/or State-Listed Plant Species

Based upon the results of the literature review, thirty-eight (38) special-status plant species are known to occur within the vicinity of the project footprint. These species, their federal and State status, habitat requirements and occurrence probability are included in Table 1. Of the 38 species, only one federally listed species has a moderate probability of occurring, the Coachella Valley milk-vetch (*Astragalus lentiginous* var. *coachellae*, CNPS 1B.2).

- **Coachella Valley milk-vetch.** Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) is federally endangered and a CVMSCHP covered species. The species generally occurs in dunes and sandy flats, along the disturbed margins of sandy washes, and in sandy soils along roadsides adjacent to existing sand dunes. The species may also occur in sandy substrates in creosote bush scrub, not directly associated with sand dune habitats. There are core habitat areas within the Thousand Palms Preserve including a small area in the Thousand Palms Canyon and a larger area south of Ramon Road (Coachella Valley Conservation Commission 2016).

Potentially suitable habitat does occur within the sandy creosote bush scrub vegetation community in the BSA with critical habitat occurring just north of the BSA. None were observed within the BSA during the field survey.

Other Special-Status Plant Species

Of the 38 special-status plant species, only 13 have a low or moderate probability of occurring within the BSA. Table 1 lists these species as well as their habitat requirements and occurrence probability. Only the mecca-aster (*Xylorhiza cognata*, CNPS 1B.2) has a low probability of occurring within the BSA and is covered under the CVMSHCP. Additionally, none of these species were observed within the BSA during the field survey.

Table 1. Special-Status Plant Species Known From the Vicinity of the Project Footprint

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
Abronia villosa var. *aurita* **Chaparral sand-verbena**	US: None CA: None CNPS: 1B.1 CVMSHCP: NC	Sandy soils in chaparral, coastal scrub, and desert dunes. Found at 75 to 1,600 meters (246 to 5,249 feet) above MSL.	Blooms January through September (annual herb)	Not Expected: The site does not contain suitable habitat to support this species.
Astragalus bernardinus **San Bernardino milk-vetch**	US: None CA: None CNPS: 1B.2 CVMSHCP: NC	Often in granitic or carbonate soils in Joshua tree woodland and Pinyon and juniper woodland from 900 to 2,000 meters elevation.	Blooms April through June (perennial herb)	Not Expected: The site does not contain suitable habitat to support this species.
Astragalus hornii var. *hornii* **Horn's milk-vetch**	US: None CA: None CNPS: 1B.1 CVMSHCP: NC	Occurs in meadows and seeps and playas from 60 to 850 meters (195 to 2,790 feet) above MSL.	Blooms May through October (annual herb)	Not Expected: The site does not contain suitable habitat to support this species.
Astragalus lentiginous var. borreganus **Borrego milk-vetch**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Mojavean desert scrub, Sonoran desert scrub.	Blooms February through May (annual herb)	Low. Suitable habitat present, nearest CNPS record within Myoma quadrangle.
Astragalus lentiginosus var. *coachellae* **Coachella Valley milk-vetch**	US: FE CA: None CNPS: 1B.2 CVMSHCP: C	Occurs in desert dunes and sandy Sonoran desert scrub from 40 to 655 meters (130 to 2,150 feet) above MSL.	Blooms February through May (annual/perennial herb)	Moderate: Suitable habitat present, species known from immediate vicinity, critical habitat to the north of site.
Astragalus preussii var. *laxiflorus* **Lancaster milk-vetch**	US: None CA: None CNPS: 1B.1 CVMSHCP: NC	Occurs in chenopod scrub habitat at 700 meters (2,295 feet) above MSL.	Blooms March through May (perennial herb)	Not Expected: The site does not contain suitable habitat to support this species.

Table 1. Special-Status Plant Species Known From the Vicinity of the Project Footprint

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
Astragalus sabulonum **Gravel milk-vetch**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in usually sandy, sometimes gravelly soils in desert dunes, Mojavean desert scrub, and Sonoran desert scrub. Found in flats, washes, and roadsides from -60 to 930 meters (-195 to 3,050 feet) above MSL.	Blooms February through June (annual/perennial herb)	Not Expected. Suitable habitat present, however, nearest CNDDB records approx. 11 miles southeast of site.
Astragalus tricarinatus **Triple-ribbed milk-vetch**	US: FE CA: None CNPS: 1B.2 CVMSHCP: C	Occurs in sandy or gravelly soils in Joshua tree woodland and Sonoran desert scrub habitats from 450 to 1,190 meters (1,475 to 3,905 feet) above MSL.	Blooms February through May (perennial herb)	Not Expected. Site below known elevational range.
Ayenia compacta **California ayenia**	US: None CA: None CNPS: 2B.3 CVMSHCP: NC	Occurs in rocky soils in Mojavean desert scrub and Sonoran desert scrub habitats from 150 to 1,095 meters (490 to 3,595 feet) above MSL.	Blooms March through April (perennial herb)	Not Expected. The site does not contain suitable soils to support this species.
Calochortus palmeri car. munzii **San Jacinto mariposa-lily**	US: None CA: None CNPS: 1B.2 CVMSHCP: NC	Occurs in chaparral, lower montane coniferous forest and meadows and seep habitats from 855 to 2,200 meters (2,805 to 7,220 feet) above MSL.	Blooms April through July (perennial bulbiferous herb)	Not Expected: The site does not contain suitable habitat to support this species.
Cuscuta californica var. *apiculata* **Pointed dodder**	US: None CA: None CNPS: 3 CVMSHCP: NC	Occurs in Mojavean desert scrub and Sonoran desert scrub from 0 to 500 meters (0 to 1,640 feet) above MSL.	Blooms February through August (annual vine (parasitic))	Low. Suitable habitat present, nearest CNPS record within Cathedral City quadrangle.
Ditaxis claryana **Glandular ditaxis**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in sandy soils in Mojavean desert scrub and Sonoran desert scrub from 0 to 465 meters (0 to 1,525 feet) above MSL.	Blooms October through March (perennial herb)	Low. Suitable habitat present, nearest CNDDB records approx. 7 miles south of site.

Table 1. Special-Status Plant Species Known From the Vicinity of the Project Footprint

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
Ditaxis serrate var. californica **California ditaxis**	US: None CA: None CNPS: 3.2 CVMSHCP: NC	Occurs in Sonoran desert scrub from 30 to 1,000 meters (100 to 3,280 feet) above MSL.	Blooms March through December (perennial herb)	Low. Suitable habitat present, nearest CNDDB records approx. 8 miles south of site.
Eremothera boothii ssp. boothii **Booth's evening-primerose**	US: None CA: None CNPS: 2B.3 CVMSHCP: NC	Occurs in Joshua tree "woodland", Pinyon and juniper woodland habitat from 815 to 2,400 meters (2,675 to 7,875 feet) above MSL.	Blooms April through September (annual herb)	Not Expected: The site does not contain suitable habitat to support this species.
Erigeron parishii **Parish's daisy**	US: FT CA: None CNPS: 1B.1 CVMSHCP: NC	Occurs in usually carbonate and sometime granitic mojavean desert scrub, pinyon and juniper woodland habitat from 800 to 2,000 meters (2,625 to 6,560 feet) above MSL.	Blooms May through August (perennial herb)	Not Expected: The site does not contain suitable habitat to support this species.
Euphorbia abramsiana **Abrams' spurge**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in Mojavean desert scrub and Sonoran desert scrub from -5 to 1,310 meters (-15 to 4,300 feet) above MSL.	Blooms August through November (annual herb)	Low. Suitable habitat present, nearest CNDDB records approx. 4.5 miles south of site.
Euphorbia arizonica **Arizona spurge**	US: None CA: None CNPS: 2B.3 CVMSHCP: NC	Occurs in sandy Sonoran desert scrub from 50 to 300 meters (165 to 985 feet) above MSL.	Blooms March through April (perennial herb)	Low. Suitable habitat present, nearest CNDDB records approx. 3 miles north of site.
Euphorbia platysperma **flat-seeded spurge**	US: None CA: None CNPS: 1B.2 CVMSHCP: NC	Occurs in desert dunes and sandy Sonoran desert scrub from 65 to 100 meters (215 to 330 feet) above MSL.	Blooms February through September (annual herb)	Moderate. Suitable habitat present, nearest CNDDB records less then 1 mile southwest of site.
Galium angustifolium ssp. gracillimum **Slender bedstraw**	US: None CA: None CNPS: 4.2 CVMSHCP: NC	Occurs in granitic or rocky Sonoran desert scrub and Joshua tree "woodland" from 130 to 1,550 meters (425 to 5,085 feet) above MSL.	Blooms April through July (perennial herb)	Not Expected: The site does not contain suitable habitat to support this species.

Table 1. Special-Status Plant Species Known From the Vicinity of the Project Footprint

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
Horsfordia alata **Pink velvet-mallow**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Occurs in rocky Sonoran desert scrub from 100 to 500 meters (330 to 1,640 feet) above MSL.	Blooms February through December (perennial shrub)	Not Expected: The site does not contain suitable habitat to support this species.
Horsfordia newberryi **Newberry's velvet-mallow**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Occurs in rocky Sonoran desert scrub from 3 to 800 meters (10 to 2,6250 feet) above MSL.	Blooms February through December (perennial shrub)	Not Expected: The site does not contain suitable habitat to support this species.
Johnstonella costata **Ribbed cryptantha**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Occurs in desert dunes, Mojavean desert scrub, Sonoran desert scrub from -60 to 500 meters (-195 to 1,640 feet) above MSL.	Blooms February through May (annual herb)	Moderate. Suitable habitat present, site within CNPS Myoma quadrangle.
Johnstonella holoptera **Winged cryptantha**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Occurs in Mojavean desert scrub, Sonoran desert scrub from 100 to 1,690 meters (330 to 5,545 feet) above MSL.	Blooms March through April (annual herb)	Moderate. Suitable habitat present, site within CNPS Myoma quadrangle.
Juncus acutus ssp. leopoldii **Southwestern spiny rush**	US: None CA: None CNPS: 4.2 CVMSHCP: NC	Occurs in coastal dunes (mesic), coastal scrub, meadows and seeps (alkaline seeps), marshes and swamps (coastal salt) from 3 to 900 meters (10 to 2,955 feet) above MSL.	Blooms March through June (perennial rhizomatous herb)	Not Expected: The site does not contain suitable habitat to support this species.
Juncus cooperi **Cooper's rush**	US: None CA: None CNPS: 4.3 CVMSHCP: NC	Occurs in meadows and seeps (mesic, alkaline or saline) from -260 to 1,770 meters (-855 to 5,805 feet) above MSL.	Blooms April through August (perennial herb)	Not Expected: The site does not contain suitable habitat to support this species.
Linanthus maculatus ssp. *maculatus* **Little San Bernardino Mtns. linanthus**	US: None CA: None CNPS: 1B.2 CVMSHCP: C	Occurs in desert dunes, Joshua tree "woodland", Mojavean desert scrub and Sonoran desert scrub from 140 to 1,220 meters (460 to 4,005 feet) above MSL.	Blooms March through May (annual herb)	Not Expected. Site below known elevational range.

Table 1. Special-Status Plant Species Known From the Vicinity of the Project Footprint

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
Lycium torreyi **Torrey's box-thorn**	US: None CA: None CNPS: 4.2 CVMSHCP: NC	Occurs in Mojavean desert scrub, Sonoran desert scrub from -50 to 1,220 meters (-165 to 4,005 feet) above MSL.	Blooms January through November (perennial shrub)	Moderate. Suitable habitat present, site within CNPS Myoma quadrangle.
Marina orcuttii var. orcuttii **California marina**	US: None CA: None CNPS: 1B.3 CVMSHCP: NC	Occurs in rocky soils in Chaparral, Pinyon and juniper woodland, and Sonoran desert scrub from 1,050 to 1,160 meters (3,445 to 3,805 feet) above MSL.	Blooms May through October (perennial herb)	Not Expected. Site below known elevational range.
Matelea parvifolia **Spear-leaf matelea**	US: None CA: None CNPS: 2B.3 CVMSHCP: NC	Occurs in rocky soils in Mojavean desert scrub and Sonoran desert scrub from 440 to 1,095 (1,445 to 3,595 feet) above MSL.	Blooms March through May (perennial herb)	Not Expected. Site below known elevational range.
Monardella robisonii **Robinson's monardella**	US: None CA: None CNPS: 1B.3 CVMSHCP: NC	Occurs in pinyon and juniper woodland habitat from 610 to 1,500 meters (2,000 to 4,920 feet) above MSL.	Blooms February through October (perennial rhizomatous herb)	Not Expected. Site below known elevational range.
Nemacaulis denudata var. *gracilis* **Slender cottonheads**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in coastal dunes, desert dunes, and Sonoran desert scrub from -50 to 400 meters (-165 to 1,310 feet) above MSL.	Blooms March through May (annual herb)	Low. Suitable habitat present, nearest CNDDB records approx. 6 miles southwest of site.
Petalonyx linearis **Narrow-leaf sandpaper-plant**	US: None CA: None CNPS: 2B.3 CVMSHCP: NC	Occurs in Mojavean desert scrub, Sonoran desert scrub from -25 to 1,115 meters (-80 to 3,660 feet) above MSL.	Blooms January through December (perennial shrub)	Low. Suitable habitat present, nearest CNDDB records approx. 3 miles northeast of site.
Pseudorontium cyathiferum **Deep Canyon snapdragon**	US: None CA: None CNPS: 2B.3 CVMSHCP: NC	Occurs in rocky Sonoran desert scrub below 800 meters (2,625 feet) above MSL.	Blooms February through April (annual herb)	Not Expected: The site does not contain suitable habitat to support this species.

Table 1. Special-Status Plant Species Known From the Vicinity of the Project Footprint

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
Saltugilia latimeri **Latimer's woodland-gilia**	US: None CA: None CNPS: 1B.2 CVMSHCP: NC	Occurs in granitic, rocky, sandy, washes in chaparral, Mojavean desert scrub and pinyon and juniper woodland habitats from 400 to 1,900 meters (1,310 to 6,235 feet) above MSL.	Blooms March through June (annual herb)	Not Expected. Site below known elevational range.
Selaginella eremphila **Desert spike-moss**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in chaparral and gravelly, rocky Sonoran desert scrub from 200 to 1,295 meters (655 to 4,250 feet) above MSL.	Blooms May through July (perennial rhizomatous herb)	Not Expected. Site below known elevational range.
Senna covesii **Cove's cassia**	US: None CA: None CNPS: 2B.2 CVMSHCP: NC	Occurs in dry, sandy desert washes and slopes in Sonoran desert scrub habitat from 225 to 1,295 meters (740 to 4,250 feet) above MSL.	Blooms March through August (perennial herb)	Not Expected. Site below known elevational range.
Stemodia durantifolia **Purple stemodia**	US: None CA: None CNPS: 2B.1 CVMSHCP: NC	Occurs in mesic or sandy soils in Sonoran desert scrub habitat from 180 to 300 meters (590 to 985 feet) above MSL.	Blooms January through December (perennial herb)	Not Expected. Site below known elevational range.
Xylorhiza cognata **Mecca-aster**	US: None CA: None CNPS: 1B.2 CVMSHCP: C	Occurs in Sonoran desert scrub habitat from 20 to 400 meters (65 to 1,310 feet) above MSL.	Blooms January through June (perennial herb)	Low. Suitable habitat present, nearest CNDDB records approx. 6.5 miles east of site.

Notes:

US: Federal Classifications

FE Taxa listed as Endangered

FT Taxa listed as Threatened

CA: State Classification

SE Taxa State-listed as Endangered

ST Taxa State-listed as Threatened

CNPS Rare Plant Rank*

List 1B.2 List 1b: Rare, threatened, or endangered in California and elsewhere. 0.2: Fairly endangered in California

List 2.3 List 2: Rare, threatened, or endangered in California, but more common elsewhere. O.3: Not very endangered in California.

List 4.2 Limited distribution (Watch list). 0.2: Fairly endangered in California.

Table 1. Special-Status Plant Species Known From the Vicinity of the Project Footprint

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
List 4.3	Limited distribution (Watch list). 0.3: Not very endangered in California.			
List A	Plants rare, threatened or endangered in California and elsewhere.			
List B	Plants rare, threatened or endangered in California but more common elsewhere.			
*California Rare Plant Ranks are assigned by a committee of government agency and non-governmental botanical experts and are not official State designations of rarity status.				
CVMSHCP Conservation Status				
NC	Impacts to this species are not covered through participation in the CVMSHCP.			
C	Impacts to this species are covered through participation in the CVMSHCP.			

4.2 Wildlife Species

Special-status wildlife species include wildlife that meets one or more of the following criteria:

- Listed or proposed for listing as threatened or endangered under the ESA or candidates for possible future listing as threatened or endangered under the ESA (50 CFR Section 17.12)
- Listed or candidates for listing by the State of California as threatened or endangered under the California ESA (Fish and Game Code, Section 2050 et seq.)
- Meet the definition of rare or endangered under CEQA Guidelines Section 15380, subdivisions (b) and (d), including:
    - Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens
    - The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range
- Considered locally significant species (i.e., species that are not rare from a statewide perspective but are rare or uncommon in a local context such as within a county or region [CEQA Guidelines, Section 15125, subd. (c)], or as designated in local or regional plans, policies, or ordinances [CEQA Guidelines, Appendix A])

Federally and/or State-Listed Wildlife Species

No special-status wildlife species were observed during the biological field surveys, though specific protocol surveys were not conducted.

Wildlife species observed within the project footprint consisted of those common to disturbed areas and adapted to human presence. Species observed during the site visit include mourning dove (*Zenaida macroura*), common raven (*Corvus corax*) and northern mockingbird (*Mimus polyglottos*). All wildlife species observed are listed in Appendix B.

Based upon the results of the literature review, twenty-nine (29) special-status wildlife species are known to occur within the vicinity of the project footprint. These species, their federal and State status, habitat requirements and occurrence probability are included in Table 2. One of these species is listed as endangered, threatened or is a candidate for listing under the federal and/or California Endangered Species Acts:

Coachella Valley fringe-toed lizard

The Coachella Valley fringe-toed lizard (*Uma inornate*) is federally threatened, state endangered and a CVMSHCP covered species. The species is restricted to the Coachella Valley and historically ranged from Cabazon, east to Thermal. The lizard is associated with aeolian sands and has developed morphological and behavioral adaptations including a unique way of "swimming" through the loose sand. As a result, the lizard is dependent on less compacted sands for burrowing to escape the heat of the day, sometimes deeper than five centimeters and in the shade on the hottest days. During normal and wet years, the species feeds on flowers and plant dwelling arthropods, switching to leaves and ants during the dry years (Coachella Valley Conservation Commission 2016).

The BSA is located within designated critical habitat for the species and adjacent to the Thousand Palms Conservation Area of the CVMSCHP. The majority of the BSA contains creosote bush scrub habitat with looser sands, however, proper aeolian sands that the species is closely associated with is absent from the BSA.

Other Special-Status Wildlife Species

Twelve (12) special-status wildlife species have the potential to occur within the BSA, as follows:

- **Flat-tailed horned lizard**. Flat-tailed horned lizard (*Phrynosoma mcallii*) is a CDFW species of special concern and CVMSHCP covered species. The species is associated with sand flats and sand dunes, however, hard packed sand or desert pavement with aeolian sands on top are common habitat type preferences. In addition, the species is commonly associated with creosote bush and white bursage perennial plant species. The species is located at lower elevations in Coachella Valley and two of the conservation areas within the CVMSHCP plan area, including the Thousand Palms Preserve near the BSA. The species has been located within dune habitat south of Ramon Road, however, none have been known to occur north of Ramon Road within the Thousand Palms Preserve (Coachella Valley Conservation Commission 2016).
- **Burrowing owl**. Burrowing owl (*Athene cunicularia*) is a CDFW bird species of special concern and CVMSHCP covered species. The species has a broad distribution and in southern California is known to occur in lowlands over a large region, including agricultural areas. They can occur in open desert areas, along irrigation dikes and levees, or wherever burrows are available away from intense human activity (Coachella Valley Conservation Commission 2016).

  The BSA does not contain suitable natural habitat for the species as open grasslands are absent, however, debris was observed onsite that has the potential to provide suitable burrowing habitat for the species.
- **Loggerhead shrike**. Loggerhead shrike (*Lanius ludovicianus*, species of special concern) occur in open woodlands with areas of grass cover and bare ground and require tall shrubs, trees, fences, or power lines for hunting perches. Loggerhead shrike use areas of short grasses, forbs, or bare ground for hunting and thorny vegetation or barbed wire fences for impaling a wide

variety of prey including insects, arachnids, reptiles, amphibians, small birds, and small mammals (Shuford and Gardali 2008).

Potentially suitable habitat for loggerhead shrike to hunt in occurs within the creosote bush scrub within the BSA.

- **Vermilion flycatcher**. Vermilion flycatcher (*Pyrocephalus rubinus*) is a CDFW bird species of special concern with a range from southwestern United States south to central Argentina and Uruguay. The species was more abundant within the Coachella Valley but has declined since the 1950s and is more occasionally wintering in the valley. The species is associated with arid scrub, farmlands, savanna, agricultural areas, and riparian woodland (Shuford and Gardali 2008).

  Potentially suitable habitat for the vermilion flycatcher can include the surrounding trees where they can nest and the creosote bush scrub within the BSA.

- **Palm Springs pocket mouse**. Palm Springs pocket mouse (*Pergnathus longimembris bangsi*) is a CDFW mammal species of special concern and CVMSHCP covered species. The species ranges in the lower Sonoran life zones from the San Gregorio Pass area east to the Little San Bernardino Mountains and south along the eastern edge of the Peninsular Range to Borrego Valley and the east side of San Felipe Narrows. Habitat is described as having level to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils. The species is known to occur south of Ramon Road within the Thousand Palms Preserve and north of Ramon Road, west of Thousand Palms Canyon Road (Coachella Valley Conservation Commission 2016).

  Potentially suitable habitat occurs throughout the BSA within sandy creosote bush scrub vegetation areas, however, the site is adjacent to disturbed areas.

- **American badger**. American badger (*Taxidea taxus*) is a CDFW mammal species of special concern that occupy a diversity of habitats, including grasslands, savannas, and desert areas. Potentially suitable habitat does occur within the BSA, however, the area is disturbed and the nearest known occurrence is recorded 10 miles from the BSA.

- **Coachella Valley round-tailed ground squirrel**. Coachella Valley round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*) is a CDFW mammal species of special concern and CVMSHCP covered species. The species is associated with sand fields and dune formations, however, active dune and blowsand areas are not required. Habitat details include mesquite hummocks, creosote bush scrub, or desert saltbush scrub. The species is known to occur south of Ramon Road in the dune area of the Thousand Palms Preserve as well as the dunes north of Ramon Road and west of Thousand Palms Canyon Road (Coachella Valley Conservation Commission 2016).

  Potentially suitable habitat does occur within the creosote bush scrub in the BSA, however, area and immediately adjacent areas are disturbed. In addition, nearest CNDDB occurrence is located 5 miles from the BSA.

Table 2. Special-Status Wildlife Species Known From the Vicinity of the Project Footprint

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
FISH			
Cyprinodon macularius **Desert pupfish**	US: FE CA: SE CVMSHCP: C	Springs, seeps, and slow-moving streams, as well as backwaters and sloughs.	Not Expected: The site does not contain suitable riparian habitat to support this species.
INSECTS			
Danaus plexippus **Monarch Butterfly**	US: FC CA: None CVMSHCP: NC	Typically overwinter in groves of eucalyptus (*Eucalyptus* sp.), Monterey pine (*Pinus radiata*), or Monterey cypress (*Hesperocyparis macrocarpa*) along the California coast. Adult females lay eggs on milkweed species (*Asclepias* spp.). Milkweeds are critical for successful development of the caterpillar into an adult butterfly (Western Monarch Milkweed Mapper 2022).	Not Expected. The site does not contain suitable overwintering or milkweed habitat to support this species.
Dinacoma caseyi **Casey's June beetle**	US: FE CA: None CVMSHCP: NC	Known from only two small populations in southern Palm Springs. Emergence holes have been observed in disturbed, sandy wash areas and semi-developed areas beneath non-native vegetation. Soils that are modified or compacted are not likely to support persistent occupancy. Associated with alluvial fans and Carsitas series soil.	Not Expected. Suitable soils on site but outside of species known geographic range. Nearest known occurrence is over 6 miles east.
Bombus crotchii **Crotch bumble bee**	US: None CA: CE CVMSHCP: NC	Found between San Diego and Redding in a variety of habitats including open grasslands, shrublands, chaparral, desert margins including Joshua tree and creosote scrub, and semi-urban settings. It is near endemic to California, with only a few records from Nevada and Mexico (CDFW 2022). Williams et al. (2014) report plants in the genera *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia*, and *Salvia* as example food plants.	Potentially suitable creosote scrub habitat onsite, however, nearest CNDDB occurrence is over 9.5 miles west of the site.

Table 2. Special-Status Wildlife Species Known From the Vicinity of the Project Footprint

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
REPTILES			
Crotalus ruber **Red-diamond rattlesnake**	US: None CA: SSC CVMSHCP: NC	Arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, and cultivated areas. On desert slopes of mountains, it ranges into rocky desert flats.	Not Expected: The site does not contain suitable habitat to support this species.
Gopherus agassizii **Desert tortoise**	US: FT CA: ST CVMSHCP: C	Firm ground to dig burrows, or rocks to shelter. In arid sandy or gravelly locations along riverbanks, washes, sandy dunes, alluvial fans, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides.	Not Expected: The site does not contain suitable habitat to support this species. Nearest CNDDB occurrence is 8.5 miles northeast of the site.
Phrynosoma blainvillii **Coast horned lizard**	US: None CA: SSC CVMSHCP: NC	Primarily in sandy soil in open areas, especially washes and floodplains, in many plant communities. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Occurs west of the deserts from northern Baja California north to Shasta County below 2,400 meters (8,000 feet) elevation.	Not Expected: The site does outside of known range for this species. Nearest CNDDB occurrence is 13 miles northeast of the site.
Phrynosoma mcallii **Flat-tailed horned lizard**	US: None CA: SSC CVMSHCP: C	Sandy desert hardpan or gravel flats with scattered sparse vegetation of low species diversity. Common in areas with high density of harvester ants and fine windblown sand, but rarely occurs on dunes.	Suitable habitat onsite, nearest CNDDB occurrence is less than 1 mile northeast of the site.
Uma inornata **Coachella Valley fringe-toed lizard**	US: FT CA: SE CVMSHCP: C	Sparsely-vegetated arid areas with fine wind-blown sand, including dunes, washes, and flats with sandy hummocks formed around the bases of vegetation. Needs fine, loose sand for burrowing.	Suitable habitat onsite, nearest CNDDB occurrence is less than .5 miles west and east of the site. Within critical habitat.

Table 2. Special-Status Wildlife Species Known From the Vicinity of the Project Footprint

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
BIRDS			
Athene cunicularia **Burrowing Owl**	US: None CA: SSC CVMSHCP: C	Open country in much of North and South America. Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. They avoid thick, tall vegetation, brush, and trees.	Low: The site does not contain suitable natural habitat to support this species, but debris piles are present within the site.
Aquila chrysaetos **Golden eagle**	US: None CA: FP CVMSHCP: NC	Open and semi-open country featuring native vegetation. Found primarily in mountains up to 12,000 feet, canyonlands, rimrock terrain, and riverside cliffs and bluffs. Nests on cliffs and steep escarpments in grassland, chaparral, shrubland, forest, and other vegetated areas. Year-round, diurnal activity.	Not Expected: The site does not contain suitable habitat to support this species.
Empidonax traillii extimus **southwestern willow flycatcher**	US: FE CA: SE CVMSHCP: C	Requires extensive, dense riparian areas with willows or tamarisk. Require standing water.	Not Expected: The site does not contain suitable habitat to support this species.
Lanius ludovicianus **Loggerhead shrike**	US: None CA: SSC CVMSHCP: NC	Inhabits open country with short vegetation and well-spaced shrubs or low trees, particular those with spines or thorns. Frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries.	Moderate: Site contains suitable habitat to support this species. Nearest CNNDB occurrence is 4 miles southeast of site.
Polioptila californica californica **coastal California gnatcatcher**	US: FT CA: SSC CVMSHCP: NC	Year-round resident that occurs in coastal sage scrub and valleys up to about 500 meters (1,640 feet).	Not Expected: The site does not contain suitable habitat to support this species.

Table 2. Special-Status Wildlife Species Known From the Vicinity of the Project Footprint

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
Pyrocephalus rubinus **Vermilion flycatcher**	US: None CA: SSC CVMSHCP: NC	Scrub, desert, cultivated lands, and riparian woodlands.	Moderate: Site contains suitable habitat to support this species. Nearest CNNDB occurrence is 7 miles southeast of site.
Toxostoma bendirei **Bendire's thrasher**	US: None CA: SSC CVMSHCP: NC	Breeds in Mojave scrub habitats. Associated with yucca (Yucca spp.) and prickly pear (Opuntia ssp.), as well as firmly packed soil. Generally avoids areas with steep slopes and rocky terrain.	Not Expected: The site does not contain suitable dense habitat to support this species.
Toxostoma crissale **Crissal thrasher**	US: None CA: SSC CVMSHCP: C	Found in dense, low scrubby vegetation, such as desert and foothill scrub and riparian brush.	Not Expected: The site does not contain suitable habitat to support this species.
Toxostoma lecontei **Le Conte's thrasher**	US: None CA: SSC CVMSHCP: C	Desert scrub, mesquite, tall riparian brush, and chaparral.	Not Expected: The site does not contain suitable habitat to support this species.
Vireo bellii pusillus **least Bell's vireo**	US: FE CA: SE CVMSHCP: C	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Not Expected: The site does not contain suitable habitat to support this species.
MAMMALS			
Chaetodipus fallx pallidus **Pallid San Diego pocket mouse**	US: None CA: SSC CVMSHCP: NC	Sandy herbaceous areas, usually in rocky or coarse gravel soils in desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grasslands ranging from sea level to 1,350 meters.	Not Expected: The site does not contain suitable habitat to support this species.
Eumops perotis californicus **Western mastiff bat**	US: None CA: SSC CVMSHCP: NC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, and tunnels, and travels widely when foraging.	Not Expected: The site does not contain suitable habitat to support this species.

Table 2. Special-Status Wildlife Species Known From the Vicinity of the Project Footprint

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
Lasiurus xanthinus **Western yellow bat**	US: None CA: SSC CVMSHCP: C	Arid to dry areas including savannas, secluded woodlands, pasture or croplands, and urban areas.	Not Expected: The site does not contain suitable habitat to support this species.
Neotoma lepida intermedia **San Diego desert woodrat**	US: None CA: SSC CVMSHCP: NC	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Not Expected: The site does not contain suitable habitat to support this species.
Nyctinomops femorosaccus **Pocketed free-tailed bat**	US: None CA: SSC CVMSHCP: NC	Rugged cliffs, and high rocky outcrops and slopes.	Not Expected: The site does not contain suitable habitat to support this species.
Ovis canadensis nelsoni **Desert bighorn sheep**	US: None CA: FP CVMSHCP: C	Open rough, rocky, and steep terrain encompassing springs and plateaus.	Not Expected: The site does not contain suitable habitat to support this species.
Ovis canadensis nelsoni pop.2 **Peninsular bighorn sheep DPS**	US: FE CA: ST CVMSHCP: C	Found in the Peninsular Ranges occupying steep slopes and cliffs, rough and rocky topography, and sparse vegetation. Uses alluvial fans, washes, and valley floors for dispersal to neighboring ranges.	Not Expected: The site does not contain suitable habitat to support this species.
Perognathus longimembris bangsi **Palm Springs pocket mouse**	US: None CA: SSC CVMSHCP: C	Creosote scrub, desert scrub, and grasslands, generally occurring on loosely packed or sandy soils with sparse to moderately dense vegetative cover.	Low: The site contains suitable habitat to support this species but is disturbed. Nearest CNDDB occurrence is 5 miles southeast of site.
Taxidea taxus **American badger**	US: None CA: SSC CVMSHCP: NC	Agricultural land, grassland and other open areas and brush lands with sparse groundcover.	Low: The site contains suitable habitat to support this species, however, nearest CNDDB occurrence is 10 miles southeast of site.

Table 2. Special-Status Wildlife Species Known From the Vicinity of the Project Footprint

Species	Federal/State Status	Habitat and Distribution	Potential for Occurrence
Xerospermophilus tereticaudus chlorus **Coachella Valley round-tailed ground squirrel**	US: None CA: SSC CVMSHCP: C	Sandy arid areas with scrub and wash habitats including mesquite- and creosote-dominated sand dunes, creosote bush scrub, creosote-palo verde, and saltbush/alkali scrub. Wind-blown sand, coarse sand, and packed silt with desert pavement.	Low: The site contains suitable habitat to support this species but is disturbed. Nearest CNDDB occurrence is 5 miles southeast of site.

Notes:

FE	Federally Endangered
FT	Federally Threatened
FC	Federal Candidate for Listing
SE	Endangered in California
ST	Threatened in California
CE	Candidate for Endangered Status
CT	Candidate for Threatened Status
CR	Rare in California
SSP	State Species of Concern
FP	State Fully Protected

CVMSHCP Conservation Status

NC	Impacts to this species are not covered through participation in the CVMSHCP.
C	Impacts to this species are covered through participation in the CVMSHCP.

4.3 Potential Jurisdictional Wetlands and Streambeds

The project footprint does not support any areas that would be considered jurisdictional under Sections 401 and 404 of the Clean Water Act or Section 1602 of the California Fish and Game Code. No further studies to determine potential USACE, CDFW, or RWQCB jurisdiction within the project footprint are required.

Figure 4. Site Photographs

Photo 1: View of the project footprint looking south towards existing Ramon Substation, showing disturbed Creosote Bush Scrub habitat.

Photo 2: View of the project footprint towards east, showing Creosote Bush Scrub Habitat.

Photo 3: View of the construction debris piles in the disturbed Creosote Bush Scrub habitat within the project footprint.

Photo 4: View of the offroad activity in the disturbed Creosote Bush Scrub habitat within the project footprint.

4.4 Nesting Birds

Creosote Bush within the project footprint and Eucalyptus and Mesquite Trees in the buffer area provide potentially suitable habitat to support nesting birds protected under the MBTA and California Fish and Game Code occurs within the BSA. Although no raptors were observed during the site visit, the disturbed habitat within project footprint does provide foraging habitat for raptors, such as hawks and owls, among other resident and other avian species.

4.5 Wildlife Movement, Corridors, and Nursery Sites

Wildlife movement corridors, also called dispersal corridors or landscape linkages, are linear features whose primary wildlife function is to connect at least two significant habitat areas. Other definitions of corridors and linkages are as follows:

- A corridor is a specific route used for movement and migration of species. A corridor may be different from a linkage because it represents a smaller or narrower avenue for movement.
- Linkage means an area of land that supports or contributes to the long-term movement of wildlife and genetic material. A linkage is a habitat area that provides connectivity between habitat patches, as well as year-round foraging, reproduction, and dispersal habitat for resident plants and animals.

Wildlife corridors and linkages are important features in the landscape, and the viability and quality of a corridor or linkage are dependent on site-specific factors. Topography and vegetative cover are important factors for corridors and linkages. These factors should provide cover for both predator and prey species. They should direct animals to areas of contiguous open space or resources and away from humans and development. The corridor or linkage should be buffered from human encroachment and other disturbances (e.g., light, loud noises, domestic animals) associated with developed areas that have caused habitat fragmentation (Schweiger et al. 2000). Wildlife corridors and linkages may function at various levels depending upon these factors and, as such, the most successful of wildlife corridors and linkages will accommodate all or most of the necessary life requirements of predator and prey species.

Areas not considered functional wildlife dispersal corridors or linkages are typically obstructed or isolated by concentrated development and heavily traveled roads, known as chokepoints. One of the worst scenarios for dispersing wildlife occurs when a large block of habitat leads animals into cul-de-sacs of habitat surrounded by development. These habitat cul-de-sacs frequently result in adverse human/animal interfacing.

The project footprint is disturbed and contains very little native vegetation, additionally, the site is bordered by the Southern California Edison Mirage substation to the west, the existing Ramon Substation and Ramon Road to the south, which limits wildlife movement through the project site.

4.6 Coachella Valley Multiple Species Habitat Conservation Plan Compliance

As stated previously, the proposed project is within the planning boundary of the CVMSHCP; however, the project footprint is not within but adjacent to the Thousand Palms Conservation Area (Figure 5).

According to the CVMSHCP,

> "Local jurisdictions will impose a mitigation fee on new Development within the Plan Area that impacts vacant land containing Habitat for the Covered Species or any of the conserved natural communities in the Plan through adoption, or amendment of an existing fee ordinance. In addition to large vacant areas, this also applies to small vacant lots within urban areas that still contain natural open space."

Development on this vacant land would impact critical habitat for the Coachella Valley fringe-toed lizard, a CVMSHCP covered species, and the IID is a permittee to the CVMSHCP, requiring payment of the land development mitigation fee. As the IID is a permittee of the CVMSHCP, with payment of the mitigation fee, and compliance with the requirements of CVMSHCP Section 4.2, Conservation Areas; Section 4.4, Avoidance, Minimization, and Mitigation Measures; and Section 4.5, Land Use Adjacency Guidelines, full mitigation compliance with CEQA, CESA, and FESA will be granted for covered species.

Figure 5. Coachella Valley Multiple Species Conservation Plan Area

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5 Impacts Analysis

For the purpose of this impact analysis, the proposed expansion of the existing Ramon Substation is assumed to be the physical project footprint. Permanent and direct impacts are assumed within the project footprint.

Project construction- and operational-related impacts are analyzed in the context of direct or indirect effects. Direct impacts are those on the physical environment that are immediately related to the proposed project; they occur at the same time and place as the proposed project (e.g., vegetation removal and grading associated with construction). Indirect impacts are those that occur later in time or farther removed in distance than direct effects (e.g., long-term changes in water quality and offsite impacts from noise, dust, lighting, etc.). In this analysis, direct impacts from construction are treated as short term (temporary), while indirect impacts from operation are treated as long term (permanent).

5.1.1 Vegetation Communities/Land Cover Types

The proposed project would primarily affect disturbed creosote bush scrub and developed/ornamental vegetation communities. There are no special-status vegetation communities within the BSA. The proposed project would also permanently impact a small amount of natural creosote bush scrub.

5.1.2 Riparian Habitat and Other Special-Status Vegetation Communities

The proposed project would have impacts to creosote bush scrub, disturbed creosote bush scrub, and developed/ornamental vegetation communities. Table 3 summarizes the proposed project impacts on vegetation communities and land cover types. Figure 6 depicts these impacts. No riparian habitat or other special-status vegetation communities are present within the BSA. Therefore, construction and operation of the project would have no direct or indirect impacts on riparian habitat or other special-status vegetation communities.

Table 3. Vegetation Community and Land Cover Type Impacts

Vegetation Community/Land Cover Type	Acreage
Creosote Bush Scrub	0.13
Disturbed Creosote Bush Scrub	3.83
Developed/Ornamental	0.03
Total	**3.99**

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Figure 6. Vegetation Communities and Land Cover Type Impacts

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5.1.3 Special-Status Plant Species

Federally and/or State-Listed Plant Species

As noted above, one federally and/or state listed plant species would have a moderate probability of occurring within the BSA. The Coachella Valley milk-vetch is known to occur within sandy substrates in creosote bush scrub habitat which occurs within the proposed Project footprint, north of the existing Ramon substation. No Coachella Valley milk-vetch individuals were observed during the field visit. The area adjacent to the substation is disturbed due to dumping of materials and garbage and usage of the area by the homeless. In addition, the creosote bush vegetation is more spread out as a result of the disturbance. Surrounding land uses are residential with buildings and areas being used immediately west of the project.

The Coachella Valley milk-vetch is a CVMSCHP covered species and direct impacts to this species is considered a covered activity and mitigated through participation in the CVMSCHP. In addition, mitigation measure BIO-1 would be implemented and would require payment of the mitigation fee as required by the CVMSCHP.

No other federally and/or state listed plant species have any probability from occurring or were observed during the field visit. In this context, no significant impacts on federally and/or state listed plant species would be expected.

Other Special-Status Plant Species

As noted in Table 1, 13 non-listed special-status plant species have the potential to occur in the BSA or within the project vicinity. None of these species were observed during the field visit. Implementation of the project would impact disturbed creosote bush scrub and creosote bush scrub vegetation communities that may be suitable habitat for these non-listed special-status plant species. Significant impacts may occur as a result of the project, however, most of the construction activities would be limited to creosote bush scrub that has been disturbed previously or is subject to dumping activities. In addition, implementation of Mitigation Measures BIO-2 and BIO-3 would reduce impacts to these special-status plant species. Mitigation Measure BIO-2 would implement biological resource protection measures prior to construction including a worker's environmental training and review of approved work areas with appropriate fencing. Mitigation Measure BIO-3 would require preconstruction surveys for the presence of any of these special-status plant species and would work to avoid any impacts to them. In this context, impacts to non-listed special-status plant species would be reduced to less than significant.

5.1.4 Special-Status Wildlife Species

Federally and/or State-Listed Wildlife Species

As noted above, one federally and/or state listed wildlife species would have a potential of occurring within the BSA. The Coachella Valley fringe-toed lizard has the potential of occurring within the sandy substrates of the creosote bush scrub located within the project footprint. No Coachella Valley fringe-toed lizard individuals were observed during the field visit; however, no protocol surveys were conducted. The project footprint is located within federally designated critical habitat for the species. Surrounding land uses are residential with buildings and areas utilized for living spaces located to the west. In addition, the creosote bush scrub directly north of the existing substation is subject to human disturbance as dumped materials and garbage was observed onsite as well as a small encampment.

The project is located adjacent to the Thousand Palms conservation area as designated by the CVMSCHP. The Coachella Valley fringe-toed lizard is a CVMSCHP covered species and direct impacts to this species is considered a covered activity and mitigated through participation in the CVMSCHP. Mitigation Measure BIO-1 would also be implemented and would require payment of the mitigation fee as required by the CVMSCHP.

No other federally and/or state listed wildlife species have any probability of occurring or were observed during the field visit. In this context, impacts to federally and/or state listed wildlife species would be less than significant.

Other Special-Status Wildlife Species

As noted in Table 2, 12 non-listed special-status wildlife species have the potential to occur within the BSA. The project would be limited to the disturbed creosote bush scrub habitat that occurs north of the existing Ramon substation. In addition, surrounding land uses are residential with living areas and buildings located to the west. The flat-tailed horned lizard, Palm Springs pocket mouse, and Coachella Valley round-tailed ground squirrel are CDFW species of special concern and CVMSCHP covered species that are known to occur in active dunes and creosote bush scrub habitats. They are noted to occur north and south of Ramon Road in active dune sites. The loggerhead shrike and vermilion flycatcher are known to forage and hunt within creosote bush scrub. The American badger is known to occur within a variety of habitat, including the present creosote bush scrub. Suitable habitat for the burrowing owl does not occur within the BSA, however, dumped materials observed onsite may provide suitable burrows for the species to utilize.

Although the creosote bush scrub is suitable habitat for these species, the area is disturbed with dumping of materials or homeless encampments. Adjacent areas are also highly disturbed with residential living areas or are lacking active dune habitat that some species utilize. In addition, construction activities over the minimally suitable habitat would take place in short duration. Implementation of Mitigation Measures BIO-2 and BIO-3 would help to reduce impacts to any special-status wildlife species. Mitigation Measure BIO-2 would require the implementation of biological resource protection measure prior to construction, including worker environmental trainings and review of the approved work area with appropriate fencing. Mitigation Measure BIO-3 would require preconstruction surveys for non-CVMSCHP covered or non-listed special-status wildlife species and work to avoid any impacts to these species. In this context, impacts to non-listed special-status wildlife species would be less than significant.

5.1.5 Jurisdictional Aquatic Resources

No jurisdictional aquatic resources were found during the field visit. The proposed project would be limited to the area north of the existing Ramon substation and utilize established access routes or previously disturbed or developed areas. No impacts to jurisdictional aquatic resources would be expected.

5.1.6 Wildlife Corridors

Development of the project footprint will not result in the loss of any potential wildlife movement areas, wildlife corridors or nursery sites as the project site is not located within but is adjacent to an established habitat corridor or linkage area. Implementation of Mitigation Measure BIO-2 will ensure the project will avoid potential impacts to nearby wildlife movement areas and corridors.

5.1.7 Local Policies and Ordinances Protecting Biological Resources

County General Plans and development ordinances may include regulations or policies governing biological resources. For example, policies may include tree preservation, locally designated species survey areas, local species of interest, and significant ecological areas. There are no local ordinances applicable to biological resources on site except for code provisions related to the CVMSHCP mitigation fee and land credits. The project will not be in conflict with any local policies or ordinances applicable to existing biological resources on site.

6 Cumulative Effects

Cumulative impacts of development on biological resources potentially include habitat fragmentation, increased edge effects, reduced habitat quality, and increased mortality of some common wildlife species. The proposed project would be an expansion of the existing Ramon substation within creosote bush scrub that is slightly disturbed with dumped materials or human encampments. The project is located at the edge of a conservation area as defined by the CVMSHCP and would impact the disturbed creosote bush scrub. The project is within the CVMSHCP boundaries and implementation of Mitigation Measures BIO-1 through BIO-4 would minimize or avoid impacts that could otherwise contribute to cumulative impacts to biological resources. As the IID is a permittee to the CVMSHCP, the proposed project would be a covered activity under the CVMSHCP with the mitigation payment and compliance under the CVMSHCP, CEQA, CESA, and FESA requirements.

7 Avoidance and Minimization Measures

In order to ensure that the project is in compliance with the CVMSHCP and project effects on biological resources are less than significant with respect to CEQA, the following avoidance and minimization measures should be implemented:

BIO-1. Coachella Valley Multiple Species Habitat Conservation Plan Fee Payment.

As a signatory to the Coachella Valley Multiple Species Habitat Conservation Plan, the IID shall require a local development mitigation fee prior to the issuance of building permits for the proposed use on the project site at the rates applicable at the time of payment of the fee as set forth in the most recent fee schedule. The project applicant shall be required to provide documentation to the IID confirming the payment of the local development mitigation fee.

The Coachella Valley milk-vetch and Coachella Valley fringe-toed lizard are federally listed species and CVMSHCP covered species with potential to occur within the project footprint. Direct impacts to these species as a result of the covered project activity would be in compliance with the CVMSHCP as long as the IID, a permittee of the CVMSHCP, submits a payment of the mitigation fee, complies with the requirements of CVMSHCP Section 4.2, Conservation Areas; Section 4.4, Avoidance, Minimization, and Mitigation Measures; and Section 4.5 Land Use Adjacency Guidelines, and is in full compliance with CEQA, CESA, and FESA requirements.

BIO-2. Implement Biological Resource Protection Measures Prior to Construction

a. Prior to the commencement of construction, a project biologist (a person with, at minimum, a bachelor's degree in biology, ecology, or environmental studies with familiarity with special status plant and wildlife species with the potential to be affected by the project) 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, and shall maintain communications with the contractor to ensure that issues relating to biological resources are appropriately and lawfully managed. The project biologist may designate qualified biologists or biological monitors to help oversee project compliance or conduct preconstruction surveys for special status species. These biologists shall have familiarity with the species for which they would be conducting preconstruction surveys or monitoring construction activities.

b. The project biologist or designated qualified biologist shall review final plans, designate areas that need temporary fencing (e.g., environmentally sensitive area [ESA] fencing), and monitor construction activities within and adjacent to areas with native vegetation communities or special status plant and wildlife species. The qualified biologist shall monitor activities within designated areas during critical times such as vegetation removal, initial ground disturbing activities, and the installation of BMPs and fencing to protect jurisdictional resources, and shall ensure that all regulatory agency permit requirements, conservation measures, and general avoidance and minimization measures are properly implemented and followed. The qualified biologist shall check construction barriers or exclusion fencing and shall provide corrective measures to the

contractor to ensure that the barriers or fencing are maintained throughout construction. The qualified biologist shall have the authority to stop work if a special status wildlife species is encountered within the project area during construction. Construction activities shall cease until the project biologist or qualified biologist determine(s) that the animal will not be harmed or that it has left the construction area on its own. The appropriate regulatory agency(ies) shall be notified within 24 hours of sighting of a special status wildlife species.

c. Prior to the start of construction, all project personnel and contractors who will be on site during construction shall complete mandatory training conducted by the project biologist or a designated qualified biologist. Any new project personnel or contractors that come on board after the initiation of construction shall also be required to complete the mandatory Worker Environmental Awareness Program training before they commence with work. The training shall advise workers of potential impacts on jurisdictional resources. At a minimum, the training shall include the following topics: (1) occurrences of special status species and special status vegetation communities in the project area (including vegetation communities subject to USACE, CDFW, and RWQCB jurisdiction), (2) the purpose for resource protection; (3) protective measures to be implemented in the field, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced to avoid jurisdictional resource areas in the field (i.e., avoid areas delineated on maps or on the Project site by fencing); (5) environmentally responsible construction practices; and (6) the protocol to resolve conflicts that may arise at any time during the construction process.

d. Prior to any ground disturbance the project boundary will be fenced as a means to protect the adjacent lands. The fencing/signage shall be clearly marked in the field by construction personnel under the guidance of the biologist or designated employee. The fencing/signage will remain in place for the duration of the project activities and no work or other project activities will occur outside of the fenced area to incidental impacts to nearby species. Upon completion of project activities, the fencing/signage will be removed.

e. Construction activities shall be limited to daylight hours to the extent feasible. If nighttime activities are unavoidable, then workers shall direct all lights for nighttime lighting into the work area and shall minimize the lighting of natural habitat areas adjacent to the work area. The contractor shall use light glare shields to reduce the extent of illumination into special status vegetation communities. If the work area is located near surface waters, the lighting shall be shielded such that it does not shine directly into the water.

f. Clearing shall be confined to the minimum area necessary to facilitate construction activities. Cleared vegetation and spoils shall be disposed of daily at a permanent off site spoils location or at a temporary on site location that will not create habitat for special status wildlife species. Spoils and dredged material shall be disposed of at an approved site or facility in accordance with all applicable federal, state, and local regulations.

g. The Contractor shall avoid wildlife entrapment by completely covering or providing escape ramps for all excavated steep walled holes or trenches more than 1 foot deep at the end of each construction workday. The qualified biologist shall inspect open trenches

and holes and shall remove or release any trapped wildlife found in the trenches or holes prior to filling by the construction contractor.

h. Wildlife can be attracted to den like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar features; construction equipment; or construction debris left overnight in areas that may be occupied by special status species that could occupy such structures shall be inspected by a qualified biologist prior to being used for construction. Such inspections shall occur at the beginning of each day's activities for those materials to be used or moved that day. If necessary, and under the direct supervision of the biologist, the structure may be moved up to one time to isolate it from construction activities, until the special status species has moved from the structure of its own volition, has been captured and relocated, or has otherwise been removed from the structure.

i. The spread of dust from work sites to special-status vegetation communities or habitats for special-status species on adjacent lands shall be minimized by use of a water truck. Dirt access roads, haul roads, and spoils areas shall be watered at least twice each day when being used during construction dry periods.

BIO-3. Minimize and Avoid Effects on Special-Status Species

a. The project biologist shall conduct focused pre-construction surveys for federal- and State-listed and other special-status plants. All special-status plant species (including listed threatened or endangered species, and all CRPR 1A, 1B, 2, 3, and 4 ranked species) impacted by project activities shall be documented in pre-construction survey reports. Surveys shall be conducted during the appropriate season in all suitable habitat located within the project footprint. The field surveys and reporting must conform to current CDFW botanical field survey protocol (CDFG 2009) or more recent updates, if available.

b. The project biologist shall conduct focused pre-construction surveys for any special-status wildlife species, including Coachella Valley fringe-toed lizard, flat-tailed horned lizard, burrowing owl, loggerhead shrike, vermilion flycatcher, Palm Springs pocket mouse, American badger, and Coachella Valley round-tailed ground squirrel. Surveys shall be conducted at least 14 days prior to the start of construction within suitable habitat located within the project footprint. At the discretion of the project biologist, work will be halted if the species are highly disturbed.

BIO-4. Avoid Effects on Migratory and Nesting Birds

When feasible, any vegetation removal or tree trimming activities shall occur outside of the nesting season (February 15–August 31). If vegetation removal or tree trimming activities must occur during the nesting season, a qualified biologist shall conduct a preconstruction survey to locate any active nests within seven days prior to such activities. Should nesting birds be found, an exclusionary buffer (typically 100 feet or up to 300 feet for raptors) suitable to prevent nest disturbance as a result of project activities shall be established by the biologist. This buffer shall be clearly marked in the field by construction personnel under the guidance of the biologist, and construction or clearing shall not be conducted in the buffer until the biologist determines that the young have fledged or the nest is no longer active.

8 References

Calflora. 2023. Information on California plants for education, research and conservation, based on data contributed by the Consortium of California Herbaria and dozens of other public and private institutions and individuals. Berkeley, California: The Calflora Database (a nonprofit organization). Accessed April 2023. http://www.calflora.org/.

California Natural Diversity Database (CNDDB). 2023. RareFind 5 [Internet]. Records of occurrence for U.S.G.S. 7.5- minute Quadrangle maps: *La Quinta, West Berdoo Canyon, Keys View, Myoma, East Deception Canyon, Indio, Seven Palms Valley, Rancho Mirage and Cathedral City, California*. CDFW [May 31, 2023]. State of California Resources Agency. Sacramento, California.

California Native Plant Society, Rare Plant Program. 2023. Inventory of Rare and Endangered Plants (online edition, v9.5). California Native Plant Society, Sacramento, CA. Website: http://www.rareplants.cnps.org [accessed May 31, 2023].

Coachella Valley Conservation Commission. 2016. Coachella Valley Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan. https://cvmshcp.org/plan-documents/

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. United States Army Engineer Waterways Experiment Station, Vicksburg, MS.

Google Earth. 2023. Various Date Maps showing Thousand Palms, CA. Google Earth. Accessed June 2023. earth.google.com/web/.

Historic Aerials. 2020. Aerial imagery and topographic maps for the study area. Accessed June 2023. https://www.historicaerials.com/.

Jepson Flora Project (eds.) 2021. Jepson eFlora. Accessed June 2023. https://ucjeps.berkeley.edu/eflora/.

Riverside County Watershed Protection. 2020. The Story of the Whitewater River Watershed. https://rcwatershed.org/2020/06/10/the-story-of-the-whitewater-river-watershed/

Shuford, W. David and Gardali, Thomas. 2008. California Bird Species of Special Concern. https://wildlife.ca.gov/Conservation/SSC/Birds

United States (U.S.) Department of Agriculture Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed April 2023.

United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation. Carlsbad Fish and Wildlife office. Accessed June 2023. https://ecos.fws.gov/ipac/.

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Appendix A. Literature Review

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Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (La Quinta (3311663) OR West Berdoo Canyon (3311672) OR Keys View (3311682) OR Myoma (3311673) OR East Deception Canyon (3311683) OR Indio (3311662) OR Seven Palms Valley (3311684) OR Rancho Mirage (3311664) OR Cathedral City (3311674))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Abrams' spurge *Euphorbia abramsiana*	PDEUP0D010	None	None	G4	S2	2B.2
Algodones euparagia *Euparagia unidentata*	IIHYMBC010	None	None	G1G2	S1S2	
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
Arizona spurge *Euphorbia arizonica*	PDEUP0D060	None	None	G5	S3	2B.3
Bendire's thrasher *Toxostoma bendirei*	ABPBK06050	None	None	G4	S3	SSC
black-tailed gnatcatcher *Polioptila melanura*	ABPBJ08030	None	None	G5	S3S4	WL
Booth's evening-primrose *Eremothera boothii ssp. boothii*	PDONA03052	None	None	G5T4	S3	2B.3
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California ayenia *Ayenia compacta*	PDSTE01020	None	None	G4	S3	2B.3
California ditaxis *Ditaxis serrata var. californica*	PDEUP08050	None	None	G5T3T4	S2?	3.2
California marina *Marina orcuttii var. orcuttii*	PDFAB2F031	None	None	G2G3T1T2	S2?	1B.3
Casey's June beetle *Dinacoma caseyi*	IICOLX5010	Endangered	None	G1	S1	
chaparral sand-verbena *Abronia villosa var. aurita*	PDNYC010P1	None	None	G5T2?	S2	1B.1
cheeseweed owlfly (cheeseweed moth lacewing) *Oliarces clara*	IINEU04010	None	None	G1G3	S2	
Coachella giant sand treader cricket *Macrobaenetes valgum*	IIORT22020	None	None	G1G2	S2	
Coachella Valley fringe-toed lizard *Uma inornata*	ARACF15010	Threatened	Endangered	G1Q	S1	
Coachella Valley jerusalem cricket *Stenopelmatus cahuilaensis*	IIORT26010	None	None	G1G2	S2	
Coachella Valley milk-vetch *Astragalus lentiginosus var. coachellae*	PDFAB0FB97	Endangered	None	G5T1	S1	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G4	S4	SSC
coastal California gnatcatcher *Polioptila californica californica*	ABPBJ08081	Threatened	None	G4G5T3Q	S2	SSC
Colorado Valley woodrat *Neotoma albigula venusta*	AMAFF08031	None	None	G5T3T4	S1S2	
Cove's cassia *Senna covesii*	PDFAB491X0	None	None	G5	S3	2B.2
Crissal thrasher *Toxostoma crissale*	ABPBK06090	None	None	G5	S3	SSC
Crotch bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G2	S2	
Deep Canyon snapdragon *Pseudorontium cyathiferum*	PDSCR2R010	None	None	G4G5	S1	2B.3
desert bighorn sheep *Ovis canadensis nelsoni*	AMALE04013	None	None	G4T4	S3	FP
Desert Fan Palm Oasis Woodland *Desert Fan Palm Oasis Woodland*	CTT62300CA	None	None	G3	S3.2	
desert pupfish *Cyprinodon macularius*	AFCNB02060	Endangered	Endangered	G1	S1	
desert spike-moss *Selaginella eremophila*	PPSEL010G0	None	None	G4	S2S3	2B.2
desert tortoise *Gopherus agassizii*	ARAAF01012	Threatened	Threatened	G3	S2S3	
Earthquake Merriam's kangaroo rat *Dipodomys merriami collinus*	AMAFD03144	None	None	G5T2?	S2	
ferruginous hawk *Buteo regalis*	ABNKC19120	None	None	G4	S3S4	WL
flat-seeded spurge *Euphorbia platysperma*	PDEUP0D1X0	None	None	G3	S1	1B.2
flat-tailed horned lizard *Phrynosoma mcallii*	ARACF12040	None	None	G3	S3	SSC
glandular ditaxis *Ditaxis claryana*	PDEUP080L0	None	None	G3G4	S2	2B.2
golden eagle *Aquila chrysaetos*	ABNKC22010	None	None	G5	S3	FP
gravel milk-vetch *Astragalus sabulonum*	PDFAB0F7R0	None	None	G4G5	S2	2B.2
Horn's milk-vetch *Astragalus hornii var. hornii*	PDFAB0F421	None	None	GUT1	S1	1B.1
Lancaster milk-vetch *Astragalus preussii var. laxiflorus*	PDFAB0F721	None	None	G4T2	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Latimer's woodland-gilia *Saltugilia latimeri*	PDPLM0H010	None	None	G3	S3	1B.2
Le Conte's thrasher *Toxostoma lecontei*	ABPBK06100	None	None	G4	S3	SSC
least Bell's vireo *Vireo bellii pusillus*	ABPBW01114	Endangered	Endangered	G5T2	S3	
Little San Bernardino Mtns. linanthus *Linanthus maculatus ssp. maculatus*	PDPLM041Y1	None	None	G2T2	S2	1B.2
loggerhead shrike *Lanius ludovicianus*	ABPBR01030	None	None	G4	S4	SSC
Mecca-aster *Xylorhiza cognata*	PDASTA1010	None	None	G2	S2	1B.2
narrow-leaf sandpaper-plant *Petalonyx linearis*	PDLOA04010	None	None	G4	S3?	2B.3
pallid San Diego pocket mouse *Chaetodipus fallax pallidus*	AMAFD05032	None	None	G5T3T4	S3S4	SSC
Palm Springs pocket mouse *Perognathus longimembris bangsi*	AMAFD01043	None	None	G5T2	S1	SSC
Palm Springs round-tailed ground squirrel *Xerospermophilus tereticaudus chlorus*	AMAFB05161	None	None	G5T2Q	S2	SSC
Parish's daisy *Erigeron parishii*	PDAST3M310	Threatened	None	G2	S2	1B.1
Peninsular bighorn sheep DPS *Ovis canadensis nelsoni pop. 2*	AMALE04012	Endangered	Threatened	G4T3Q	S2	FP
pocketed free-tailed bat *Nyctinomops femorosaccus*	AMACD04010	None	None	G5	S3	SSC
prairie falcon *Falco mexicanus*	ABNKD06090	None	None	G5	S4	WL
purple stemodia *Stemodia durantifolia*	PDSCR1U010	None	None	G5	S2	2B.1
red-diamond rattlesnake *Crotalus ruber*	ARADE02090	None	None	G4	S3	SSC
Robison's monardella *Monardella robisonii*	PDLAM180K0	None	None	G3	S3	1B.3
San Bernardino milk-vetch *Astragalus bernardinus*	PDFAB0F190	None	None	G3	S3	1B.2
San Diego desert woodrat *Neotoma lepida intermedia*	AMAFF08041	None	None	G5T3T4	S3S4	SSC
San Jacinto mariposa-lily *Calochortus palmeri var. munzii*	PMLIL0D121	None	None	G3T3	S3	1B.2
slender cottonheads *Nemacaulis denudata var. gracilis*	PDPGN0G012	None	None	G3G4T3?	S2	2B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
southwestern willow flycatcher *Empidonax traillii extimus*	ABPAE33043	Endangered	Endangered	G5T2	S3	
spear-leaf matelea *Matelea parvifolia*	PDASC0A0J0	None	None	G5	S3	2B.3
triple-ribbed milk-vetch *Astragalus tricarinatus*	PDFAB0F920	Endangered	None	G2	S2	1B.2
vermilion flycatcher *Pyrocephalus rubinus*	ABPAE36010	None	None	G5	S2S3	SSC
western mastiff bat *Eumops perotis californicus*	AMACD02011	None	None	G4G5T4	S3S4	SSC
western yellow bat *Lasiurus xanthinus*	AMACC05070	None	None	G4G5	S3	SSC

Record Count: 66

CNPS Rare Plant Inventory

California Native Plant Society

Search Results

27 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3311663:3311672:3311682:3311673:3311683:3311662:3311684:3311664:3311674**], **0** feet between Plant low elevation and high elevation, **800** feet between Plant low elevation and high elevation

FAMILY	▲ SCIENTIFIC NAME	COMMON NAME	FED LIST	STATE LIST	CA RARE PLANT RANK	LIFEFORM	BLOOMING PERIOD	GENERAL HABITATS	LOWEST ELEVATION (FT)	HIGHEST ELEVATION (FT)
Nyctaginaceae	*Abronia villosa* var. *aurita*	chaparral sand-verbena	None	None	1B.1	annual herb	(Jan)Mar-Sep	Chaparral, Coastal scrub, Desert dunes	245	5250
Fabaceae	*Astragalus hornii* var. *hornii*	Horn's milk-vetch	None	None	1B.1	annual herb	May-Oct	Meadows and seeps, Playas	195	2790
Fabaceae	*Astragalus lentiginosus* var. *borreganus*	Borrego milk-vetch	None	None	4.3	annual herb	Feb-May	Mojavean desert scrub, Sonoran desert scrub	100	2935
Fabaceae	*Astragalus lentiginosus* var. *coachellae*	Coachella Valley milk-vetch	FE	None	1B.2	annual/perennial herb	Feb-May	Desert dunes, Sonoran desert scrub (sandy)	130	2150
Fabaceae	*Astragalus sabulonum*	gravel milk-vetch	None	None	2B.2	annual/perennial herb	Feb-Jun	Desert dunes, Mojavean desert scrub, Sonoran desert scrub	-195	3050
Malvaceae	*Ayenia compacta*	California ayenia	None	None	2B.3	perennial herb	Mar-Apr	Mojavean desert scrub, Sonoran desert scrub	490	3595

Convolvulaceae	*Cuscuta californica* var. *apiculata*	pointed dodder	None None 3	annual vine (parasitic)	Feb-Aug	Mojavean desert scrub, Sonoran desert scrub	0	1640
Euphorbiaceae	*Ditaxis claryana*	glandular ditaxis	None None 2B.2	perennial herb	Oct-Mar	Mojavean desert scrub, Sonoran desert scrub	0	1525
Euphorbiaceae	*Ditaxis serrata* var. *californica*	California ditaxis	None None 3.2	perennial herb	Mar-Dec	Sonoran desert scrub	100	3280
Euphorbiaceae	*Euphorbia abramsiana*	Abrams' spurge	None None 2B.2	annual herb	(Aug)Sep-Nov	Mojavean desert scrub, Sonoran desert scrub	-15	4300
Euphorbiaceae	*Euphorbia arizonica*	Arizona spurge	None None 2B.3	perennial herb	Mar-Apr	Sonoran desert scrub (sandy)	165	985
Rubiaceae	*Galium angustifolium* ssp. *gracillimum*	slender bedstraw	None None 4.2	perennial herb	Apr-Jun(Jul)	Joshua tree "woodland", Sonoran desert scrub	425	5085
Malvaceae	*Horsfordia alata*	pink velvet-mallow	None None 4.3	perennial shrub	Feb-Dec	Sonoran desert scrub (rocky)	330	1640
Malvaceae	*Horsfordia newberryi*	Newberry's velvet-mallow	None None 4.3	perennial shrub	Feb-Dec	Sonoran desert scrub (rocky)	10	2625
Boraginaceae	*Johnstonella costata*	ribbed cryptantha	None None 4.3	annual herb	Feb-May	Desert dunes, Mojavean desert scrub, Sonoran desert scrub	-195	1640

Boraginaceae	*Johnstonella holoptera*	winged cryptantha	None None 4.3	annual herb	Mar-Apr	Mojavean desert scrub, Sonoran desert scrub	330	5545
Juncaceae	*Juncus acutus* ssp. *leopoldii*	southwestern spiny rush	None None 4.2	perennial rhizomatous herb	(Mar)May-Jun	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt), Meadows and seeps (alkaline seeps)	10	2955
Juncaceae	*Juncus cooperi*	Cooper's rush	None None 4.3	perennial herb	Apr-May(Aug)	Meadows and seeps (mesic, alkaline or saline)	-855	5805
Polemoniaceae	*Linanthus maculatus* ssp. *maculatus*	Little San Bernardino Mtns. linanthus	None None 1B.2	annual herb	Mar-May	Desert dunes, Joshua tree "woodland", Mojavean desert scrub, Sonoran desert scrub	460	4005
Solanaceae	*Lycium torreyi*	Torrey's box-thorn	None None 4.2	perennial shrub	(Jan-Feb)Mar-Jun(Sep-Nov)	Mojavean desert scrub, Sonoran desert scrub	-165	4005
Polygonaceae	*Nemacaulis denudata* var. *gracilis*	slender cottonheads	None None 2B.2	annual herb	(Mar)Apr-May	Coastal dunes, Desert dunes, Sonoran desert scrub	-165	1310

Loasaceae	*Petalonyx linearis*	narrow-leaf sandpaper-plant	None	None	2B.3	perennial shrub	(Jan-Feb)Mar-May(Jun-Dec)	Mojavean desert scrub, Sonoran desert scrub	-80	3660
Plantaginaceae	*Pseudorontium cyathiferum*	Deep Canyon snapdragon	None	None	2B.3	annual herb	Feb-Apr	Sonoran desert scrub (rocky)	0	2625
Selaginellaceae	*Selaginella eremophila*	desert spike-moss	None	None	2B.2	perennial rhizomatous herb	(May)Jun(Jul)	Chaparral, Sonoran desert scrub (gravelly, rocky)	655	4250
Fabaceae	*Senna covesii*	Cove's cassia	None	None	2B.2	perennial herb	Mar-Jun(Aug)	Sonoran desert scrub	740	4250
Plantaginaceae	*Stemodia durantifolia*	purple stemodia	None	None	2B.1	perennial herb	(Jan)Apr-Dec	Sonoran desert scrub (often mesic, sandy)	590	985
Asteraceae	*Xylorhiza cognata*	Mecca-aster	None	None	1B.2	perennial herb	Jan-Jun	Sonoran desert scrub	65	1310

Showing 1 to 27 of 27 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 31 May 2023].

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901

In Reply Refer To:
Project Code: 2023-0089763
Project Name: Ramon Substation

June 05, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a biological assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a biological assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at the Fish and Wildlife Service's Endangered Species Consultation website at:

https://www.fws.gov/endangered/what-we-do/faq.html

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

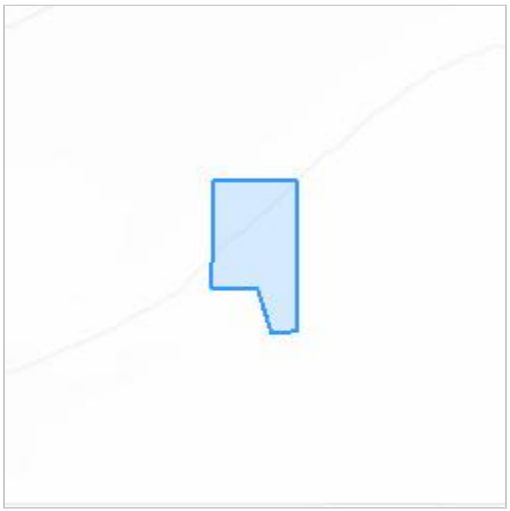
This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

PROJECT SUMMARY

Project Code: 2023-0089763
Project Name: Ramon Substation
Project Type: Distribution Line - New Construction - Above Ground
Project Description: Improvements to the existing Ramon Substation
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@33.81955935,-116.36739771508995,14z



Counties: Riverside County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

REPTILES

NAME	STATUS
Coachella Valley Fringe-toed Lizard *Uma inornata* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2069	Threatened
Desert Tortoise *Gopherus agassizii* Population: Wherever found, except AZ south and east of Colorado R., and Mexico There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4481	Threatened

FISHES

NAME	STATUS
Desert Pupfish *Cyprinodon macularius*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/7003

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

FLOWERING PLANTS

NAME	STATUS
Coachella Valley Milk-vetch *Astragalus lentiginosus var. coachellae*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/7426

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Coachella Valley Fringe-toed Lizard *Uma inornata*	Final

https://ecos.fws.gov/ecp/species/2069#crithab

IPAC USER CONTACT INFORMATION

Agency:	County of Riverside
Name:	Aaron Newton
Address:	8690 Balboa Ave.
Address Line 2:	Suite 200
City:	San Diego
State:	CA
Zip:	92123
Email	aaron.newton@hdrinc.com
Phone:	8587128331

Appendix B. Plant and Wildlife Species Observed

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Species	Common Name	Special-Status	Wetland Rank	Weed Rank
EUDICOTS				
ASTERACEAE – SUNFLOWER FAMILY				
Ambrosia salsola var. salsola	common burrobrush			
Encelia farinosa	brittlebush			
CHENOPODIACEAE – GOOSEFOOT FAMILY				
Atriplex canescens	four-wing saltbush			
FABACEAE – LEGUME FAMILY				
*Parkinsonia aculeata**	Mexican palo verde		FAC	
Psorothamnus emoryi	Emory's indigo-bush			
Psorothamnus spinosus	smoke tree			
Senna armata	spiny senna			
LAMIACEAE – MINT FAMILY				
Salvia dorrii	Dorr's sage			
MYRTACEAE – MYRTLE FAMILY				
*Eucalyptus camaldulensis**	red gum		FAC	
SIMMONDSIACEAE – JOJOBA FAMILY				
Simmondsia chinensis	jojoba			
TAMARICACEAE – TAMARISK FAMILY				
*Tamarix ramosissima**	saltcedar			4500
ZYGOPHYLLACEAE – CALTROP FAMILY				
Larrea tridentata	creosote bush			
MONOCOTS				
POACEAE – GRASS FAMILY				
*Schismus barbatus**	barbed Mediterranean grass			

Scientific Name	Common Name	Special Status
REPTILES		
IGUANIDAE - IGUANA FAMILY		
Dipsosaurus dorsalis	Desert Iguana	
BIRDS		
COLUMBIDAE - PIGEON FAMILY		
Zenaida asiatica	White-winged Dove	
Zenaida macroura	Mourning Dove	
CORVIDAE - CROW FAMILY		
Corvus corax	Common Raven	
MIMIDAE - THRASHER FAMILY		
Mimus polyglottos	Northern Mockingbird	
PASSERIDAE - OLD WORLD SPARROW FAMILY		
*Passer domesticus**	House Sparrow	
TROCHILIDAE - HUMMINGBIRD FAMILY		
Calypte anna	Anna's Hummingbird	

LEGEND

Federal (USFWS):

BGEPA=Bald and Golden Eagle Protection Act

FE=Endangered

FT=Threatened

FC=Candidate

FCE=Federal Candidate Endangered

FCT= Federal Candidate Threatened

Legend

Symbols:

* Non-native species
cf. confer: This designation is used when a species or infraspecific taxon cannot be confirmed, but is believed to be the selected species of infraspecific taxon based on available anatomy

Federal Designations:

U.S. Fish and Wildlife Service:

FE Endangered
FT Threatened
FC Candidate Species

U.S. Forest Service:

FSS Forest Service Sensitive
WL Watch List

U.S. Army Corps of Engineers Wetland Rank:

OBL: Obligate Wetland - Almost always occur in wetlands. With few exceptions, these plants are found in standing water or seasonally saturated soils near the surface.
FACW: Facultative Wetland - Usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
FAC: Facultative - Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats.
FACU Facultative Upland - Usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
None (UPL): Upland - Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils.

Other Designations:

California Invasive Plant Council Rank:

High These species have severe ecological impacts on the surrounding habitat. They have moderate to high rates of dispersal and establishment, and most are widely distributed.
Moderate These species have substantial and apparent—but generally not severe—ecological impacts on the surrounding habitat. They have moderate to high rates of dispersal. Distribution may range from limited to widespread.
Limited These species are invasive, but their ecological impacts are minor on a statewide level. They have low to moderate rates of colonization. Although their distribution is generally limited, these species may be locally persistent and problematic.
Watch List These species are predicted to become invasive if no further actions are taken. Distribution may range from limited to widespread in specific regions.

State of California Designations:

California Department of Fish and Wildlife:

SE Endangered
ST Threatened
SR Rare

California Rare Plant Rank:

1A Plants presumed extirpated in California and either rare or extinct elsewhere
1B Plants Rare, Threatened, or Endangered in California and elsewhere
2A Plants presumed extirpated in California, but more common elsewhere
2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3 Plants about which we need more information - review list
4 Plants of limited distribution - watch list

Threat Code Extensions:

None Plants lacking any threat information
.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Moderately threatened in California (20–80% of occurrences threatened; moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)

California Department of Food and Agriculture Weed Rank:

A eradication, containment, rejection, or other holding action at the state-County level is mandated
B eradication, containment, control, or other holding action is at the discretion of the commissioner
C no state action is required except to retard the speed of spreading
4500 this plant is included in CCR Section 4500 list of state noxious weeds

Aquatic Resources Delineation

Vega SES 6 Solar Project

Imperial County, California

Prepared For:

Apex Energy Solutions, LLC.
604 Sutter Street
Suite 250
Folsom, California 95630

Submitted by:

ECORP Consulting, Inc.
3838 Camino Del Rio North
Suite 370
San Diego, California 92108
(858) 279-4040

December 2022

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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LIST OF ACRONYMS AND ABBREVIATIONS

APT	Antecedent Precipitation Tool
CARI	California Aquatic Resource Inventory
CC	Constructed channel
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
Commission	California State Lands Commission
CWA	Clean Water Act
Gen-tie	Generator intertie
GIS	Geographic Information System
GPS	Global Positioning System
IC	Irrigation ditches
IID	Imperial Irrigation District
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWPR	Navigable Waters Protection Rule
OHWM	Ordinary high-water mark
Project	Stagecoach Solar Project
PV	Photovoltaic
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SFEI	San Francisco Estuary Institute
Study Area	Solar Field, Gen-tie lines, and Substations
sUAS	small Unmanned Aircraft System
SWQB	Surface Water Quality Bureau
SWRCB	State Water Resources Control Board
TOB	Top-of-bank
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey

WDR	Waste discharge regulation

1.0 INTRODUCTION

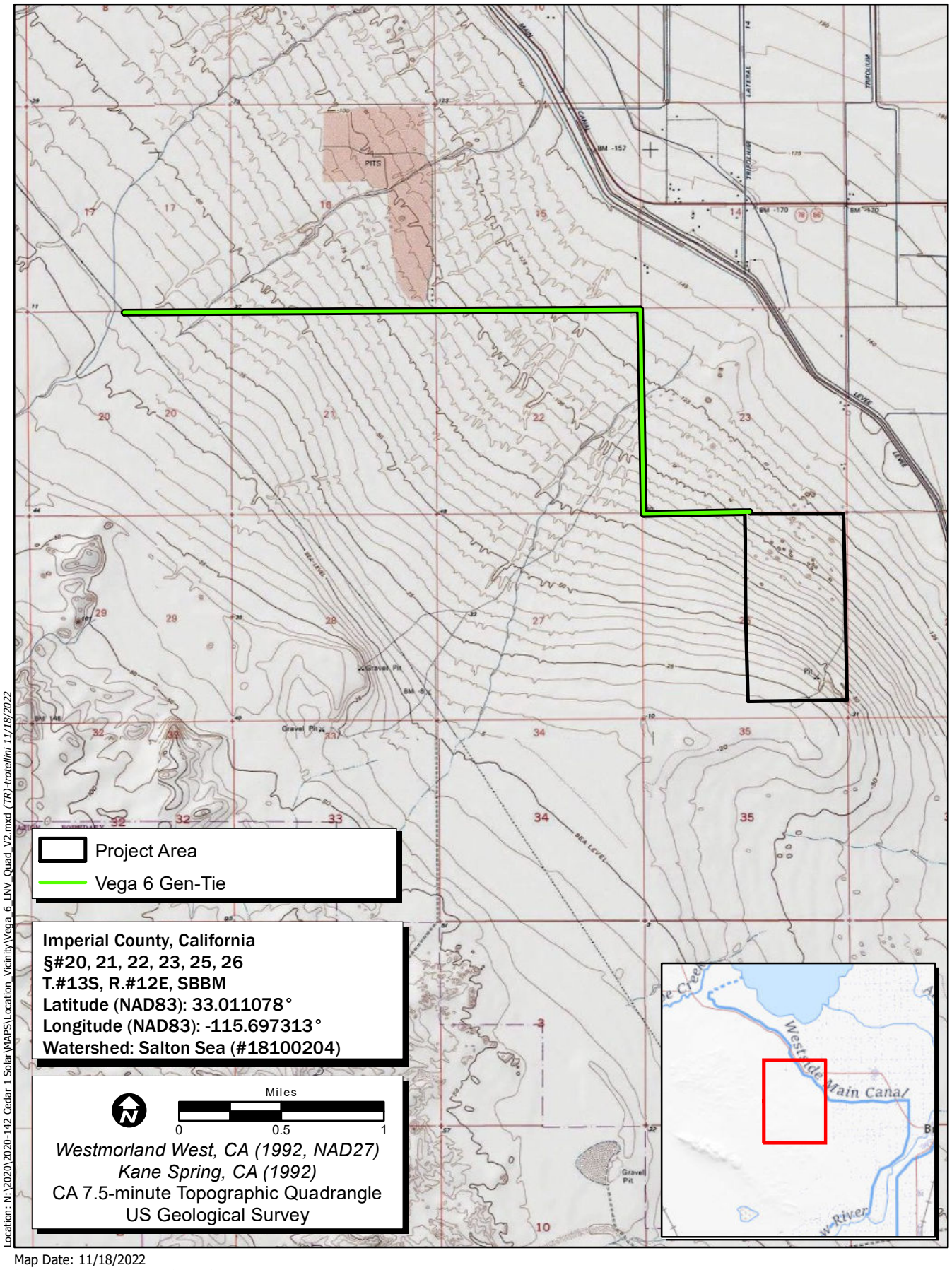
This aquatic resources delineation report was prepared to describe the aquatic resources at the Vega SES 6 Solar Project (Project). The Project is an 80 megawatt direct current and 320 megawatt-hour battery storage utility-scale solar undertaking located on approximately 283 acres of vacant land on a single parcel (Assessor Parcel Number 034-160-002) in Imperial County, California. The Proposed Project would include construction of a solar energy generation facility, battery storage, groundwater supply well, and an approximately 4-mile generator intertie (gen-tie) alignment. For the purposes of this report, the term *Project Area* refers to the areas likely to be directly affected by the Project implementation, including the gen-tie line, and corresponds to the client-supplied Project boundary. The term *Study Area* refers to the Project Area plus a 50-foot buffer (aquatic resource delineation) or a 500-foot buffer (background review).

The Project Area is located in Imperial County, approximately five miles southwest of the community of Westmorland, California, and 1.5 miles south of State Route 78. It is located directly south of Garvey Road and 0.50 mile west of the Westside Main Canal (Figure 1. *Project Location and Vicinity*). The Project Area is located within Sections 20, 21, 22, 23, 25, and 26 of Township 13 South, Range 12 East as depicted on the Westmorland West (Calipatria SW), California, Kane Spring, California, U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles (USGS 1992).

This report describes aquatic resources identified within the Project Area 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). The information presented in this report provides data per the USACE Los Angeles District's *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* requirements (USACE 2016). The aquatic resource boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the Project Area and are subject to modification following a verification process by each regulating agency.

Table 1. Geographic Information Summary

Project Name	Sections	Approximate Center of Study Area
SES 6	26	33.009138, -115.697034
Gen-tie	20, 21, 22, 23, 25, 26	33.224760, -115.414804



Location: N:\2020\2020-142 Cedar 1 Solar\MAPS\Location_Vicinity\Vega_6_LNV_Quad_V2.mxd (TR)-trotellini 11/18/2022

Map Date: 11/18/2022

Figure 1. Project Location and Vicinity

2020-142 Vega SES 6

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2.0 REGULATORY SETTING

2.1 Clean Water Act

The USACE regulates discharge of dredged or fill material into waters of the U.S. under Section 404 of the CWA. "Discharges of fill material" is defined as the addition of fill material into waters of the U.S., including, but not limited to, the following: placement of fill necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 U.S. Code 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to wetlands, over 0.5 acre of impact, may require an individual permit. Projects that only minimally affect wetlands, less than 0.5 acre of impact, may meet the conditions of one of the existing Nationwide Permits. A RWQCB Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for USACE Section 404 permit actions.

Pursuant to the USEPA and USACE memorandum regarding CWA jurisdiction, issued following the U.S. Supreme Court's decision in the consolidated cases Rapanos v. United States and Carabell v. United States (herein referred to as Rapanos), the agencies will assert jurisdiction over the following waters: "Traditional Navigable Waters" (TNW), all wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are "relatively permanent" waters (RPW) (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally), and wetlands that directly abut such tributaries (USEPA and USACE 2007).

Waters requiring a significant nexus determination by the USACE and USEPA to establish jurisdiction include non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but do not directly abut a relatively permanent non-navigable tributary (USEPA and USACE 2007). The jurisdictional determination is a fact-based evaluation to establish whether a water has a significant nexus with a TNW. The significant nexus analysis will assess the flow characteristics and functions of the non-navigable tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs (USEPA and USACE 2007).

2.2 Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (hereafter referred to as Porter-Cologne Act) provides a framework to protect water quality in California. It was enacted in 1969 as Division 7 of the Water Code and is the primary water quality law in California. The Porter-Cologne Act addresses two primary functions: water quality control planning and waste discharge regulation (WDR). The state legislature, in adopting the Porter-Cologne Act, directed that California's waters "shall be regulated to attain the highest water quality which is reasonable" and charges the water boards with protecting all waters of California,

defined as "any surface water or groundwater, including saline waters, within the boundaries of the State." This encompasses all waters of the state, including those not under federal jurisdiction.

The Porter-Cologne Act regulates discharges that could affect the quality of water of surface or groundwater, wherever those discharges may occur. Under the Porter-Cologne Act, the water board regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)]. Waters of the state are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The Porter Cologne Act defines "waters of the state" very broadly, with no physical descriptors, and no interstate commerce limitation.

The Porter-Cologne Act further requires that anyone who plans to discharge waste where it might affect waters of the state must first notify the water boards. The water boards identify the sources of pollutants that threaten water quality under the Porter-Cologne Act and issue WDRs to regulate waste discharges that could affect water quality. The State Water Resources Control Board (SWRCB) adopted the *State Wetland Definition and Procedures for Discharge of Dredged or Fill Material into Waters of the U.S.* in April 2019. The water board regulates all such activities, as well as dredging, filling, or discharging materials into waters of the state, that are not regulated by USACE due to a lack of connectivity with a navigable water body. The water board may require issuance of a WDR for these activities. If a project impacts waters of the state that do not fall under federal jurisdiction, the applicant need not obtain a Section 404 permit or a Section 401 certification, but instead must receive approval from the water boards through the adoption of WDRs.

2.3 California Fish and Game Code Section 1602

Pursuant to Section 1602 of the California Fish and Game Code, a Streambed Alteration Agreement (SAA) application must be submitted 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" (California Department of Fish and Wildlife [CDFW] 2021). In Title 14 of the California Code of Regulations, Section 1.72, the CDFW defines a *stream* (including creeks and rivers) as:

> "A body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

The CDFW's jurisdiction includes drainages with a definable bed, bank, or channel with the jurisdictional limit being the top-of-bank. It also includes areas that support intermittent, perennial, or subsurface flows; supports fish or other aquatic life; or supports riparian or hydrophytic vegetation. It also includes areas that have a hydrologic source.

The CDFW will determine if the proposed actions will result in diversion, obstruction, or change of the natural flow, bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. The CDFW will submit an SAA that includes measures to protect affected fish and wildlife resources. The SAA is the final proposal agreed upon by the CDFW and the applicant.

A summary of federal, state, and local regulations and corresponding regulating agencies are summarized in Table 2.

Table 2. Summary of Federal, State, and Local Regulations

Federal Regulations		
Regulation	**Resource**	**Regulating Agency**
Federal Clean Water Act	Aquatic features meeting the definition of Waters of the US	USACE
State Regulations		
Regulation	**Resource**	**Regulating Agency**
California Fish and Game Code Section 1602	River, stream, or lake and associated riparian habitat	CDFW
Porter-Cologne Water Quality Act	Aquatic features meeting the definition of Waters of the State	SWRCB/RWQCB

3.0 METHODS

3.1 Pre-Survey Investigations

Due to the size of the area and limited road access, an initial survey using a small Unmanned Aircraft System (sUAS) was conducted to assess current site conditions and gather high-resolution imagery. Photos collected during the sUAS survey were then combined into a single orthomosaic image that was incorporated into mapping files in a Geographic Information System (GIS). The information gathered from the sUAS or drone survey were then used to assist ECORP delineation specialists with accurate mapping of potential aquatic resources onsite.

Prior to conducting the field delineations, the following resources were reviewed to identify potentially jurisdictional areas: sUAS imagery, aerial imagery (U.S. Department of Agriculture 2018; Google Earth 2020; ESRI 2021), the National Wetlands Inventory (NWI; USFWS 2021), the online Web Soil Survey (Natural Resources Conservation Service [NRCS] 2021a), and hydric soils list for the area (NRCS 2021c). The aerial imagery was used to digitize potential aquatic features using ArcGIS™, a mapping and spatial analytics software. The imagery was analyzed during a preliminary desktop delineation effort to identify differences in vegetative cover, the presence of breaks in a slope, and other areas of potential water disturbance. The aerial imagery, combined with these other resources, was used to create a map with features that required further study during the field investigation. A data dictionary was developed using the criteria in the datasheet for the identification of the ordinary high-water mark (OHWM) in arid west regions and identification of state-regulated habitat using the ArcGIS™ suite software.

3.2 Field Survey Investigation

This aquatic resources delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a), *A Field Guide to the Identification of the*

Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b), the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010), and the State of New Mexico's *Hydrology Protocol for the Determination of Ephemeral, Intermittent, and Perennial Waters* (Surface Water Quality Bureau [SWQB] 2020). Field data were recorded on Wetland Determination Data Forms- Arid West Region and Arid West OHWM Datasheets. Google Earth, ESRI©, and sUAS aerial imageries were used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the Web Soil Survey (NRCS 2021a) were used to aid in identifying hydric soils in the field. The Jepson Manual, 2nd Edition (Baldwin et al. 2012) and the USACE National Wetland Plant List (USACE 2018) were used for plant nomenclature and identification.

Digitized feature boundaries identified during the pre-survey investigation were then verified in the field. Feature boundary modifications, if necessary, were made in the field using a post-processing capable global positioning system unit with sub-meter accuracy (EOS Arrow 100 GNSS). Where aquatic features were present, the extent of potential waters of the U.S. 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. Streambed widths were based on evidence of OHWM as observed during the field survey, and streambed widths and other lateral limits of jurisdiction were calculated and recorded. Bank-to-bank width measures were also recorded and used as a measure of CDFW jurisdictional boundary where features lacked riparian vegetation. The extent of associated riparian habitat was based on the canopy of the riparian community within or directly adjacent to the streambed that is likely deriving benefit from the hydrology of the streambed. In addition, stream conditions were assessed based on the SWQB protocol to classify features as ephemeral, intermittent, or perennial waters. A combination of hydrological, geomorphic, and biological indicators was used to determine the hydrologic nature of each drainage. Each channel was also evaluated for the presence or absence of OHWM field indicators such as bed and bank, a natural line impressed in the bank, sediment deposits, changes in the character of soil, destruction of terrestrial vegetation, litter/debris, leaf litter disturbance, water stains, soil shelving, and exposed roots indicating active hydrology within the channel.

The boundaries of suspected wetland aquatic resources were delineated through standard field methods (e.g., paired sample set analyses) and aerial photograph interpretation. Paired locations were sampled to evaluate whether the vegetation, hydrology, and soils data supported an aquatic resource determination. At each paired location, one point was located such that it was within the estimated aquatic resource area, and the other point was situated outside the limits of the estimated aquatic resource area. Additional non-paired locations were sampled to confirm boundaries. All aquatic features observed within the Study Area were recorded in the field using a post-processing capable Global Positioning System (GPS) unit with submeter accuracy (e.g., Juniper Geode™). Feature characteristics and measurements were recorded directly into the data dictionary in the GPS unit. Characteristics of mapped features were also documented in photographs.

ECORP delineation specialists conducted three field surveys in 2020 and 2021; the first being a general field reconnaissance of the Study Area to identify areas supporting potential state and federal jurisdictional waters. The initial survey was conducted in conjunction with the biological reconnaissance

survey on September 29-30, 2020, by Christina Clark, Caroline Garcia, Gregory Hampton, Christina Torres. The subsequent field surveys and formal delineations were conducted to verify preliminary results and to collect additional data and photographs. These surveys were conducted on August 3-4, and 25, 2021, by Christina Clark, Caroline Garcia, Gregory Hampton, and Christina Torres. The entire Study Area was visually surveyed to determine the location and extent of aquatic resources, and special attention was given to the features identified during the initial survey described above and preliminary desktop research.

3.3 Post-Processing

The data collected in the field utilized ArcGIS™ Collector on a device (smartphone or tablet) connected to a submeter external receiver. The submeter receiver applies differential correction instantaneously in the field using the Satellite Based Augmentation System. The data were then viewed and analyzed for verification, edited, and compiled in GIS format at the time of download. ArcGIS™ software was used to develop the geodatabase and the shapefiles depicted on the figures included in this report.

4.0 RESULTS

4.1 Existing Site Conditions

The Study Area is located within relatively flat terrain at an elevation range of approximately 39 meters (129 feet) to 6 meters (21 feet) below sea level in Imperial County, California. The average winter low temperature in the vicinity of the Study Area is 41.7˚ Fahrenheit and the average summer high temperature is 104.7˚ Fahrenheit. Average annual precipitation for Imperial, California, is approximately 2.90 inches, which falls as rain (National Oceanic and Atmospheric Administration [NOAA] 2021a).

During the 2019-2020 rain year, prior to the September 2020 field survey (October 1, 2019, to April 30, 2020), approximately 4.74 inches of precipitation were recorded at the Imperial, California, weather station, located approximately 13 miles southeast of the Study Area (NOAA 2021b). The most recent significant precipitation event prior to the surveys occurred April 8-11, 2020, with a total of 0.80 inch of rainfall accumulating over four days (NOAA 2021b). During the 2020-2021 rain year, prior to the August 2021 field surveys (October 1, 2020, to April 30, 2021), approximately 1.27 inches of precipitation were recorded at the Imperial, California, weather station. The most recent significant precipitation event prior to the surveys occurred on April 3, 2021, with a total of 0.02 inch of rainfall accumulating over one day (NOAA 2021b).

A typical year analysis of the Study Area via a single point method was conducted using the USACE Antecedent Precipitation Tool (APT; USACE 2021). The APT is an automation tool that utilizes standardized methodology to calculate precipitation normalcy at a given location using publicly available data sources. The APT analysis determines whether precipitation, drought, and other climatic conditions from the previous three months are “wet,” “normal,” or “dry” for the geographic area based on a rolling 30-year period (USEPA 2021). The APT was run for the dates the wetland delineation data were collected between September 29-30, 2020. The APT demonstrated the site conditions on these dates represent a time of year referenced as the dry season, that the general region and site were in a moderate drought, and that site conditions were normal to wetter than normal in climatic conditions. The APT was also run for the dates the wetland delineation data were collected between August 3-4 and 25, 2021. The APT demonstrated the

site conditions on these dates represent a time of year referenced as the dry season, that the general region and site were in an extreme drought, and that site conditions were normal to wetter than normal in climatic conditions (USACE 2021).

4.1.1 Vegetation

Vegetation within the Study Area is characteristic of agricultural land and creosote bush scrub habitat. There are three types of vegetation communities within the Project Area: creosote bush scrub, disturbed creosote bush scrub, and disturbed tamarisk thickets. Four land use types also occur within the Project Area: active agriculture, fallow agricultural land, disturbed land, and urban/developed. One additional vegetation community, disturbed fourwing saltbush scrub, was observed within the buffer, but not within the Project Area.

Vegetation Communities within the Project Area

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 is dominant in the parcel and western portion of the gen-tie alignment. This community has sparser vegetation overall. Other species that were observed within this community included mesquite (*Prosopis* sp.), burrobush (*Ambrosia dumosa*), narrow leaved cryptantha (*Cryptantha angustifolia*), alkali goldenbush (*Isocoma acradenia*), velvet turtleback (*Psathyrotes ramosissima*), cryptantha sp. (*Cryptantha* sp.), brittlebush (*Encelia farinosa*). and desert plantain (*Plantago ovata*). Earthen mounds dominated by mesquite were also present within this vegetation community in the northeastern portion of the parcel.

Disturbed Creosote Bush Scrub (Disturbed *Larrea tridentata* Shrubland Alliance)

Disturbed creosote bush scrub is creosote bush scrub that has been previously altered. On the Project, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few creosote bush shrubs. Other plant species observed included scattered individuals of tamarisk (*Tamarix* sp.) within ephemeral drainages.

Disturbed Tamarisk Thickets (Disturbed *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. In the Project Area, tamarisk and arrow weed were often codominant in this vegetation community. Other plant species observed included Disturbed tamarisk thickets are tamarisk thickets that have been previously altered. In the Project Area, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few tamarisk shrubs. Other plant species observed included scattered individuals of alkali goldenbush, quailbush (*Atriplex lentiformis*), salt grass (*Distichlis spicata*), and bush seepweed (*Sueda nigra*) with the occasional Mexican palo verde (*Parkinsonia aculeata*) and screw bean mesquite (*Prosopis pubescens*).

Other Land Cover Types

Fallow Agriculture

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 periodically along the gen-tie alignment. These areas were adjacent to active agriculture and consisted primarily of tilled land with no vegetation. One area of fallow agriculture appeared to be vegetated with remnant sorghum (*Sorghum* sp.).

Disturbed

Disturbed land includes areas where the native vegetation community has been heavily influenced by human actions, such as grading, trash dumping, equipment staging, and off-highway vehicle use, but lack development. Disturbed land is not a vegetation classification, but rather a land cover type and is not restricted by elevation. Within the Project Area, the disturbed lands consisted primarily of bare ground with quailbush, arrow weed, saltgrass, hairy crab grass (*Digitaria sanguinalis*), and Mediterranean grass (*Schismus barbatus),* mustard sp. (*Brassica* sp.), and Saharan mustard (*Brassica tournefortii*) at low cover. Some area exhibited regrowth of native species, such as creosote bush.

Urban/Developed

Urban/developed areas do not constitute a vegetation classification, but rather a land cover type. Areas mapped as developed have been constructed upon or otherwise physically altered to an extent that natural vegetation communities are no longer supported. Along the gen-tie alignment, this land cover consisted of private residences and farming operations (not including the agricultural fields).

Vegetation Communities and Land Cover Types within Survey Area

One additional vegetation community was observed within the buffer, but not within the Project Area. No impacts to this vegetation community is expected as a result of Project-related activities.

Disturbed Fourwing Saltbush Scrub (Disturbed *Atriplex canescens* Shrubland Alliance)

Fourwing saltbush scrub is characterized by fourwing saltbush as a dominant within the shrub layer. The shrub canopy is open or intermittent, while the herbaceous layer can be variable, with seasonal herbs and nonnative grasses. It is found within playas, shores, lake deposits, dissected alluvial fans, or channel beds. Disturbed fourwing saltbush scrub is fourwing saltbush scrub that has been previously altered. In the Project Area, this vegetation cover is characterized as sparser, and in some areas completely lacked vegetation other than a few fourwing saltbush shrubs. Other plant species observed included scattered individuals of alkali goldenbush.

4.1.2 Soils

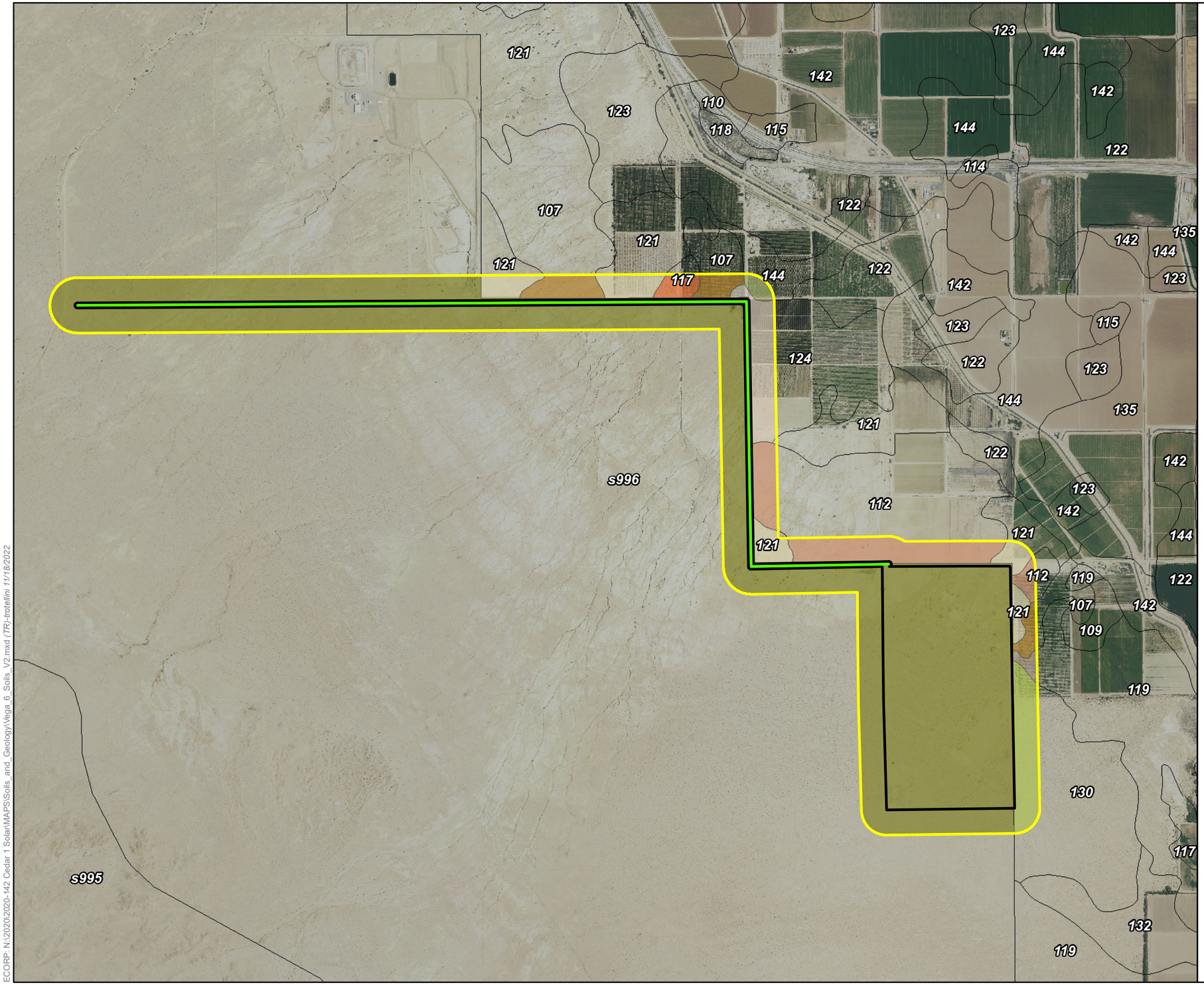
A soils analysis search was conducted using NRCS soil survey data (NRCS 2021a). The majority of the site falls within the Anza Borrego Area soil survey area in which there are no digital data available. Therefore, the Digital General Soil Map of the United States database (STATSGO2; NRCS 2021b) was searched for

this area. Fifteen soil units, or types, occur within the Study Area (Figure 2. *Natural Resources Conservation Service Soil Types*). These include:

107 - Glenbar complex

- 109 - Holtville silty clay112 - Imperial silty clay
- 117 - Indio loam
- 118 - Indio loam, wet
- 119 - Indio-Vint complex
- 121 - Meloland fine sand
- 122 - Meloland very fine sandy loam, wet
- 123 - Meloland and Holtville loams, wet
- 124 - Niland gravelly sand
- 130 - Rositas sand, 0 percent to 2 percent slopes
- 135 - Rositas fine sand, wet, 0 percent to 2 percent slopes
- 142 - Vint loamy very fine sand, wet
- 144 - Vint and Indio very fine sandy loams, wet
- s996 - Vint-Meloland-Indio

The Niland gravelly sand (124) map units contain minor hydric components (NRCS 2021c). Three water state classes (dry, moist, and wet) are used as soil moisture status entries for map unit components and designate a mean monthly soil water state at a specified depth. Soil map units with a *wet* designation are commonly used for irrigated agriculture purposes, and in some cases are indicative of areas that could support perched water in irrigated conditions. Summary characteristics based on official series descriptions for each of the soil series mapped within the alignment are provided below (NRCS 2021d).



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Map Date: 8/12/2021

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Scale in Feet
0 2,000

Figure 2. Natural Resources Conservation Service Soil Types

2020-145 Vega SES 6

Glenbar Series

The Glenbar series consists of very deep, well drained soils formed in stratified stream alluvium. Indio soils are on flood plains and alluvial fans and have slopes of 0 percent to 3 percent. The mean annual precipitation is approximately 7 inches and the mean annual air temperature is approximately 71˚ Fahrenheit. These soils have very slow permeability and slow to very slow runoff, except on low scarps.

Holtville Series

The Holtville series consists of very deep, well drained soils formed in mixed and stratified alluvium. Holtville soils are on flood plains and basins and have slopes of 0 percent to 3 percent. The mean annual precipitation is about four inches and the mean annual temperature is about 76° Fahrenheit. These soils have low runoff and slow permeability.

Imperial Series

The Imperial series consists of well or moderately well drained soils formed in calcareous alluvium from mixed sources. Indio soils are on flood plains and in old lake beds. The mean annual precipitation is approximately 4 inches and the mean annual air temperature is approximately 72˚ Fahrenheit. These soils have moderate permeability and slow runoff.

Indio Series

The Indio series consists of very deep, well or moderately well drained soils formed in alluvium derived from mixed rock sources. Indio soils are on alluvial fans, flood plains, and lacustrine basins. The mean annual precipitation is approximately 4 inches and the mean annual air temperature is approximately 72˚ Fahrenheit. These soils have moderate permeability and slow runoff.

Meloland Series

The Meloland series consists of naturally well-drained soils with slopes that are 0 percent to 1 percent. This series is a member of the sandy over clayey, mixed (calcareous), hyperthermic family of Typic Torrifluvents. These soils are in nearly level lacustrine basins and flood plains in the deserts and have slow permeability and low to medium surface runoff.

Niland Series

The Niland series consists of well and moderately well-drained soils with slopes that are typically less than 1 percent, but can range up to 5 percent. This series is a member of the sandy over clayey, mixed (calcareous), hyperthermic family of Typic Torrifluvents. These soils have very pale brown, stratified, gravelly sand and sand overlying pale brown, silty clay at a depth of 23 inches. These soils have slow runoff and permeability of the sandy portion is rapid and permeability of the clayey portion is slow.

Rositas Series

The Rositas series consists of very deep, somewhat excessively drained soils. These soils are formed in sandy eolian material and have less than 15 percent coarse and very coarse sand. The mean annual

precipitation is about 4 inches and the mean annual air temperature is about 72˚ Fahrenheit. Their slope ranges from 0 percent to 30 percent and have rapid permeability with negligible to low runoff.

Vint Series

The Vint series consists of very deep, somewhat excessively drained soils formed in stratified stream alluvium. These soils are on flood plains with a mean annual precipitation is about 7 inches and the mean annual air temperature is about 71˚ Fahrenheit. These soils have moderately rapid permeability and very slow runoff.

4.1.3 National Wetlands Inventory

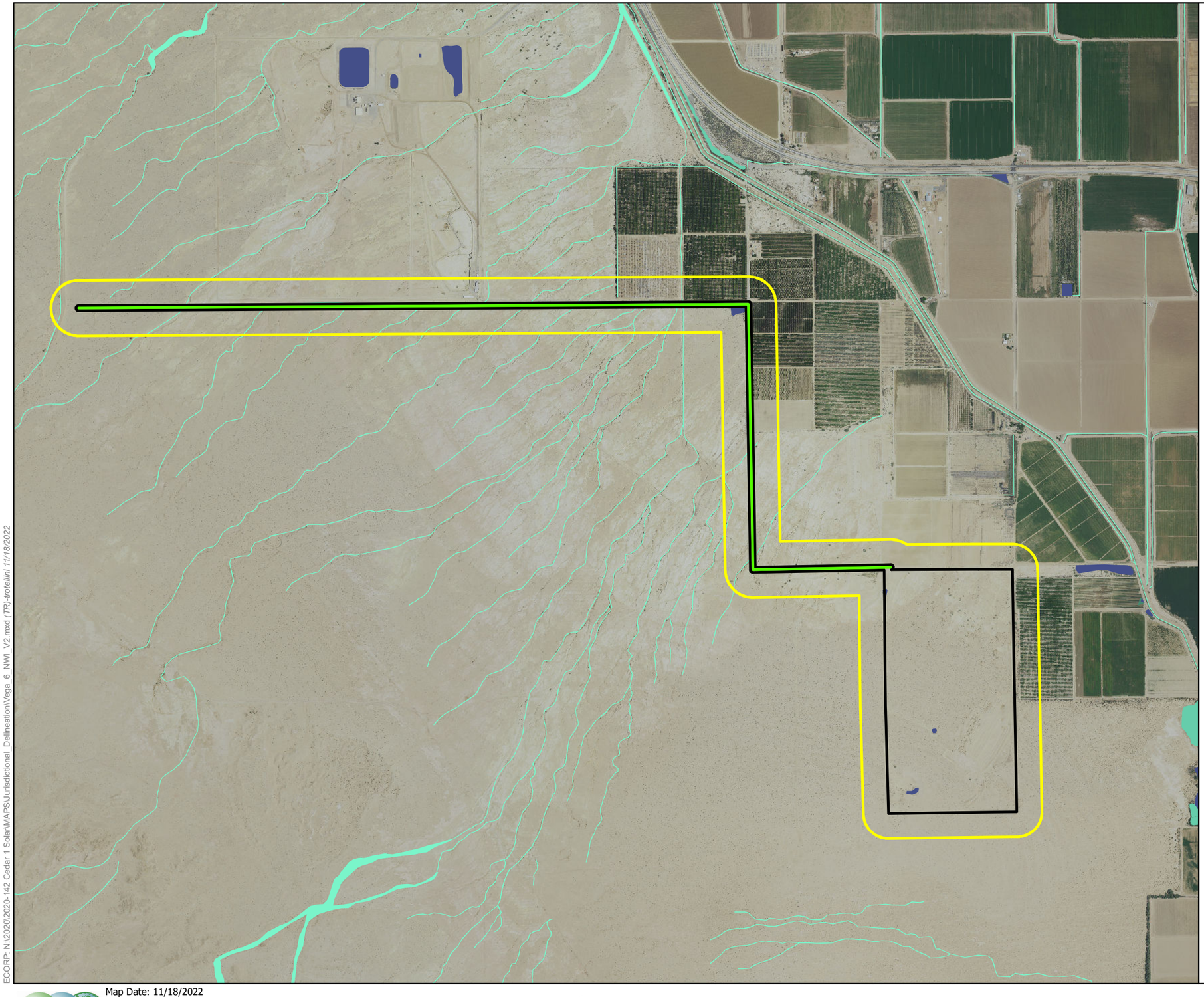
According to the NWI (USFWS 2021), there are several Riverine, Freshwater Forested/Shrub Wetland, and Freshwater Pond features mapped within the Study Area (Figure 3. *National Wetlands Inventory*). There were two freshwater pond features within NWI that did not contain hydrophytic vegetation, hydrological indicators, and/or hydric soil indicators and were therefore not included as aquatic resources.

4.1.4 Hydrology

The Study Area is within the Salton Sea watershed, Hydrologic Unit Code 18100204 (Figure 4. *Hydrology*). The undeveloped proposed solar field parcel and western portion of the gen-tie are a part of an alluvial fan 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 (Blatt et. al 1980). 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 Study Areas following large rain events and contains a network of inactive and active braided channels.

The Westside Main Canal divert waters from the All-American Canal located south of the Study Area along the U.S.-Mexico border, which brings water from the Colorado River at the Imperial Dam. It then supplies water throughout the Imperial Valley via a network of smaller irrigation channels, which ultimately drain to the Salton Sea. Section 404 of the CWA considers the Salton Sea a traditional navigable water.

There are several concrete lined lateral canals, unlined irrigation channels, and stormwater drains that either bisect or run parallel to the Study Area throughout most of the gen-tie alignment. These channels are primarily used for agriculture, with some being managed by the Imperial Irrigation District (IID) and others being privately owned by farmland operations.



Map Features

- Project Area
- 500' Buffer
- Vega 6 Gen-Tie

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Sources: NAIP(2020), NWI (2021)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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Scale in Feet
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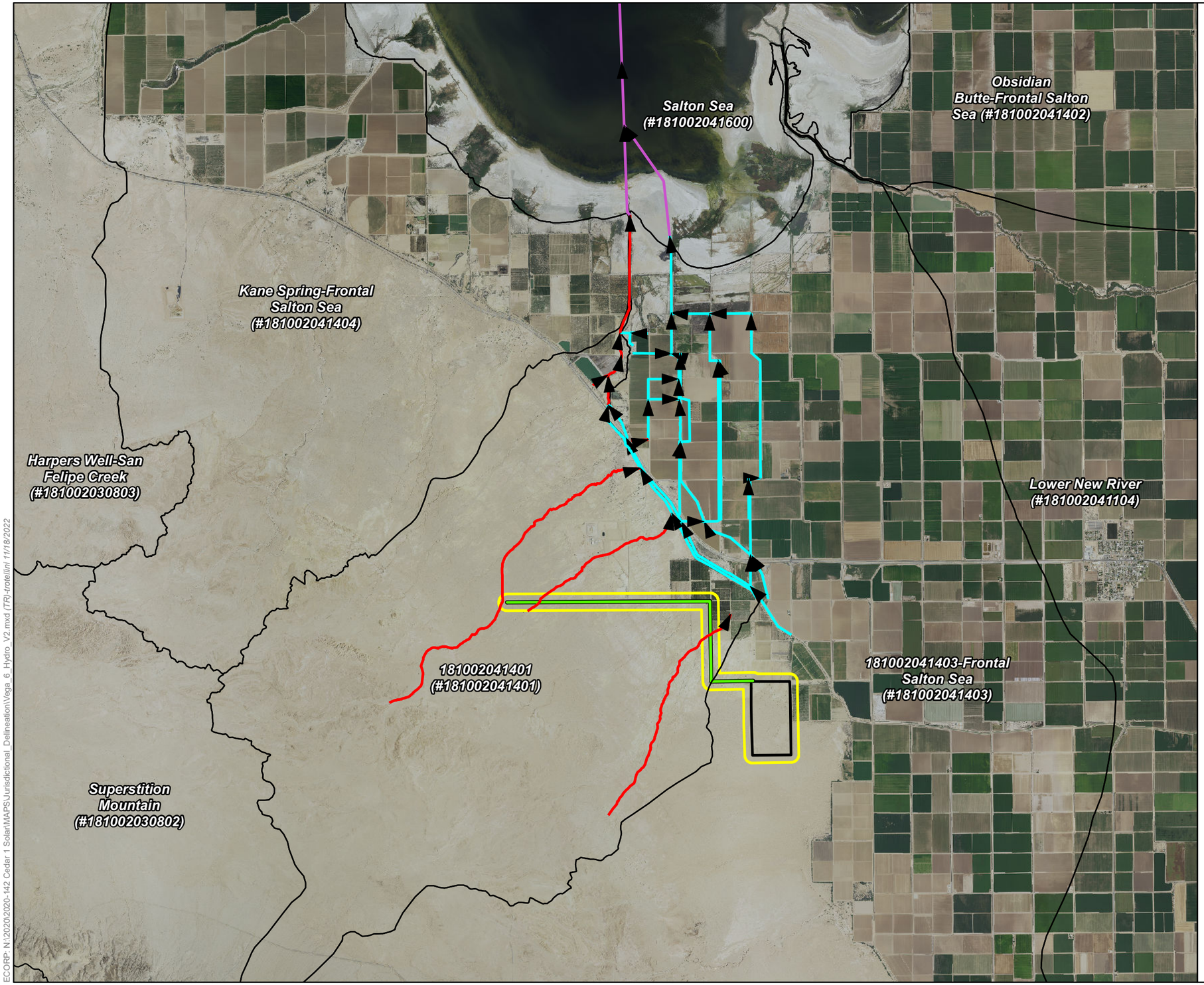
Figure 3. National Wetlands Inventory

2020-145 Vega SES 6



Map Features

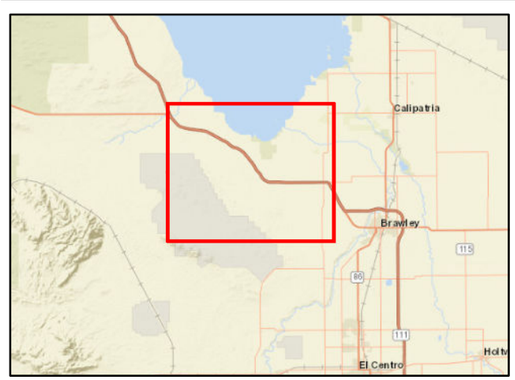
- Project Area
- Vega 6 Gen-Tie
- 500' Buffer
- Sub Watersheds (HUC12)

NHD Flowlines

- Artificial Path
- Canal/Ditch
- Stream/River

Sources: NAIP(2020), NWI (2021)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 11/18/2022

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Figure 4. Hydrology

2020-145 Vega SES 6

4.2 Aquatic Resources

Aquatic resources have been mapped within the Project Area; each resource is summarized by feature in Table 3 and depicted on Figure 5. The regulated limits that are presented in Table 3 serve as an estimate and are subject to agency verification. Features identified as an aquatic resource had physical evidence of flow, including at least two OHWM field indicators: defined bed and bank, scour, presence of a clear and natural line impressed on the bank, presence of leaf litter and/or debris, sediment sorting, shelving, destruction of terrestrial vegetation, and/or vegetation matted down, bent, or missing indicating active hydrology within the channel.

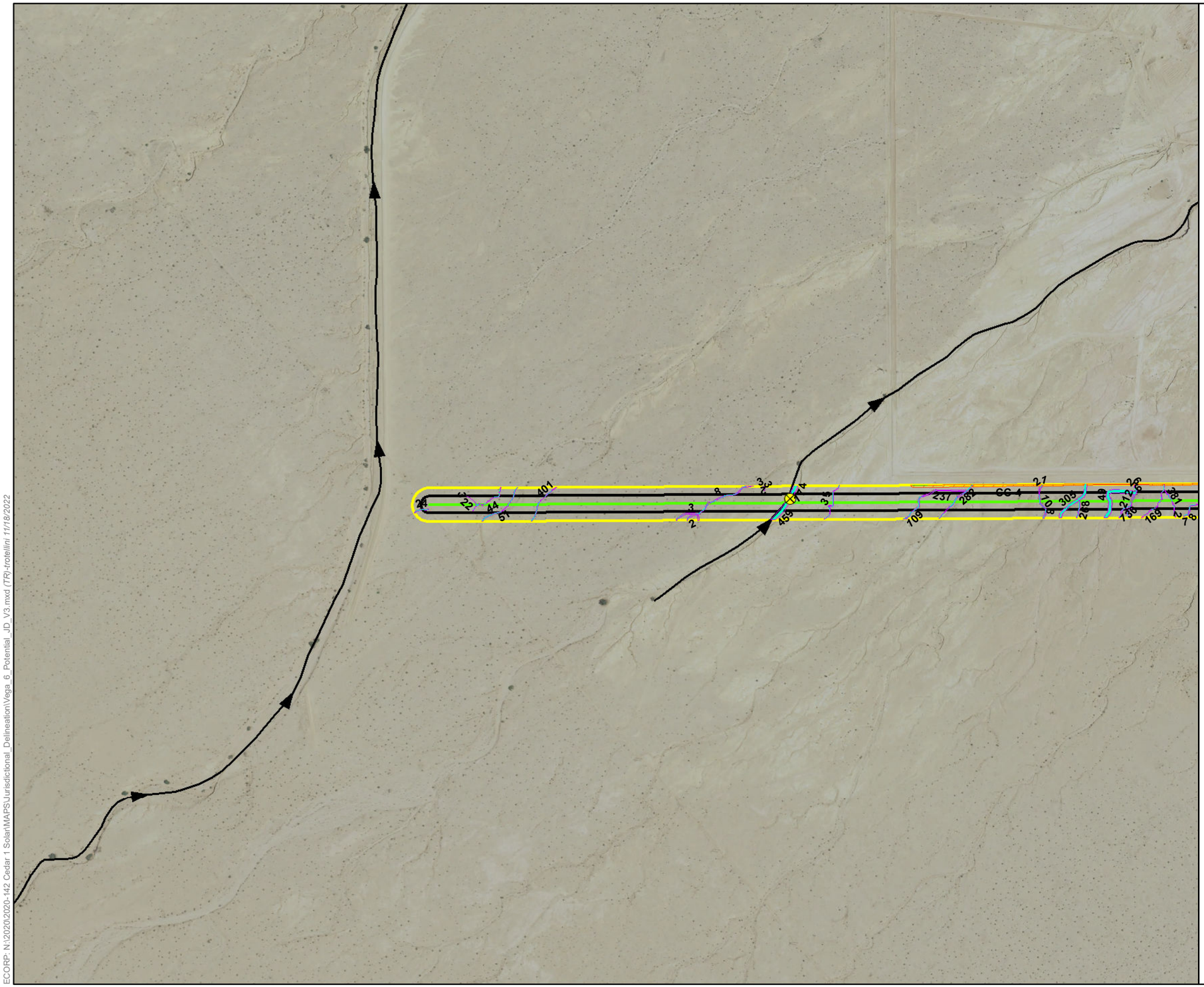
All riparian habitat was mapped, including riparian habitat not associated with aquatic features. OHWM and Wetland Determination Data Forms are included as Attachment A, representative site photographs are included as Attachment B, the USACE OMBIL Regulatory Module (ORM) aquatic resources table is included as Attachment C, digital data are provided as Attachment D, and driving directions to the Study Area are provided as Attachment E.

4.2.1 Aquatic Resources (Non-Wetland Waters)

Ephemeral Drainage

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. As previously described, the Project Area 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 Superstition Hills and Superstition Mountain through the site to the northeast.

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 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. Sampling points were not taken within the ephemeral features, as the presence of a wetland was not expected. If drainages had the potential to be intermittent, i.e., follow historic NWI blue line features, had riparian vegetation associated with them, and/or had more than three OHWM indicators, flow duration was determined using the New Mexico's Water Quality Management Planning and Continuing Planning Process – Hydrology Protocol datasheets (SWQB 2020).



Map Features

- Project Area
- 50' Buffer
- Vega 6 Gen-Tie
- Flow Lines

Sample Points

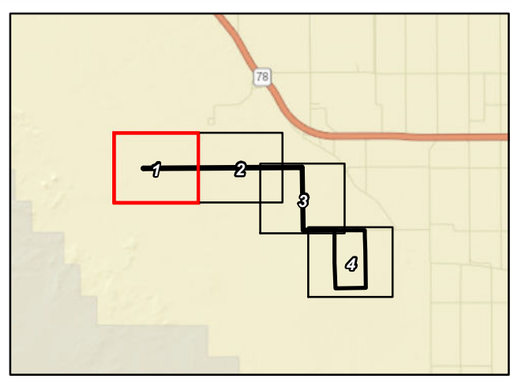
- OHWM Cross Section

Aquatic Resources

- Constructed Channel - Bank-to-Bank
- Constructed Channel - OHWM
- Ephemeral Drainage - Bank-to-Bank
- Ephemeral Drainage - OHWM

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 11/18/2022

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Scale in Feet
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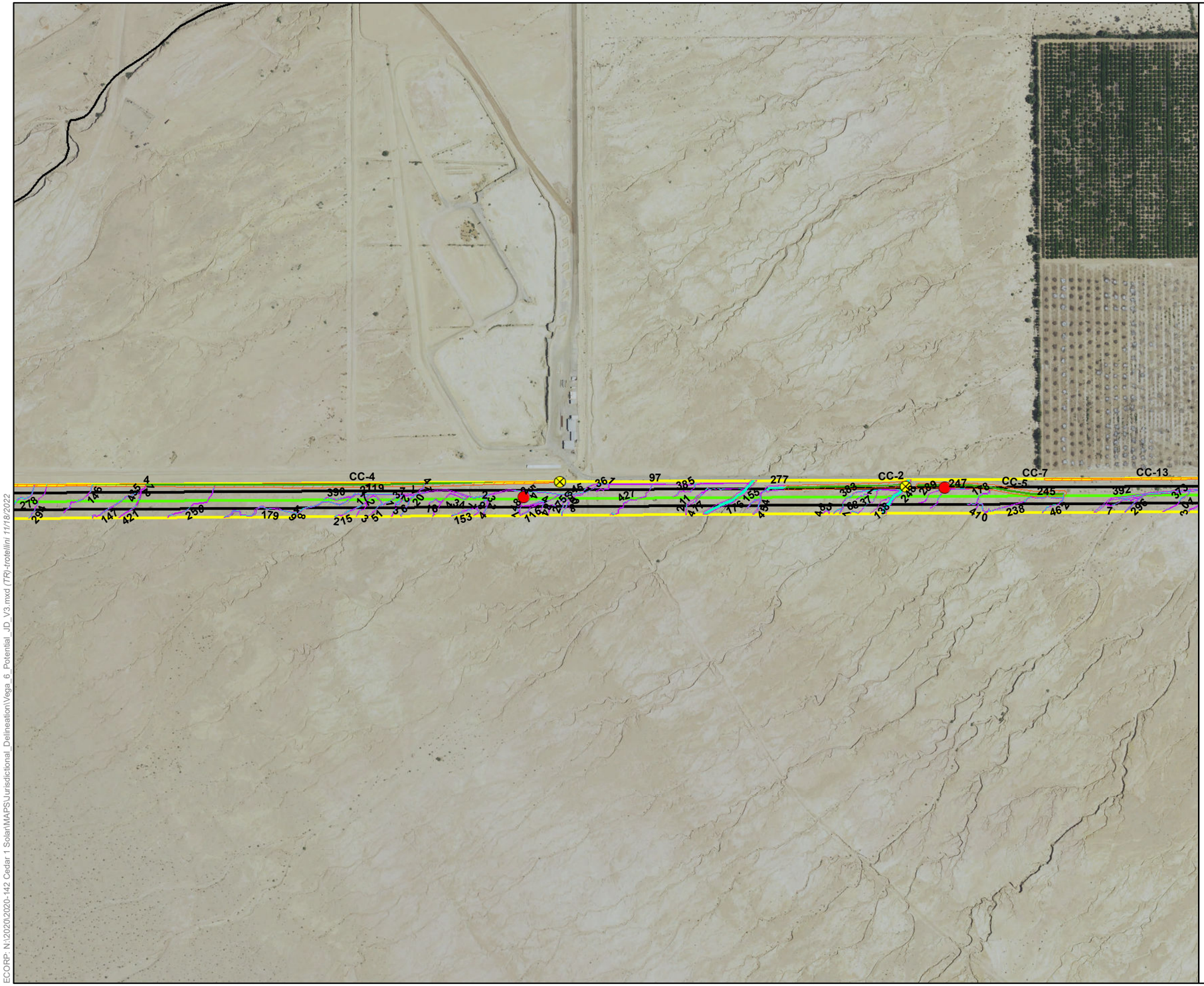
Figure 5. Aquatic Resources Delineation
Sheet 1 of 4
2020-145 Vega SES 6



Map Features

- Project Area
- 50' Buffer
- Vega 6 Gen-Tie
- Flow Lines
- Riparian Trees (*Tamarix* sp.)

Sample Points

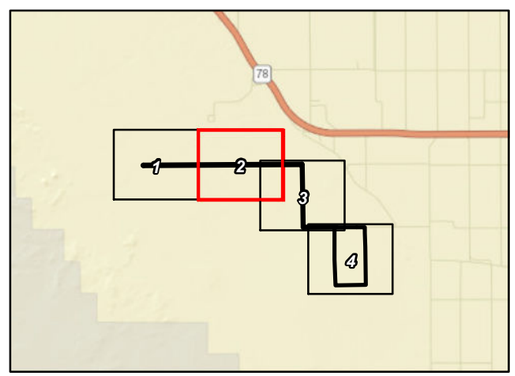
- OHWM Cross Section

Aquatic Resources

- Constructed Channel - Bank-to-Bank
- Constructed Channel - OHWM
- Ephemeral Drainage - Bank-to-Bank
- Ephemeral Drainage - OHWM

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 11/18/2022

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Scale in Feet
0 600

Figure 5. Aquatic Resources Delineation
Sheet 2 of 4
2020-145 Vega SES 6

Map Features

- Project Area
- 50' Buffer
- Vega 6 Gen-Tie
- Flow Lines
- Riparian Trees (*Tamarix* sp.)

Sample Points

- Upland Point
- OHWM Cross Section

Aquatic Resources

- Constructed Channel - Bank-to-Bank
- Constructed Channel - OHWM
- Ephemeral Drainage - Bank-to-Bank
- Ephemeral Drainage - OHWM
- Riparian Habitat

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

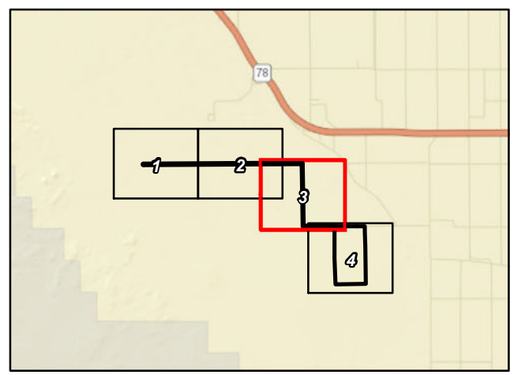

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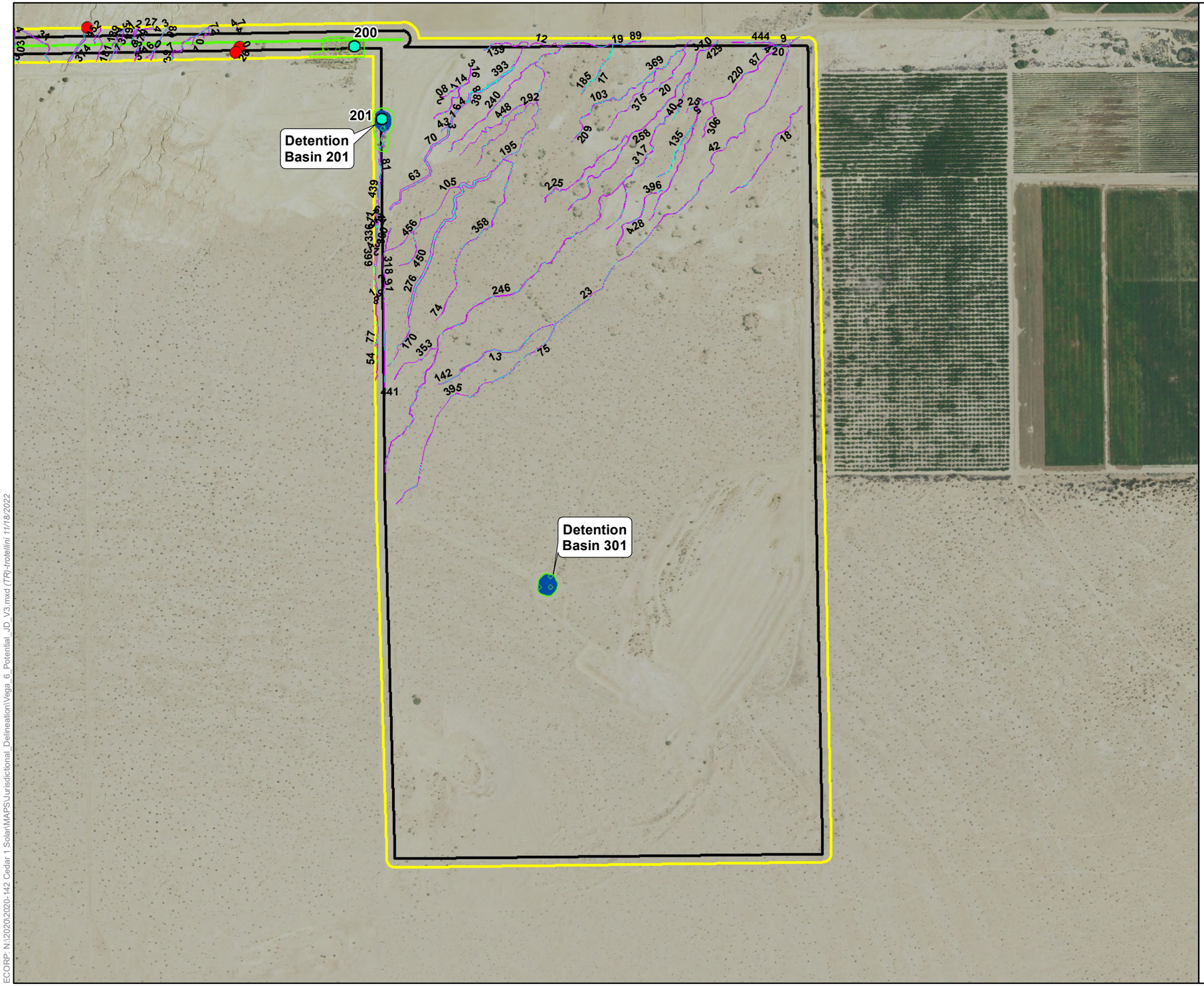
Figure 5. Aquatic Resources Delineation
Sheet 3 of 4
2020-145 Vega SES 6



Map Features

- Project Area
- 50' Buffer
- Vega 6 Gen-Tie
- Riparian Trees (*Tamarix* sp.)

Sample Points

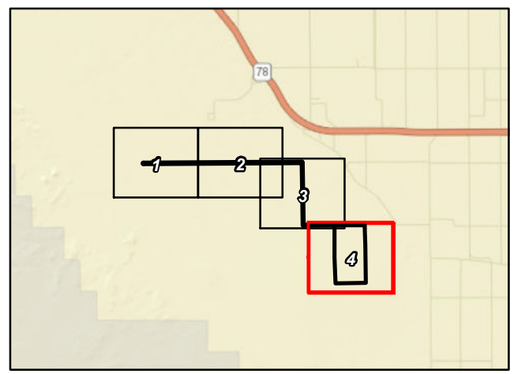
- Upland Point

Aquatic Resources

- Ephemeral Drainage - Bank-to-Bank
- Ephemeral Drainage - OHWM
- Detention Basin
- Riparian Habitat

Sources: NAIP (2020)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Map Date: 11/18/2022

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Scale in Feet
0 600

Figure 5. Aquatic Resources Delineation
Sheet 4 of 4
2020-145 Vega SES 6

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
CC-2	R4SBCx	33.0304349660293, -115.72257577224	Ephemeral; clear OHWM indicators observed, evidence of flow; non-wetland.	Unvegetated	0.056	533.924	30	None
CC-5	R4SBCx	33.0303424839635, -115.718699690964	Ephemeral; clear OHWM indicators observed, evidence of flow; non-wetland.	Unvegetated	0.345	419.567	32	None
CC-11	R4SBC	33.0303022788573, -115.714212201424	Ephemeral; clear OHWM indicators observed, evidence of flow; non-wetland.	Unvegetated	0.087	99.967	38	None
7	R6	33.0302271996173, -115.716771703212	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	148.681	3	None
8	R6	33.0304082951727, -115.74758696167	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.032	235.833	6	None
9	R6	33.0157664034074, -115.693476368982	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	86.698	4	None
10	R6	33.0159039740521, -115.704910525169	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	73.939	1	None
12	R6	33.0156571737403, -115.698545731332	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	157.433	2	None
13	R6	33.0108214684912, -115.699045754583	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.061	525.970	5	None
16	R6	33.0302903221536, -115.730227680431	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	94.955	4	None
17	R6	33.0153576550456, -115.697019161622	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.024	349.203	3	None
18	R6	33.0140406356584, -115.693689903381	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.049	714.883	3	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
19	R6	33.0157663716296, -115.696984141736	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	50.259	4	None
20	R6	33.0152690049901, -115.695601535915	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.022	380.407	2.5	None
21	R6	33.0305711653119, -115.741433185801	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	12.951	6	None
23	R6	33.0118024190642, -115.69701486999	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.035	1003.096	1.5	None
24	R6	33.0301897931142, -115.753460918922	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	39.075	3.5	None
27	R6	33.0303371196554, -115.73161173361	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	80.606	4	None
31	R6	33.0158743391448, -115.707788134821	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	159.622	4	None
35	R6	33.0304046435859, -115.74553925779	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	134.452	3.5	None
41	R6	33.0303997335623, -115.730559162688	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	24.453	4	None
42	R6	33.014196402273, -115.694537428575	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.068	1486.871	2	None
44	R6	33.0304859879378, -115.752010547489	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	196.544	2.5	None
49	R6	33.0303338420208, -115.740182374971	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.087	134.660	20	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
51	R6	33.0303903166856, -115.751757519536	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.016	142.952	5	None
53	R6	33.0161401661543, -115.709773957261	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.032	231.558	6	None
63	R6	33.0135251792896, -115.70065347516	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.103	440.724	10	None
65	R6	33.0190631279039, -115.709934677673	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	55.740	2	None
67	R6	33.0183455906046, -115.709669498306	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	158.936	3	None
70	R6	33.0143585208327, -115.69995760825	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.104	444.337	10	None
72	R6	33.0160110792805, -115.704647656999	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	56.146	3	None
74	R6	33.0116816581253, -115.699971713926	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	327.760	2	None
75	R6	33.0106495988216, -115.698568739023	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.035	612.440	2.5	None
81	R6	33.0144594353985, -115.701183176268	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.022	131.158	7	None
83	R6	33.019323841279, -115.70987040853	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	111.375	2	None
87	R6	33.0147463775049, -115.6951230699	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.100	1456.833	3	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
92	R6	33.0302401886272, -115.727702309003	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	71.538	4	None
97	R6	33.0304192058702, -115.72732683842	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.001	9.735	3.5	None
103	R6	33.0148591448726, -115.696988265156	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.025	217.396	5	None
104	R6	33.0157572038805, -115.708794732995	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	87.428	4	None
105	R6	33.0132184441282, -115.700091994659	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	338.716	1	None
108	R6	33.030245413627, -115.741506706738	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.014	102.333	6	None
109	R6	33.0303371205114, -115.743861781813	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.023	164.487	6	None
111	R6	33.0191835591846, -115.70976460354	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	250.198	2	None
114	R6	33.0151547108817, -115.699664534387	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	122.807	3	None
116	R6	33.0302413717934, -115.728072032224	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	190.373	3.5	None
119	R6	33.0303211568545, -115.729443399368	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.152	1321.928	5	None
130	R6	33.0301784453787, -115.739825390371	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	50.937	7	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
131	R6	33.0221902636487, -115.709802806545	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.012	102.030	5	None
132	R6	33.0158999124328, -115.706416340312	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	73.413	2.5	None
135	R6	33.0140413706502, -115.695554434424	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.037	398.834	4	None
136	R6	33.0302642091617, -115.730882135575	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	100.583	4	None
138	R6	33.0302439838, -115.721489077543	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	99.096	2	None
139	R6	33.0157433018839, -115.699196975608	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	45.818	2	None
142	R6	33.0103601791313, -115.699903228825	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	189.171	3	None
146	R6	33.030278615948, -115.737220604478	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.017	186.374	4	None
147	R6	33.0303267422296, -115.736284329722	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.024	232.092	4.5	None
148	R6	33.0302015183503, -115.72832561325	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	159.550	3.5	None
153	R6	33.0302387981531, -115.729289987293	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	94.836	5	None
155	R6	33.0302504441493, -115.724024767497	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	91.852	6	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
160	R6	33.0157640270646, -115.705657818367	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	35.637	4.5	None
164	R6	33.0149537292506, -115.69987661796	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.034	366.574	4	None
168	R6	33.0302317030119, -115.721701391378	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	136.806	1	None
169	R6	33.0302900143992, -115.739166304888	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	126.823	3	None
170	R6	33.0109368206814, -115.700887219408	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	353.624	1	None
172	R6	33.0301971865775, -115.731566348155	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	39.100	2	None
176	R6	33.0303727496133, -115.724253895957	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.111	192.918	25	None
178	R6	33.0302785408798, -115.719675279594	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.017	183.512	4	None
179	R6	33.0302593677607, -115.732370219585	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.058	410.703	6	None
181	R6	33.0158501434135, -115.706671556258	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	110.967	2	None
185	R6	33.0152099997597, -115.697172499814	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	193.885	2	None
189	R6	33.0158501285303, -115.70638137008	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	106.711	3	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
195	R6	33.0147261167239, -115.698213018103	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.060	1045.299	2.5	None
199	R6	33.0205059804501, -115.709831120364	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	137.506	3	None
207	R6	33.0302873534694, -115.730714814651	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	109.329	4	None
208	R6	33.0150564893584, -115.699913625812	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	128.615	3	None
209	R6	33.014466918328, -115.697348218776	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	225.687	2	None
210	R6	33.0158117886293, -115.709581996176	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.036	131.292	12	None
211	R6	33.0303123716978, -115.725148288977	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	167.397	2	None
212	R6	33.0302907227307, -115.739733818457	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.020	108.708	8	None
215	R6	33.0303195632185, -115.731499964769	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.019	203.375	4	None
220	R6	33.0150584784334, -115.694416057788	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.073	792.389	4	None
225	R6	33.013763582842, -115.697308913172	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.066	717.004	4	None
232	R6	33.0302303620769, -115.72920888318	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	55.024	5.5	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
238	R6	33.0301845889256, -115.71884836818	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	62.767	3	None
239	R6	33.0157432506979, -115.708564097501	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	42.440	4	None
240	R6	33.014789395583, -115.699075455159	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.054	784.085	3	None
245	R6	33.0302715410423, -115.718374681822	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.032	271.338	5	None
246	R6	33.0115941176703, -115.699316398161	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.232	2523.605	4	None
247	R6	33.030415804906, -115.720209372367	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.016	283.703	2.5	None
248	R6	33.0304260053566, -115.721128004555	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.077	147.348	23	None
250	R6	33.0302477970648, -115.734750626117	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	195.033	3	None
254	R6	33.0302645814737, -115.728478643845	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	126.482	3	None
255	R6	33.0147624114752, -115.695250182408	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	83.945	2	None
258	R6	33.0141777758638, -115.69650489495	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.112	1218.000	4	None
260	R6	33.0157687150853, -115.70397823059	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	21.531	3.5	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
268	R6	33.0302307529384, -115.740748501535	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.006	62.198	4	None
274	R6	33.0158630296836, -115.705922415386	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	109.161	4.5	None
275	R6	33.0302004952343, -115.727659834885	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	33.933	4.5	None
276	R6	33.0128700127456, -115.70007861393	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.393	1130.495	15	None
277	R6	33.0304348676583, -115.722739005227	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.037	634.310	30	None
278	R6	33.0303396625915, -115.738328693498	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.026	227.581	5	None
282	R6	33.0303358186211, -115.743144243681	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.017	146.481	5	None
283	R6	33.0221233447592, -115.709936333904	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	57.487	5	None
289	R6	33.0303408548687, -115.720617416098	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	190.169	2	None
292	R6	33.0144135957553, -115.698833638064	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.014	598.798	1	None
294	R6	33.0303327185736, -115.737928544587	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.006	122.659	2	None
295	R6	33.027692766277, -115.710034933383	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	46.617	4	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
296	R6	33.0302378156887, -115.71655412079	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	86.468	5	None
301	R6	33.0302427930102, -115.715115733118	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.016	175.566	4	None
303	R6	33.0158247166706, -115.708383672941	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	94.128	4	None
305	R6	33.0302897208857, -115.740791820985	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.055	159.000	15	None
306	R6	33.014581929703, -115.694891218933	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.018	257.737	3	None
308	R6	33.0302195548949, -115.727627157807	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.001	43.933	1	None
310	R6	33.0144150176164, -115.695942678623	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.129	1407.928	4	None
311	R6	33.0161760199498, -115.70986487824	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	81.155	2	None
314	R6	33.0158015172161, -115.708546165852	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.019	162.054	5	None
316	R6	33.0153438908507, -115.699513233052	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	74.807	4	None
317	R6	33.0134849491235, -115.696548674859	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.041	594.297	3	None
318	R6	33.01202971875, -115.701211280392	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.006	125.567	2	None

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Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
322	R6	33.0303094629248, -115.752499512643	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	119.946	1	None
326	R6	33.0213066237679, -115.709840124926	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	136.882	1.5	None
333	R6	33.020266775186, -115.709760666597	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.014	199.391	3	None
351	R6	33.0302956336892, -115.731039948387	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.021	223.024	4	None
353	R6	33.0106287060234, -115.70062129821	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	350.975	1	None
358	R6	33.0129656012924, -115.699096611132	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.059	860.333	3	None
359	R6	33.015757649993, -115.706002817712	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	34.874	4.5	None
360	R6	33.0126339835425, -115.701150328915	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	142.320	2	None
361	R6	33.0304293969944, -115.727055488566	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	34.274	4	None
364	R6	33.0158445067719, -115.706295452454	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	115.211	2	None
369	R6	33.0153337789061, -115.695998271393	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.051	554.807	4	None
370	R6	33.0159359322087, -115.706077428109	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.005	50.487	4.5	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
371	R6	33.0302996545708, -115.721929821318	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	87.801	2	None
372	R6	33.0302613452955, -115.730943356225	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	94.054	4	None
373	R6	33.030265903443, -115.71567107196	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	108.827	4	None
374	R6	33.0158498167733, -115.707108698267	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.028	123.333	10	None
375	R6	33.0149038520767, -115.696368127569	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.024	521.174	2	None
378	R6	33.0225560988003, -115.709836323441	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	135.910	1	None
380	R6	33.0158666346482, -115.70558230728	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.012	111.428	4.5	None
381	R6	33.0303053883255, -115.738964195111	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	123.604	4	None
383	R6	33.0303960225192, -115.721779800612	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.027	395.201	3	None
385	R6	33.0304019493657, -115.725419955475	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	144.666	2	None
388	R6	33.0149453351461, -115.699543004096	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.022	77.313	11	None
390	R6	33.030297686066, -115.73212494697	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.012	172.964	3	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
391	R6	33.0118514764645, -115.701218214299	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	58.918	2	None
392	R6	33.0303597329243, -115.715811767351	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.220	878.904	11	None
393	R6	33.0151915308877, -115.699060264689	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.080	308.358	11	None
395	R6	33.0094515331539, -115.700321275418	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.033	968.938	1.5	None
396	R6	33.0133756678305, -115.695954840759	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.007	149.646	2	None
397	R6	33.0158995113318, -115.705056234918	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.023	198.244	5	None
400	R6	33.0303066693993, -115.714584889055	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	108.415	6	None
401	R6	33.0305562603885, -115.750909707473	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	122.029	4	None
402	R6	33.0146761051353, -115.695518416997	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	94.626	2	None
406	R6	33.0163895633296, -115.709719311671	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.037	202.909	8	None
410	R6	33.0301729888743, -115.719630137048	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	25.016	5	None
417	R6	33.0302627347832, -115.725147659808	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	229.434	2	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
420	R6	33.0157860416588, -115.693341616334	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	46.053	4	None
421	R6	33.0301671838034, -115.736098666657	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	22.432	4	None
423	R6	33.0188678976019, -115.709798159727	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	144.703	3	None
427	R6	33.0302713289653, -115.726309413786	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.010	221.351	2	None
428	R6	33.0128945294378, -115.696425784335	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.034	369.731	4	None
429	R6	33.0149535774901, -115.695396631509	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.056	813.631	3	None
433	R6	33.0144557586389, -115.70002860545	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	59.896	2	None
434	R6	33.0303735465833, -115.72990989235	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.021	228.043	4	None
435	R6	33.0302983738161, -115.735991740616	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	97.416	4	None
438	R6	33.0302954342887, -115.71478422137	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.011	114.443	4	None
441	R6	33.0102256358381, -115.701229827974	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.054	1242.163	2	None
448	R6	33.0144577614311, -115.699157741635	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.027	584.277	2	None

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
450	R6	33.0123875490778, -115.700618051797	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	264.428	1.5	None
451	R6	33.0303177132782, -115.72767148512	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.013	279.084	2	None
452	R6	33.0159332781663, -115.706823029673	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.003	52.482	2.5	None
453	R6	33.0195406720364, -115.709794769408	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.008	171.924	2	None
454	R6	33.0303276520456, -115.72390993549	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.017	121.509	6	None
456	R6	33.0126355590637, -115.700788858805	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.015	315.838	2	None
459	R6	33.0302764657528, -115.746437165	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.068	118.733	25	None
462	R6	33.0302096336093, -115.718054200365	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.004	47.533	3.5	None
465	R6	33.0198894668701, -115.709830032192	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.009	116.330	3.5	None
484	R6	33.0301931303845, -115.728128473629	Ephemeral; clear OHWM indicators observed, evidence of recent flow; non-wetland.	Unvegetated	0.002	28.764	3.5	None
Detention Basin 201	PUSA	33.01457416, -115.7011688	Ephemeral, hydrophytic vegetation, hydrology, non-hydric soils, non-wetland.	Disturbed tamarisk thickets	0.141	N/A	N/A	0.318
Detention Basin 301	PUSA	33.00696819, -115.6980746	Ephemeral, hydrophytic vegetation, no hydrology, non-hydric soils, non-wetland.	Disturbed tamarisk thickets	0.287	N/A	N/A	0.287

Table 3. Aquatic Resources within the Project Area

Resource Name	Aquatic Resources Classification		OHWM/Wetland Presence Summary	Dominant Vegetation	Resource Size (acres)[2]	Resource Size (linear feet)	Feature Width[3]	Riparian Habitat Size (acres)
	Cowardin[1]	Location (lat/long)						
Unassociated Riparian Habitat	N/A	33.03014234, -115.7105209; 33.01585369, -115.7019851	N/A	Disturbed tamarisk thickets	N/A	N/A	N/A	1.342
Total	N/A	N/A	N/A	N/A	**7.810**	**48189.959**	N/A	**1.948**

[1] CC=Constructed Channel

[2] Cowardin Codes: (R4SBC[x]) Riverine, Intermittent, Streambed, Seasonally Flooded, [Excavated]; (R6) Riverine, Ephemeral; (PUSA) Palustrine, Unconsolidated Shore, Temporary Flooded (USFWS 2021b)

[3]Bank-to-bank widths were used to calculate resource acreages

[4] Widths provided are bank-to-bank widths

4.2.2 Manmade Features

Detention Basin

Detention basins are man-made surface storage basins in upland areas that provide flow control of stormwater runoff. They are typically dry most of the year and can also be used for recreational or agricultural purposes. There are two detention basins located within the Study Area. Detention Basin 201, which is located in the northwest corner of the parcel, has soil cracks and rows of young tamarisk trees but lacks hydric soils. Detention Basin 301, which is located in the southern section of the parcel, appears to be abandoned with remnant disturbed tamarisk thickets and no signs of hydrology.

Constructed Channel

Constructed channels (CC) are manufactured features constructed for the purpose of channeling stormwater and ephemeral features to a desired location. Within the Study Area, these include ephemeral ditches that retain water within their berms, as well as ephemeral drainage systems that convey water through culverts to natural drainage features that eventually drain into the Salton Sea. CC-2, CC-5, and CC-11 appear to have been created to catch stormwater runoff and man-made berms are present where the features are intersected by roads and canals, so the water remains within the features.

4.2.3 Potential CDFW Regulated Habitats

Riparian Habitat

Riparian habitat is present primarily within the eastern and southern portions of the Study Area. There is riparian habitat associated with the detention basins within the parcel. Additional riparian habitat is associated with the agricultural drains and roadside ditches. Riparian habitat associated with Detention Basins 201 and 301 appear in historic aerials dating as early as 1992, which appear to have been part of agriculture systems (Nationwide Environmental Title Research Online [NETROnline] 2021). Both detention basins no longer appear to be in use, though the riparian habitat associated with the relic basins has persisted.

Sampling Point 200 was collected in a stand of isolated riparian habitat that appeared to be relic agricultural rows. Plant species observed included tamarisk with old annual skeletons including goosefoot (*Chenopodium* sp.) and spurry (*Spergularia* sp.). The soil matrix color at a depth of 0 inch to more than 12 inches was 2.5Y 6/4 with 1 percent redox features in the matrix colored 2.5YR 4/8. Hydric soil indicators were determined to be absent at this sampling point. Wetland hydrology indicators observed at Sampling Point 200 included drift deposits (B3), surface soil cracks (B6) and the FAC-neutral test (D5).

Sampling Point 201 was collected in a detention basin (201) located in the northeastern portion of the parcel within the Study Area. Monotypic stands of tamarisk were present throughout the feature. The soil matrix color at a depth of 0 inch to more than 12 inches was 2.5YR 6/3 with 1 percent redox features in the matrix colored 5YR 5/6. Hydric soil indicators were determined to be absent at this sampling point. Wetland hydrology indicators observed at Sampling Point 201 included drift deposits (B3), surface soil cracks (B6), and the FAC-neutral test (D5).

5.0 JURISDICTIONAL ASSESSMENT

Aquatic resources that are potentially regulated under the CWA, the Porter-Cologne Act, and California Fish and Game Code Section 1602 are summarized below. These results are subject to modification following agency verification.

5.1 Clean Water Act

Per Regulatory Guidance Letter 16-01, an applicant may request a PJD "in order to move ahead expeditiously to obtain a Corps permit authorization where the requestor determin*es that it is in his or her best interest to do so … even where initial indications are that the aquatic resources on a parcel may not be jurisdictional*" (USACE 2016b). The following information on connectivity of wetlands and other waters in the Survey Area to TNW is provided should an Approved Jurisdictional Determination (AJD) be necessary.

The ephemeral drainages within the Project Area are tributary to the Salton Sea, which is a TNW. Under the current definition of waters of the U.S., the *Rapanos* guidance, the ephemeral drainages onsite would be considered non-navigable tributaries that are not relatively permanent. In which, case, a significant nexus evaluation of the ephemeral drainages would be necessary to determine jurisdiction if seeking an AJD.

5.2 Porter-Cologne Water Quality Control Act

The following categories meet the definition of waters of the state and are regulated pursuant to the Porter-Cologne Act. The Porter-Cologne Act defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The Porter-Cologne Act defines "Waters of the State" very broadly, with no physical descriptors, and no interstate commerce limitation. The categories are:

- Ephemeral Drainages
- Detention Basins
- Constructed Channels

The remaining features are excluded from the definition of waters of the state pursuant to current guidance from the SWRCB and include the inactive ephemeral drainages. Impacts to features that fall under the definition of waters of the state would trigger the need for permits through the WDR process.

5.3 California Fish and Game Code Section 1600-1602

The following categories meet the criteria for resources that are regulated under Section 1600 of the California Fish and Game Code. This includes all resources with surface or subsurface flow, and a body of water that "flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life." Areas with associated riparian vegetation that is supported by the surface and subsurface flow through these streambeds that are also added to CDFW's jurisdiction under Section 1600. The categories are:

- Ephemeral Drainages
- Detention Basins
- Constructed Channels
- Associated Riparian Habitat

The remaining features are excluded from Sections 1600-1602 pursuant to current guidance from CDFW and include the inactive ephemeral drainages, because they do not meet the definition of a bed, channel, or bank of any river, stream, or lake and associated riparian habitat. Impacts to features that fall under the definition of streambed and associated riparian habitat would trigger the need for Streambed Alteration Notification and the Project may need to enter into formal Agreements with CDFW. Additional areas mapped as riparian habitat, such as those located within the parcel, are not associated with any streams with flow but have likely established opportunistically in areas that were recently left fallow, previously irrigated and farmed, and are in artificially moist areas where surface and subsurface flow are unlikely.

6.0 REFERENCES

Baldwin, B. G., D.H Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual; Vascular Plants of California, Second Edition. University of California Press, Berkeley, California. 1,519 pp. + app.

Blatt H., Middleton G. V., Murray R. C., 1980. *Origin of sedimentary rocks, 2nd ed*. Prentice-Hall, Englewood Cliffs, 631 pp.

California Department of Fish and Wildlife (CDFW). 2021. Environmental Review and Permitting. Available online: https://wildlife.ca.gov/Conservation/Environmental-Review. Accessed August 16, 2021.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U. S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi.

ESRI. "Topographic" [basemap]. Scale Not Given. "World Imagery". Accessed August 2021.

Google Earth. 2020. https://www.google.com/maps/@33.03104,-115.6981,263m/data=!3m1!1e3. Accessed August 16, 2021.

Imperial Irrigation District (IID). 2021. Water Transportation System. Available online: https://www.iid.com/water/water-transportation-system.

Kollmorgen Instruments Company. 1990. Munsell Soil Color Charts. Kollmorgen Corporation. Baltimore, Maryland.

Nationwide Environmental Title Research Online (NETROnline). 2021. "Historic Aerials." NETR Online, www.historicaerials.com/. Accessed August 16, 2021.

National Oceanic and Atmospheric Administration (NOAA). 2021a. NCDC 1981-2010 Climate Normals for Imperial, California. Available Online: https://www.ncdc.noaa.gov/cdo-web/datatools/normals. Accessed August 16, 2021.

_____. 2021b. Climate Date Online: Daily Precipitation Summaries for Imperial, California. Available Online: https://www.ncdc.noaa.gov/cdo-web/search. Accessed August 16, 2021.

Natural Resources Conservation Service (NRCS). 2021a. Soil Survey Geographic Database. Available online: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed August 02, 2021.

_____. 2021b. Web Soil Survey. STATSGO2 Database. Available online at https://websoilsurvey.nrcs.usda.gov/. Accessed August 02, 2021.

_____. 2021c. Soil Data Access Hydric Soils List. Available at https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed September 1, 2021.

_____. 2021d. Official Soil Series Descriptions. Available at https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed August 16, 2021.

Surface Water Quality Bureau (SWQB. 2020). Hydrology Protocol for the Determination of Ephemeral, Intermittent, and Perennial Waters. State of New Mexico Water Quality Management Plan & Continuing Planning Process. Dated October 23, 2020.

U.S. Army Corps of Engineers (USACE). 2021. The Antecedent Precipitation Tool. Available Online: https://github.com/jDeters-USACE/Antecedent-Precipitation-Tool/releases/tag/v1.0.13. September 1, 2021.

_____. 2018. National Wetland Plant List, version 3.4. USACE Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. Available online: http://wetland-plants.usace.army.mil/

_____. 2016. Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. Dated January 2016. Sacramento District.

_____. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. K.E. Curtis and R.W Lichvar. ERDC/CRREL TN-10-1. Hanover, NH: U.S. Army Engineer Research and Development Center.

_____. 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

_____. 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. R. W. Lichvar and S. M McColley. ERDC/CRREL TR-08-12. Hanover, NH: U.S. Army Engineer Research and Development Center.

U.S. Department of Agriculture (USDA). 2018. The Farm Service Agency: National Agriculture Imagery Program. Accessed August 2021.

U.S. Environmental Protection Agency (USEPA). 2021. Navigable Waters Protection Rule: The Antecedent Precipitation Tool (APT). Dated January 21, 2021.

U.S. Fish and Wildlife Service (USFWS). 2021. National Wetlands Inventory. Accessible online: https://www.fws.gov/wetlands/

U.S. Geological Survey (USGS). 1992. "Westmorland West and Kane Spring, California" 7.5-minute Quadrangle. U.S. Department of the Interior.

LIST OF ATTACHMENTS

ATTACHMENT A

OHWM and Wetland Determination Data Forms – Arid West Region

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vega SES 6
Project Number: 2020-145
Stream: 81
Investigator(s): C. Clark, C. Torres

Date: 8/4/2021 **Time:** 1200
Town: Imperial County **State:** CA
Photo begin file#: **Photo end file#:**

Y [x] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [x] Is the site significantly disturbed?

Location Details: Drainage bisects the northwestern gen-tie alignment located adjacent to waste storage facility.

Projection: **Datum:**
Coordinates:

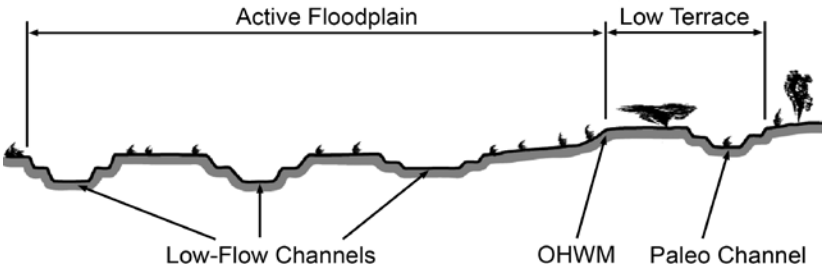
Potential anthropogenic influences on the channel system:
Run-off from adjacent active agriculture located at the eastern and northern portions of the site, along with a hazardous waste storage facility at the northwestern portion of the site. Several roadside detention/irrigation ditches line the road along the waste facility and agriculture fields.

Brief site description:
Project site is located ~6 miles south of the Salton Sea and overlaps with the Westside Main Canal at the eastern portion of the site. An alluvial fan system intersects the site and directs surface flow from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

Checklist of resources (if available):

- [x] Aerial photography
  Dates: 1953-2020
- [x] Topographic maps
- [ ] Geologic maps
- [x] Vegetation maps
- [x] Soils maps
- [x] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [x] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

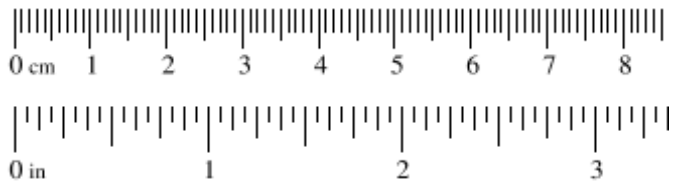


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [x] GPS
   - [ ] Digitized on computer
   - [ ] Other:

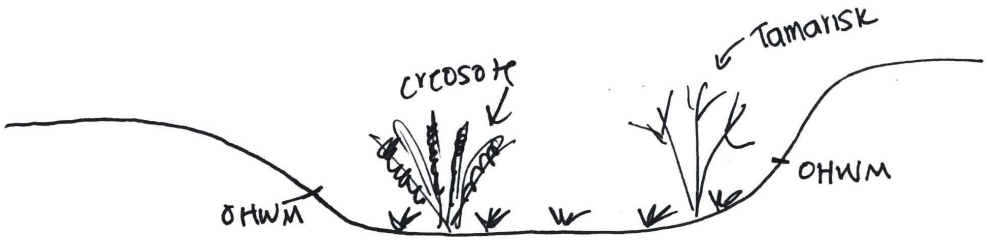
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 2020-145 **Cross section ID:** 81 **Date:** 8/4/2021 **Time:** 1200

Cross section drawing:



OHWM

GPS point: 33.030348, -115.746382

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Large drainage bisects gen-tie and continues northeast.
OHWM: 15' width
B2B: 25' width

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 33.030348, -115.746382

Characteristics of the floodplain unit:

Average sediment texture: Medium silt
Total veg cover: 12 % Tree: 0 % Shrub: 2 % Herb: 10 %
Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Channel itself is primarily unvegetated, with some upland vegetation existing within the channel bed.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vega SES 6
Project Number: 2020-145
Stream: 149
Investigator(s): C. Clark, C. Torres

Date: 8/4/2021 **Time:** 0830
Town: Imperial County **State:** CA
Photo begin file#: **Photo end file#:**

Y [x] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [x] Is the site significantly disturbed?

Location Details: Drainage bisects a road along the north-western gen-tie alignment located adjacent to active farmland.

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:
Run-off from adjacent active agriculture located at the eastern and northern portions of the site, along with a hazardous waste storage facility at the northwestern portion of the site. Several roadside detention/irrigation ditches line the road along the waste facility and agriculture fields.

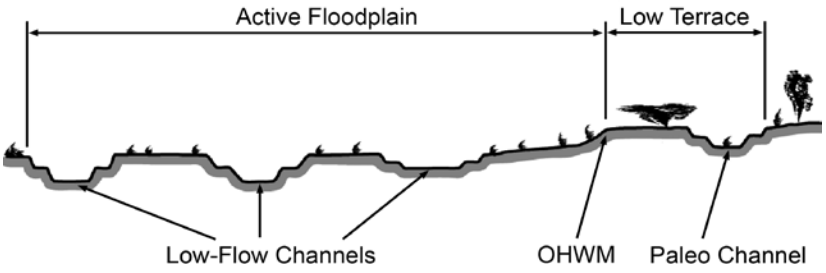
Brief site description:
Project site is located ~6 miles south of the Salton Sea and overlaps with the Westside Main Canal at the eastern portion of the site. An alluvial fan system intersects the site and directs surface flow from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

Checklist of resources (if available):

- [x] Aerial photography
  Dates: 1953-2020
- [x] Topographic maps
- [ ] Geologic maps
- [x] Vegetation maps
- [x] Soils maps
- [x] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [x] Global positioning system (GPS)
- [ ] Other studies

- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

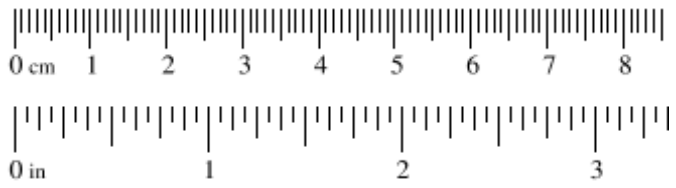


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [x] GPS
   - [ ] Digitized on computer
   - [ ] Other:

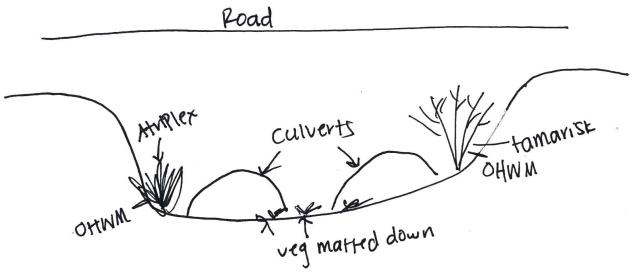
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 2020-145 **Cross section ID:** 149 **Date:** 8/4/2021 **Time:** 0900

Cross section drawing:



OHWM

GPS point: 33.030627, -115.723983

Indicators:

- ☐ Change in average sediment texture
- ☒ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Large drainage bisects road via two culverts from the south end.
OHWM: 14' width
B2B: 25' width

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 33.030627, -115.723983

Characteristics of the floodplain unit:

Average sediment texture: Medium silt
Total veg cover: 5 % Tree: 0 % Shrub: 5 % Herb: 0 %
Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Channel itself is primarily unvegetated, with some upland vegetation existing within the channel bed. Very defined bed and bank with shelving and scour present.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vega SES 6
Project Number: 2020-145
Stream: 150
Investigator(s): C. Clark, C. Torres

Date: 8/4/2021 **Time:** 0730
Town: Imperial County **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Drainage bisects a road along the north-western gen-tie alignment located adjacent to active farmland.

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:
Run-off from adjacent active agriculture located at the eastern and northern portions of the site, along with a hazardous waste storage facility at the northwestern portion of the site. Several roadside detention/irrigation ditches line the road along the waste facility and agriculture fields.

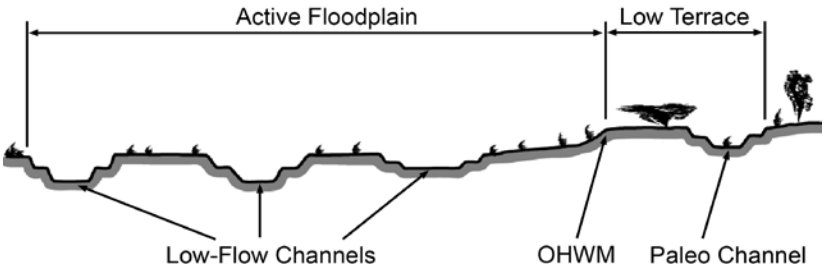
Brief site description:
Project site is located ~6 miles south of the Salton Sea and overlaps with the Westside Main Canal at the eastern portion of the site. An alluvial fan system intersects the site and directs surface flow from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: 1953-2020
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [X] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies

- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

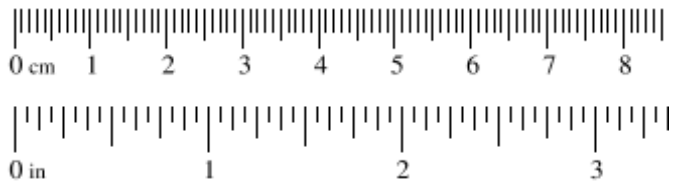


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

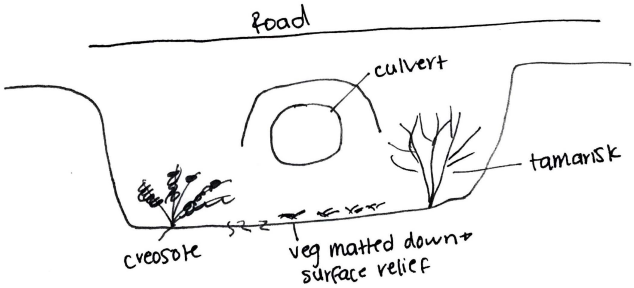
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 2020-145 **Cross section ID:** 150 **Date:** 8/4/2021 **Time:** 0730

Cross section drawing:



OHWM

GPS point: 33.030462, -115.721091

Indicators:

- ☐ Change in average sediment texture
- ☒ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Large drainage bisects road via a culvert from the south end.
OHWM: 15' width
B2B: 23' width

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 33.030462, -115.721091

Characteristics of the floodplain unit:

Average sediment texture: Medium silt
Total veg cover: 7 % Tree: 0 % Shrub: 7 % Herb: 0 %
Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Channel itself is unvegetated, with some upland vegetation existing within the channel bed. Very defined bed and bank with shelving and scour present.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vega SES 6
Project Number: 2020-145
Stream: 154
Investigator(s): C. Clark, C. Torres

Date: 8/4/2021 **Time:** 0652
Town: Imperial County **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Drainage bisects a road along the north-western gen-tie alignment located adjacent to active farmland

Projection: **Datum:**
Coordinates:

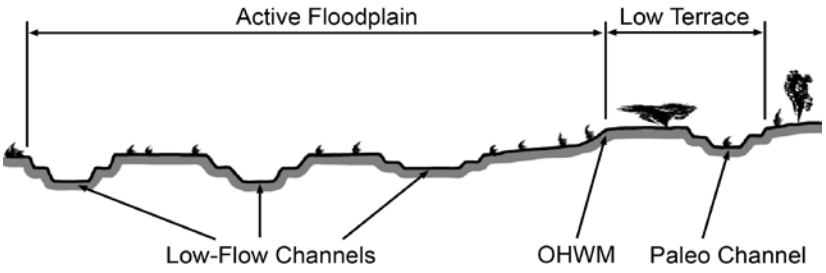
Potential anthropogenic influences on the channel system:
Run-off from adjacent active agriculture located at the eastern and northern portions of the site, along with a hazardous waste storage facility at the northwestern portion of the site. Several roadside detention/irrigation ditches line the road along the waste facility and agriculture fields.

Brief site description:
Project site is located ~6 miles south of the Salton Sea and overlaps with the Westside Main Canal at the eastern portion of the site. An alluvial fan system intersects the site and directs surface flow from the direction of Superstition Hills and Superstition Mountain through the site to the northeast.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: 1953-2020
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [X] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

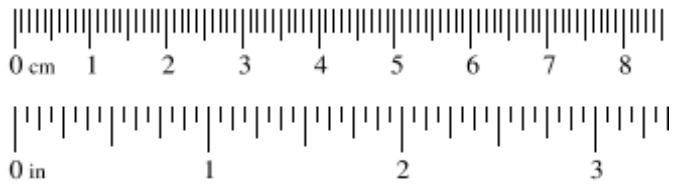


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

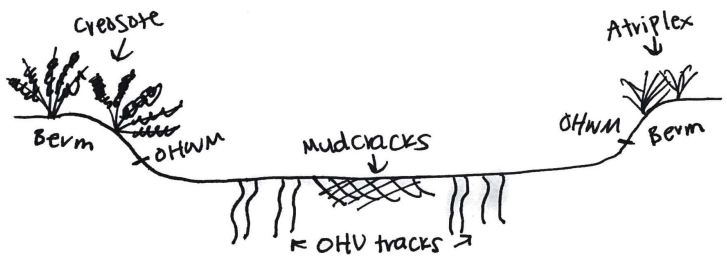
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 2020-145 **Cross section ID:** 154 **Date:** 8/4/2021 **Time:** 0652

Cross section drawing:



OHWM

GPS point: 33.030478, -115.714232

Indicators:

- [ ] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Large drainage bisects road and is also being used as a road for OHV. It is bermed on either side of the channel, except where the drainage bisects the access road.
OHWM: 25' width
B2B: 38' width

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: 33.030478, -115.714232

Characteristics of the floodplain unit:

Average sediment texture: Medium silt
Total veg cover: 10 % Tree: 0 % Shrub: 10 % Herb: 0 %
Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Channel itself is unvegetated. Upland vegetation present along banks, with scattered individuals of creosote bush. A number of tributaries offshoot from this main drainage that eventually travels north of the project area towards the Westside Main Canal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vega SES 6 City/County: Imperial County Sampling Date: 8/5/2021

Applicant/Owner: Apex Energy Solutions, LLC. State: CA Sampling Point: 200

Investigator(s): C. Clark, C. Torres Section, Township, Range: S26, T13S, R12E

Landform (hillslope, terrace, etc.): Toeslope- roadside Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR): D Lat: 33.015795 Long: -115.701781 Datum: NAD83

Soil Map Unit Name: NOTCOM: No Digital Data Available (2600446) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Point taken within a small patch of tamarisk thicket.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10')			
1. Tamarix sp.	5	Yes	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 10')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 10')			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 5	x 3 = 15
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 5 (A)	15 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Old annual skeletons present within plot, including goosefoot (Chenopodium sp.) and spurry (Spergularia sp.).

SOIL

Sampling Point: 200

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12+	2.5Y 6/4	99	2.5YR 4/8	1	C	M	Slt Cly	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ✓ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Moist at 3" depth and deep soil cracks within area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vega SES 6 City/County: Imperial County Sampling Date: 8/5/2021

Applicant/Owner: Apex Energy Solutions, LLC. State: CA Sampling Point: 201

Investigator(s): C. Clark, C. Torres Section, Township, Range: S26, T13S, R12E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): D Lat: 33.014611 Long: -115.701255 Datum: NAD83

Soil Map Unit Name: NOTCOM: No Digital Data Available (2600446) NWI classification: PUSAx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Ponded area with tamarisk and bermed all the way around.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10')			
1. Tamarix sp.	5	Yes	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 10')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 10')			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	5 (A)		15 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 201

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12+	2.5YR 6/3	99	5YR 5/6	1	C	M	Slt Cly	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ✓ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
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- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils moist at 1" depth.

ATTACHMENT B

Representative Site Photographs

Photo 1. Representative photo of an ephemeral drainage within the proposed solar field parcel; photo facing northeast. (Photo coordinates: 33.011272°N, -115.697849°W, August 3, 2021).

Photo 2. Detention Basin 201 within the northwestern portion of the proposed solar field parcel; photo facing northwest. (Photo coordinates: 33.014611°N, -115.701255°W, August 5, 2021).

Photo 3. Constructed Channel 2 within the western portion of the gen-tie line; photo facing east. (Photo coordinates: 33.030496°N, - 115.722701°W, August 4, 2021).

Photo 4. Representative photo of an ephemeral drainage within the proposed solar field parcel; photo facing north. (Photo coordinates: 33.012429°N, -115.700629°W, August 4, 2021).

Photo 5. Representation of an ephemeral drainage with riparian tree (tamarisk) situated in the southeastern portion of the gen-tie line; photo facing northeast. (Photo coordinates: 33.015872°N, -115.707104°W, August 5, 2021).

Photo 6. Feature determined to be non jurisdictional due to lack of OHWM indicators located in the southern portion of the proposed solar field parcel; photo facing southwest. (Photo coordinates: 33.007796°N, - 115.700369°W, August 4, 2021).

ATTACHMENT C

USACE ORM Aquatic Resources Table
(Provided as an accompanying electronic file)

ATTACHMENT D

Digital Data
(Provided as accompanying electronic files)

ATTACHMENT E

Driving Directions to Study Area

Google Maps I-8, San Diego, CA 92116 to Imperial County, California Drive 128 miles, 1 hr 58 min

I-8
San Diego, CA 92116

Follow I-8 E to Forrester Rd in Imperial County. Take exit 111 from I-8 E

1 hr 31 min (105 mi)

1. Head east on I-8 E
14.1 mi
2. Keep left to stay on I-8 E
90.2 mi
3. Take exit 111 for Forrester Rd
0.2 mi
4. Keep left at the fork, follow signs for Westmorland
98 ft

Continue on Forrester Rd. Drive to Garvey Rd

27 min (23.3 mi)

5. Turn left onto Forrester Rd
14.2 mi
6. Turn left onto W Cady Rd
2.0 mi
7. Continue onto Wieman Rd
2.1 mi
8. Continue onto Hoskins Rd
2.3 mi
9. Turn left onto CA-78 W/CA-86 N
2.5 mi
10. Turn left onto Vendel Rd
423 ft
11. Turn right toward Garvey Rd
0.1 mi
12. Turn left onto Garvey Rd
Destination will be on the left
62 ft

33.03746064736512, -115.70990872428219
California

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Aquatic Resources Survey Report

Ramon Substation Expansion

Thousand Palms, California

August 3, 2023

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Contents

Figures

Appendices

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1 Introduction

This report integrates information collected from a variety of literature sources and a field survey to describe the aquatic resources within the vicinity of the Ramon Substation (project) located in an unincorporated portion of Riverside County, California (Figure 1). The Imperial Irrigation District (IID) is proposing improvements to the existing Ramon Substation as part of the VEGA SES 6 Solar and Battery Storage Project (VEGA 6) in unincorporated Imperial County, CA.

Energy generated by the VEGA 6 project will be transmitted to IID's existing 161 kV "L" Line, with ultimate delivery to IID's Ramon Substation in Riverside County. IID has identified that upgrades to the Ramon Substation will be required in order to accommodate several planned utility-scale projects, including the VEGA 6 project. Implementation of the proposed project would require upgrades to the existing IID Ramon Substation. The upgrades would involve an expansion of the existing developed area of the substation, generally expanding to include 4 additional acres of a currently undisturbed area at the substation site.

1.1 Project Location

The proposed project is located east of Palm Springs near the City of Thousand Palms, approximately 2.1 miles east of Interstate 10 (I-10) and immediately north of Ramon Road (Figure 1). The project is located in Section 16 of Township 4 South, Range 6 East of the United States Geological Survey (USGS) 7.5-minute series *Myoma, California* topographic quadrangle (Figure 2). The project is located within the boundaries of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), adjacent to the Thousand Palms Conservation Area. The CVMSHCP covers approximately 240,000 acres of land in Coachella Valley with the purpose to balance growth while conserving sensitive habitats and species.

1.2 Project Description

Ramon Substation Improvements

The IID owns and operates the existing Ramon Substation. The Ramon Substation is located on a single parcel (Assessor Parcel Number 651-230-015) in unincorporated Riverside County, generally northeast of Cathedral City, north of the I-10 Freeway. The existing substation currently occupies approximately 6.7 acres of the 11.26-acre parcel, and contains equipment typically associated with electrical substations including power lines, transformers, and switching gear. Access to the existing substation is provided by Ramon Road, which is immediately south of the existing substation.

Upgrades to the existing Ramon Substation are proposed which would add additional capacity to the substation in order to accommodate electricity generated by planned utility-scale solar projects, which would tie into the substation, and then energy converted would be added to the electrical grid. This includes, but is not limited to, the proposed VEGA 6 solar energy project. The VEGA 6 solar energy project is located in an unincorporated portion of Imperial County.

The upgrades would involve an expansion of the existing developed area of the substation, generally expanding to include 4 additional acres of a currently undisturbed area at the substation site. During

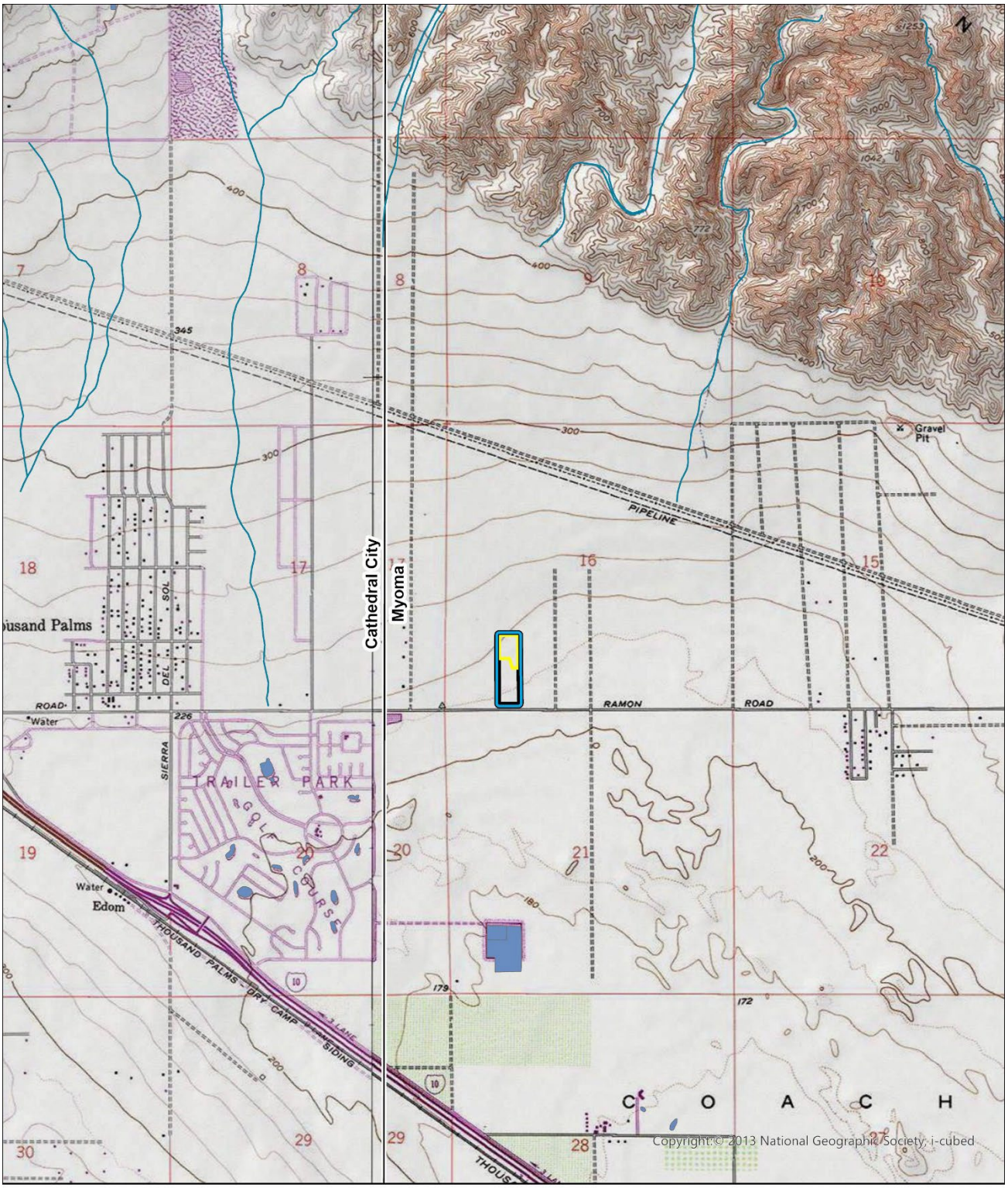
construction, access to the proposed expansion area would be through the existing substation site, via existing dirt roads located on the west and east of the existing substation, or a combination thereof.

IID CEQA Responsible Agency

The IID is a Responsible Agency as defined by CEQA Guideline Section 15381 as it relates to the proposed Ramon Substation improvements. In this capacity, the IID has the discretionary authority to approve improvements to the existing Ramon Substation, and would utilize the information contained in the VEGA 6 Environmental Impact Report, as prepared by the County of Imperial as the CEQA Lead Agency, as the CEQA clearance for the substation improvements.

Figure 1. Project Location Map

Figure 2. USGS 7.5-Minute Quadrangle Map



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2 Regulatory Background

2.1 United State Army Corps of Engineers

2.1.1 Section 404 of the Clean Water Act

Section 404 of the CWA establishes a program for USACE to regulate the discharge of dredge and fill material into waters of the U.S. (WOUS), 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. An individual Section 404 permit or authorization to use an existing USACE nationwide permit must be obtained if any portion of an activity would result in dredge or fill impacts on a river or stream that has been determined to be jurisdictional under Section 404 of the CWA. When applying for a permit, a company or organization must show that they would either avoid wetlands where practicable, minimize wetland impacts, or provide compensation for any unavoidable destruction of wetlands.

Waters of the United States

Pursuant to Section 404 of the CWA, USACE regulates the discharge (temporary or permanent) of dredged or fill material into waters of the U.S. (WOUS) including wetlands.

There have been multiple Supreme Court decisions and regulatory definitions recently concerning the proper standard for how to determine whether a wetland or stream that is not navigable in fact is properly considered a WOUS. Most recently, on May 25, 2023, the U.S. Supreme Court, issued its opinion in Sackett v. Environmental Protection Agency, 598 U.S. (Sackett). The opinion addresses the definition of WOUS pursuant to the CWA, 33 U.S.C. Section 1251 et seq. and defines the geographic reach of USACE's and the U.S. Environmental Protection Agency's (EPA) authority in regulating streams, wetlands and other water bodies under the CWA.

In light of Sackett, the agencies announced that they are developing a rule to amend the final "Revised Definition of 'Waters of the United States'" rule, published in the Federal Register on January 18, 2023, to be consistent with the U.S. Supreme Court's May 25, 2023 decision in Sackett. They intend to issue a final rule by September 1, 2023. In the meantime, the agencies will interpret the phrase "waters of the United States" consistent with the Supreme Court's decision in Sackett.

The prior definitions and regulatory guidance to identify WOUS in California were the pre-2015 definitions which included significant nexus evaluations for adjacent wetlands, as described in the Rapanos guidance. The Supreme Court ruling in Sackett effectively nullifies the use of the Rapanos significant nexus evaluation in future jurisdictional determinations (JDs). Under the Sackett ruling, WOUS only include navigable waters, impoundments of navigable waters, relatively permanent tributaries of navigable waters, and contiguous or adjoining wetlands (Sackett v. Environmental Protection Agency, 2023). Ephemeral streams and other water bodies that are not relatively permanent, and wetlands or aquatic habitats that do not have a continuous surface connection with a RPW or navigable water (i.e., isolated wetlands) would not be federally jurisdictional and would not be considered WOUS considering the Court's ruling.

Revised Definition of 'Waters of the United States' Rule (January 2023)

On January 18, 2023, EPA published the final "Revised Definition of 'Waters of the United States' Rule", which became effective on March 20, 2023. This rule establishes a clear and reasonable definition of waters of the United States, which is founded upon the familiar 1986 regulations, with amendments informed by the Clean Water Act and statute as a whole, the scientific record, relevant Supreme Court precedent, and the agencies' expertise. The rule returns the definition of "waters of the United States" to that which existed prior to 2015. The Revised Definition Rule defines the term waters of the "United States" in USACE regulations at 33 Code of Federal Regulations Part 328.3(a) as:

1) Traditional Navigable Waters, the territorial seas, and interstate waters (paragraph (a)(1) waters)
2) Impoundments of "waters of the United States" (paragraph (a)(2) waters)
3) Tributaries to traditional navigable waters, the territorial seas, interstate waters or paragraph (a)(2) impoundments when the tributaries meet either relatively permanent standard or the significant nexus standard ("jurisdictional tributaries");
4) Wetlands adjacent to paragraph (a)(1) waters; wetlands adjacent to and with a continuous surface connection to relatively permanent paragraph (a)(2) impoundments or jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard; and wetlands adjacent to paragraph (a)(2) impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard ("jurisdictional adjacent wetlands" and
5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (a)(4) that meet either the relatively permanent standard or the significant nexus standard ("paragraph (a)(5) waters").

Paragraph (b) of the Revised Definition Rule identifies specific exclusions to waters of the United States, including:

1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;
3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or

excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

The limits of USACE jurisdiction in nontidal waters extends to the ordinary high water mark (OHWM) which is defined at 33 CFR 328.3(e) as:

> "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

In practice, examples of a discharge of fill material may include, but are not limited to, grading, placing riprap for erosion control, pouring concrete, and stockpiling excavated material into waters of the U.S. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, performing certain drainage channel maintenance activities, constructing temporary mining and farm/forest roads, and excavating without stockpiling.

Since an Approved Jurisdictional Determination (AJD) will not be processed by the USACE until guidance for the Sackett ruling is issued, and then likely take several months or more based on USACE backlog, other options for project proponents to advance may include a Preliminary Jurisdictional Determination (PJD) or relying on professional opinions and legal counsel. Under a PJD, the USACE will verify delineations and assume all, or the majority of, the aquatic features are WOUS for permitting purposes. Advancing a project without USACE guidance, an AJD or PJD / Section 404 permit is a compliance risk that each client should consider with legal counsel, when based on professional judgement, and weighing the likely schedule ramifications.

Wetlands

The term wetlands (a subset of WOUS) is defined at 33 Code of Federal Regulations 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987, USACE published a manual to guide its field personnel in determining jurisdictional wetland boundaries followed by the *Arid West Supplement* in 2008 (USACE 2008a). The methodology set forth in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* generally requires that to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria (three parameter definition). The plant community must be determined to by hydrophytic based on:

1. The dominance test applied using the 50/20 rule,[1] or where the vegetation fails the dominance test and wetland hydrology and hydric soils are present, vegetation is determined to be hydrophytic

[1] If a particular species accounts for more than 50 percent of the total coverage of vegetation in the stratum, or for at least 20 percent of the total coverage in the stratum which the species was found, that species is defined as dominant.

using the Prevalence Index test[2] based upon the indicator status (i.e., rated as facultative or wetter in the 2018 National List of Plant Species that Occur in Wetlands [USACE 2020]);

2. Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., redoximorphic features with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
3. Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for a sufficient period to cause: the formation of hydric soils; and establishment of a hydrophytic plant community. A positive test for wetland hydrology is based on the presence of one primary or two secondary indicators.

2.2 Regional Water Quality Control Board

In California, the State Water Resources Control Board (SWRCB) and nine RWQCBs regulate activities within state and federal waters under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. SWRCB is responsible for setting statewide policy, coordinating and supporting RWQCB efforts, and reviewing petitions that contest RWQCB actions. Each RWQCB is semiautonomous and has the authority to set water quality standards, issue Section 401 certifications and waste discharge requirements, and take enforcement action for projects occurring within its boundary. However, when a project crosses multiple RWQCB jurisdictional boundaries, SWRCB becomes the regulating agency that issues project permits.

2.2.1 Section 401 of the Clean Water Act

Section 401 specifies that certification from the state is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into WOUS. A federal permit or license cannot be issued that may result in a discharge to WOUS unless certification under Section 401 of the CWA is granted or waived by the U.S. Environmental Protection Agency, state, or tribe where the discharge would originate (SWRCB 2014). The aquatic resources study area (ARSA) is located within the boundaries of the Colorado River (Region 7) RWQCB, which would have the authority to grant, grant with conditions, deny, or waive water quality certification for the Project.

Under Section 401, all activities regulated at the federal level by USACE are also regulated at the state level. Therefore, state jurisdiction usually includes all waters or tributaries to waters that are determined to be WOUS and, similar to WOUS, are typically delineated at the OHWM.

2.2.2 Porter-Cologne Water Quality Control Act

RWQCB also regulates discharge of waste to Waters of the State (WOS), pursuant to California's Porter Cologne Water Quality Control Act enacted in 1969, which provides the legal basis for water quality regulation within California. Under this act, WOS are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code Section 13050(e)). Should RWQCB determine that discharge of pollutants (including fill) is proposed to waters that meet the definition of WOS but not WOUS, waste discharge requirements may be required.

[2] A Prevalence Index is calculated using wetland indicator status and relative abundance for each vascular plant species present.

2.2.3 State Wetland Definition and Procedures for the Discharge or Dredge or Fill Material to Waters of the State

On April 2, 2019, SWRCB adopted the State Wetland Definition and Procedures for the Discharge of Dredged or Fill Material to WOS. The procedures became effective May 28, 2020. These rules define what SWRCB considers a wetland and include a framework for determining if a feature that meets the SWRCB wetland definition is a WOS, subject to regulation. Second, the rules clarify requirements for permit applications to discharge dredged or fill material to any WOS.

SWRCB defines an area as wetland as follows:

> An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation (SWRCB 2019).

SWRCB considers the following wetlands (as determined using methodology in the USACE *Wetland Delineation Manual* [USACE Environmental Laboratory 1987]) as WOS:

1. Natural wetlands
2. Wetlands created by modification of a surface water of the state
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts on other WOS, except where the approving agency explicitly identifies the mitigation as being of limited duration
    b. Specifically identified in a water quality control plan as a wetland or other water of the state
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape
    d. Greater than or equal to 1 acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not WOS unless they also satisfy the criteria set forth in 2, 3a, or 3b):
        i. Industrial or municipal wastewater treatment or disposal
        ii. Settling of sediment
        iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program
        iv. Treatment of surface waters
        v. Agricultural crop irrigation or stock watering
        vi. Fire suppression
        vii. Industrial processing or cooling

viii. Active surface mining – even if the site is managed for interim wetlands functions and values

ix. Log storage

x. Treatment, storage, or distribution of recycled water

xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits)

xii. Fields flooded for rice growing

All artificial wetlands that are less than 1 acre in size and do not satisfy the criteria set forth in numbers 2, 3.a, 3.b, or 3.c are not WOS. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

2.3 California Department of Fish and Wildlife

2.3.1 California Fish and Game Code Section 1600 et seq.

The State of California regulates water resources under Section 1600 et seq. of the California Fish and Game Code. Section 1602 states:

> An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses and extends to the top of the bank of a stream or lake if unvegetated, or to the limit of the adjacent riparian habitat located contiguous to the watercourse if the stream or lake is vegetated.

3 Methodology

3.1 Literature Review

The following literature and materials were reviewed both prior to conducting aquatic resources delineation fieldwork and in the process of determining jurisdictional status of features identified in the field:

- Current and historical aerial photographs (Google Earth 2023; Historic Aerials 2023; USGS Earth Explorer 2023)
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil mapping data (USDA NRCS 2023)
- National Hydrography Dataset (USGS 2022)
- U.S. Fish and Wildlife Service National Wetlands Inventory data to identify areas mapped as wetland features (USFWS 2022)

3.2 Field Surveys

HDR Biologist Aaron Newton and Ronell Santos conducted a site visit on June 16, 2023 in order to identify general site conditions, vegetation communities, and suitability of habitat for various special-status species. All aquatic resources within accessible areas of the ARSA, which consists of the Ramon Substation and proposed expansion plus a 50-foot buffer, were investigated on foot. Aquatic resource boundaries were mapped by hand on printed 1:2,400 scale 2023 aerial maps, or widths were recorded (in feet) with locational data using the Esri Collector for ArcGIS application on an Android V.10 phone connected to a global positioning system. Notes describing aquatic resource type, substrate type, flow regime, presence or absence of vegetation, and any other pertinent details regarding observed hydrology were taken at each feature. All features were later digitized using geographic information system software.

Plant species observed were identified by visual characteristics and morphology in the field. Taxonomic nomenclature for plants follows the *Jepson Manual: Vascular Plants of California*, second edition (Baldwin et al. 2012) and the Jepson eFlora database (Jepson Flora Project 2021). Vegetation communities were characterized using *A Manual of California Vegetation, second edition* (Sawyer et al. 2009).

3.2.1 United State Army Corps of Engineers Jurisdiction

Aquatic resources potentially subject to USACE jurisdiction were delineated according to 33 Code of Federal Regulations Part 328.4 and using the methods outlined in the USACE *Wetland Delineation Manual* (USACE Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008c).

Aquatic features were investigated for evidence of an OHWM or other jurisdictional indicators, such as presence of hydrophytic vegetation. Three wetland sampling points were assessed within the ARSA in areas exhibiting potential wetland conditions, notably potentially hydrophytic vegetation and hydrologic indicators. Wetland indicator status of plant species was determined using the 2020 *USACE National Wetland Plant List, Version 3.5* (USACE 2020). Soils were analyzed using the *Natural Resources Conservation Service Field Indicators of Hydric Soils in the U.S., Version 8.2* (USDA NRCS 2020), the Hydric Soils List for Orange County and Part of Riverside County, California (USDA NRCS 2022), and *Munsell® Soil Color Book* (*Munsell Color X-Rite* 2013).

Ephemeral aquatic features that were constructed in uplands for the sole purpose of managing upland stormwater flows were mapped but are not considered jurisdictional (USACE Guidance Document [USACE 2008d]).

Common plant species were identified by visual characteristics and morphology in the field, while less common or otherwise unknown plant species were collected and identified later with the aid of plant keys. Taxonomic nomenclature for plants follows the Jepson eFlora (Jepson Flora Project 2021).

3.2.2 Regional Water Quality Control Board Jurisdiction

RWQCB jurisdiction, for the purposes of CWA Section 401 regulation, is identical to USACE jurisdiction. In addition, the ARSA was evaluated for isolated features that would not be subject to federal jurisdiction but would be potentially regulated under the Porter-Cologne Water Quality Control Act.

3.2.3 California Department of Fish and Wildlife

The ARSA was surveyed for features that exhibit streambed and stream banks and/or riparian vegetation and would, therefore, be subject to CDFW jurisdiction. Any such features would be mapped from top-of-bank to top-of-bank, or to the extent of riparian vegetation, whichever is greater.

4 Results

4.1 Environmental Setting

4.1.1 Existing and Adjacent Land Use

The project footprint has a General Plan land use designation of general residential. The surrounding land use designations include general residential and one-family dwellings. The project footprint currently consists of a disturbed area north of the existing Ramon substation, sparsely vegetated with low growing creosote bushes in sandy soils. Two large electrical transmission poles are located within the footprint and dumped materials can be found scattered throughout the southern end of the footprint. A small human encampment was also observed during the field visit.

4.1.2 Soils

The online NRCS Web Soil Survey was referenced to identify potential hydric soils occurring within the Biological Resources Study Area (BSA) (USDA NRCS 2023). The following soils are mapped within the BSA (Appendix A).

- **Carsitas:** The soils of the Carsitas series are characterized by very deep, somewhat excessively drained soils formed in alluvium. Carsitas series soils are on 0 to 30 percent slopes on alluvial fans, fan aprons, valley fills, and in drainageways at elevations of -220 to 2,625 feet. Carsitas series soils within the project footprint include Carsitas gravelly sand, 0 to 9 percent slopes.
- **Myoma:** The Myoma series are characterized by somewhat excessively drained soils with rapid permeability. They are nearly level to rolling at elevations of -200 to 1,800 feet. Myoma series soils within the project footprint include Myoma fine sand, 0 to 5 percent slopes.

4.1.3 Hydrology

The BSA is located within the Upper Whitewater River watershed, approximately 201,200 acres in size, which is located within the larger Whitewater River Hydrologic Unit (HUC-8 # 180100201). The major surface water within the watershed includes the Whitewater River and originates within the summit of Mount San Gorgonio in the San Bernardino Mountains. The river travels southeast joining with three other tributaries before ultimately draining into the Salton Sea at the southeastern end of the Coachella Valley (Riverside County Watershed Protection 2020).

4.1.4 Vegetation Communities and Other Land Types

Based on a review of historic aerial photographs [Historic Aerials (1959-2020) and Google Earth (1996-2023)] the survey area was cleared of vegetation prior to May 2002 for the creation of the existing Ramon Substation and associated transmission line poles and portions been routinely disturbed since that time.

The figure and acreages correspond with the BSA, which includes the project footprint plus a 500-plus buffer. Vegetation onsite consisted of three land cover types with the predominant land cover type as Developed/Ornamental. A description of each vegetation community occurring within the BSA is

provided below and depicted in Figure 3. All botanical species observed are listed in Appendix B. Photographs of the site from the June 16, 2023 visit are included in Figure 4.

Developed/Ornamental

Developed/Ornamental land is comprised of areas of intensive use with much of the land constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is highly modified and characterized by permanent or semi-permanent structures, pavement, unvegetated areas, and landscaped areas that require irrigation. Developed/Ornamental areas typically provide high value or function for human use but provide little habitat value to wildlife. Ornamental plantings can provide some use for wildlife movement or use by species adapted to human presence.

Within the BSA, Developed/Ornamental land includes paved roads, electric substations, areas where non-native ornamental species and landscaping have been installed, and bare ground with compacted soils that no longer support vegetation. A total of 17.15 acres of Developed/Ornamental land occur within the BSA. A strip of land just north of Ramon Road, in front of the substation has planted ornamental vegetation, approximately 1.56 acres of land.

Creosote Bush Scrub (*Larrea tridentata* Alliance)

Within the Creosote Bush Scrub community (*Larrea tridentata* Alliance), creosote bush is dominant in the shrub canopy with several sub-dominant desert shrub species such as four-wing saltbush (*Atriplex canescens*), burrobrush (*Ambrosia salsola*), brittlebush (*Encelia farinosa*), and Mediterranean grass (*Schismus barbatus*).

Within the BSA, Creosote Bush Scrub occurs primarily in the north and east of the existing Ramon Substation and covers a total of 35.02 acres of the BSA.

Disturbed-Creosote Bush Scrub (*Larrea tridentata* Alliance)

The disturbed-Creosote Bush Scrub community (*Larrea tridentata* Alliance) is composed of similar species as Creosote Bush Scrub but receives regular disturbance from offroad activity and illegal dumping. The vegetation community is dominated by creosote bush with sub-dominant desert shrub species such as four-wing saltbush (*Atriplex canescens*), burrobrush (*Ambrosia salsola*), brittlebush (*Encelia farinosa*), and Mediterranean grass (*Schismus barbatus*).

Within the BSA, disturbed-Creosote Bush Scrub occurs to the north of the existing Ramon Substation and covers a total of 11.57 acres of the BSA.

Special-Status Vegetation Communities

Special status natural communities are those that are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status plants or animals occurring in those habitats. Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents.

None of the vegetation communities within the project footprint is considered sensitive or of special concern.

Figure 3. Vegetation Communities and Other Land Cover Types in the BSA

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4.2 Aquatic Resources Delineation Results

4.2.1 United States Army Corps of Engineers

No aquatic resources were observed within the ARSA during the field visit. The area is entirely upland dominated by creosote bush scrub with no features exhibiting any hydrologic indicators or containing hydrophytic plants. No soil samples were taken during the field visit.

4.2.2 Regional Water Quality Control Board

The ARSA is within the jurisdiction of the Colorado River RWQCB (Region 7). Within the ARSA, WOS, as defined by the SWRCB's procedures are generally equivalent to WOUS. No aquatic resources were observed within the ARSA during the field visit. The area is entirely upland dominated by creosote bush scrub with no features exhibiting any hydrologic indicators or containing hydrophytic plants.

4.2.3 California Department of Fish and Wildlife Jurisdiction

Features within the ARSA were assessed for CDFW jurisdiction based on whether they exhibited a stream bed and bank, provided habitat value for terrestrial and/or aquatic wildlife, and/or associated with a naturally occurring drainage feature. No aquatic resources were observed within the ARSA during the field.

5 Conclusions

No aquatic features that would be potentially subject to USACE/RWQCB/CDFW jurisdiction occur within the ARSA. The project would not result in direct impacts that include discharge of fill to USACE/RWQCB jurisdictional features or substantial modification of CDFW jurisdictional features and would not require authorization and mitigation for impacts.

Figure 4. Site Photographs

Photo 1: View of the project footprint looking south towards existing Ramon Substation, showing disturbed Creosote Bush Scrub habitat.

Photo 2: View of the project footprint towards east, showing Creosote Bush Scrub Habitat.

Photo 3: View of the construction debris piles in the disturbed Creosote Bush Scrub habitat within the project footprint.

Photo 4: View of the offroad activity in the disturbed Creosote Bush Scrub habitat within the project footprint.

6 References

Baldwin, Bruce G., Douglas Goldman, David J. Keil, Robert Patterson, Thomas J. Rosatti, and Dieter H. Wilken). 2012. *The Jepson Manual Vascular Plants of California*, 2nd Edition. University of California Press, Berkeley.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. United States Army Engineer Waterways Experiment Station, Vicksburg, MS.

Google Earth. 2023. Various Date Maps showing Thousand Palms, CA. Google Earth. Accessed June 2023. earth.google.com/web/.

Historic Aerials. 2020. Aerial imagery and topographic maps for the study area. Accessed June 2023. https://www.historicaerials.com/.

Jepson Flora Project (eds.) 2021. Jepson eFlora. Accessed June 2023. https://ucjeps.berkeley.edu/eflora/.

Munsell. 2013. *Munsell Soil Color Charts: with Genuine Munsell Color Chips.* Grand Rapids, MI. 2009 Year Revised / 2013 Production.

Riverside County Watershed Protection. 2020. The Story of the Whitewater River Watershed. https://rcwatershed.org/2020/06/10/the-story-of-the-whitewater-river-watershed/

Sawyer and Keeler-Wolf. 2009. *A Manual of California Vegetation*. California Native Plant Society, Second Edition. Sacramento, California.

State Water Resources Control Board (SWRCB). 2014. 401 Water Quality Certification Frequently Asked Questions. Accessed February 2022. https://www.waterboards.ca.gov/rwqcb9/water_issues/programs/401_certification/docs/401c/401FAQRB9V514.pdf.

——— 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019. Accessed February 2022. https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html.

United States Army Corps of Engineers (USACE). 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Revised. https://cawaterlibrary.net/wp-content/uploads/2017/12/trel08-28.pdf.

_____2008b. Guidance on Clean Water Act Jurisdiction Following the Supreme Court Decision in Rapanos v. U.S. and Carabell v. U.S. December 2, 2008. https://www.usace.army.mil/Missions/Civil Works/Regulatory Program and Permits/Related Resources/CWA Guidance/. Accessed June 2023.

——— 2008c. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Hanover, NH:Cold Regions Research and

Engineering Laboratory. https://cawaterlibrary.net/wp-content/uploads/2018/03/FinalOHWMManual_2008.pdf.

——— 2008d. Regulatory Guidance Letter No 08 02: Jurisdictional Determinations. 26 June 2008.

——— 2020. National Wetland Plant List, version 3.5. https://wetland-plants.sec.usace.army.mil/nwpl_static/v34/home/home.html. Accessed June 2023.

United States (U.S.) Department of Agriculture Natural Resources Conservation Service (NRCS). 2018. Field Indicators of Hydric Soils in the U.S., Version 8.2.

———. 2023. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed April 2023.

United States Fish and Wildlife Service (USFWS). 2022. National Wetlands Inventory website. https://www.fws.gov/wetlands/. Accessed June 2023.

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Appendix A. Soils Report

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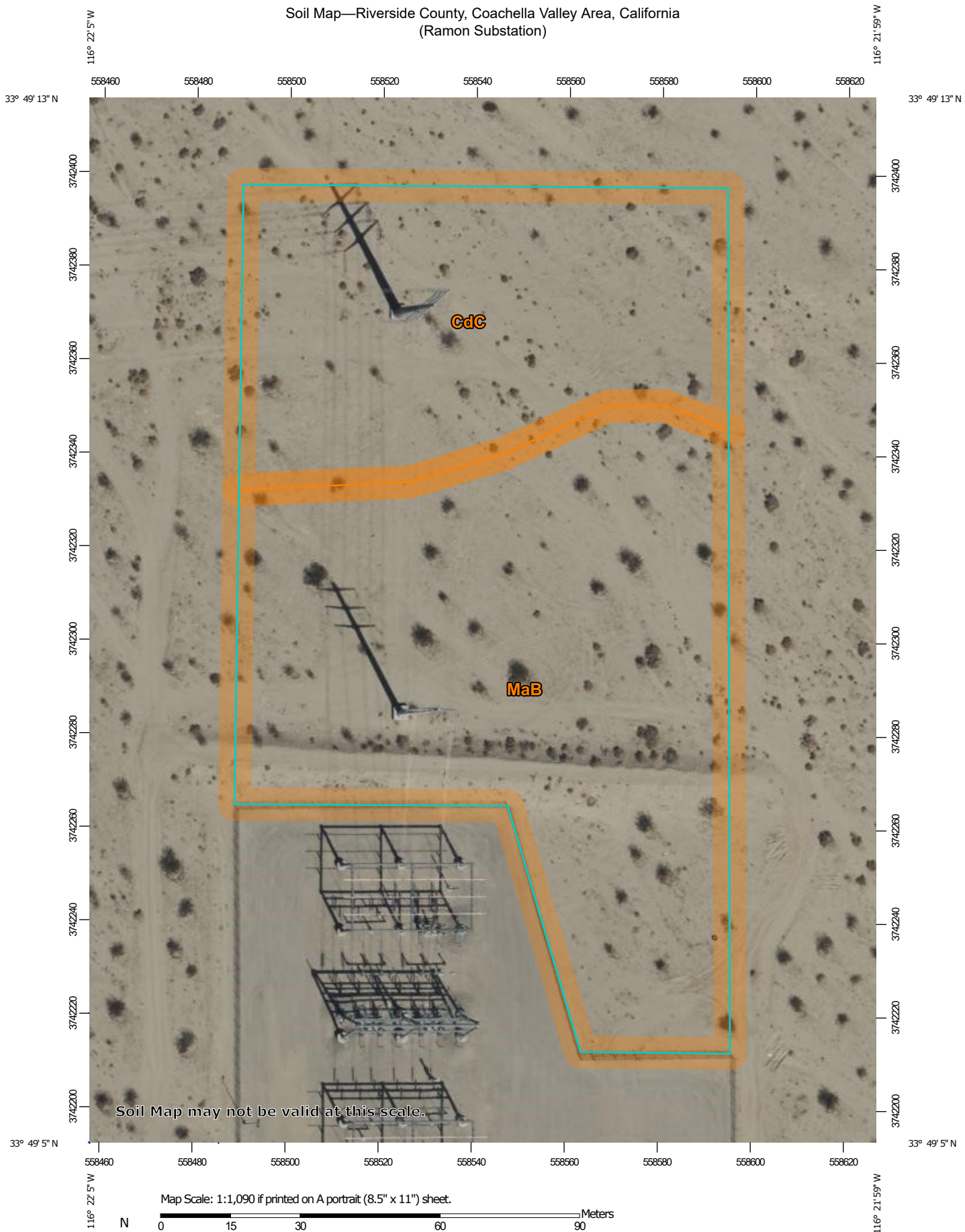
Soil Map—Riverside County, Coachella Valley Area, California
(Ramon Substation)



Map Scale: 1:1,090 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Riverside County, Coachella Valley Area, California
Survey Area Data: Version 14, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 15, 2022—May 28, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CdC	Carsitas gravelly sand, 0 to 9 percent slopes	1.5	37.1%
MaB	Myoma fine sand, 0 to 5 percent slopes	2.5	62.9%
Totals for Area of Interest		**4.0**	**100.0%**

Appendix B. Plant and Wildlife Species Observed

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Species	Common Name	Special-Status	Wetland Rank	Weed Rank
EUDICOTS				
ASTERACEAE – SUNFLOWER FAMILY				
Ambrosia salsola var. salsola	common burrobrush			
Encelia farinosa	brittlebush			
CHENOPODIACEAE – GOOSEFOOT FAMILY				
Atriplex canescens	four-wing saltbush			
FABACEAE – LEGUME FAMILY				
*Parkinsonia aculeata**	Mexican palo verde		FAC	
Psorothamnus emoryi	Emory's indigo-bush			
Psorothamnus spinosus	smoke tree			
Senna armata	spiny senna			
LAMIACEAE – MINT FAMILY				
Salvia dorrii	Dorr's sage			
MYRTACEAE – MYRTLE FAMILY				
*Eucalyptus camaldulensis**	red gum		FAC	
SIMMONDSIACEAE – JOJOBA FAMILY				
Simmondsia chinensis	jojoba			
TAMARICACEAE – TAMARISK FAMILY				
*Tamarix ramosissima**	saltcedar			4500
ZYGOPHYLLACEAE – CALTROP FAMILY				
Larrea tridentata	creosote bush			
MONOCOTS				
POACEAE – GRASS FAMILY				
*Schismus barbatus**	barbed Mediterranean grass			

Legend

Symbols:

* Non-native species
cf. confer: This designation is used when a species or infraspecific taxon cannot be confirmed, but is believed to be the selected species of infraspecific taxon based on available anatomy

Federal Designations:

U.S. Fish and Wildlife Service:

FE Endangered
FT Threatened
FC Candidate Species

U.S. Forest Service:

FSS Forest Service Sensitive
WL Watch List

U.S. Army Corps of Engineers Wetland Rank:

OBL: Obligate Wetland - Almost always occur in wetlands. With few exceptions, these plants are found in standing water or seasonally saturated soils near the surface.
FACW: Facultative Wetland - Usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
FAC: Facultative - Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats.
FACU Facultative Upland - Usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
None (UPL): Upland - Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils.

Other Designations:

California Invasive Plant Council Rank:

High These species have severe ecological impacts on the surrounding habitat. They have moderate to high rates of dispersal and establishment, and most are widely distributed.
Moderate These species have substantial and apparent—but generally not severe—ecological impacts on the surrounding habitat. They have moderate to high rates of dispersal. Distribution may range from limited to widespread.
Limited These species are invasive, but their ecological impacts are minor on a statewide level. They have low to moderate rates of colonization. Although their distribution is generally limited, these species may be locally persistent and problematic.
Watch List These species are predicted to become invasive if no further actions are taken. Distribution may range from limited to widespread in specific regions.

State of California Designations:

California Department of Fish and Wildlife:

SE Endangered
ST Threatened
SR Rare

California Rare Plant Rank:

1A Plants presumed extirpated in California and either rare or extinct elsewhere
1B Plants Rare, Threatened, or Endangered in California and elsewhere
2A Plants presumed extirpated in California, but more common elsewhere
2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3 Plants about which we need more information - review list
4 Plants of limited distribution - watch list

Threat Code Extensions:

None Plants lacking any threat information
.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Moderately threatened in California (20–80% of occurrences threatened; moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)

California Department of Food and Agriculture Weed Rank:

A eradication, containment, rejection, or other holding action at the state-County level is mandated
B eradication, containment, control, or other holding action is at the discretion of the commissioner
C no state action is required except to retard the speed of spreading
4500 this plant is included in CCR Section 4500 list of state noxious weeds

CONFIDENTIAL

The Cultural Resources Inventory Report for the VEGA 6 SES, LLC Project contains sensitive and confidential information that is not available for public distribution.

Technical Memorandum

To:	Tim Gnibus, HDR
From:	Amber Parron, HDR
Date:	10/24/2023
Subject:	**Ramon Substation Improvements Project – Cultural Resource Technical Study**

1. Introduction

HDR, under contract with the Imperial Irrigation District (IID), conducted a cultural resource technical study in support of the proposed Ramon Substation Improvements Project (project) in Riverside County, California. The project is located in unincorporated Riverside County, east of Thousand Palms and north of Interstate 10. The substation currently occupies approximately 6.2 acres on the north side of East Ramon Road, east of the intersection with Vista de Oro (**Figure 1** and **Figure 2**). The project involves the expansion of the substation toward the north to include an additional footprint of 4 acres in a currently empty portion of the substation site. The proposed improvements would increase the capacity of the substation to accommodate electricity generated by planned utility-scale solar projects, which would tie into the substation, and then energy converted would be added to the electrical grid. The project area reviewed for this study encompasses the footprint of the proposed expansion and a buffer on either side of the substation to include potential access and staging areas that may be used for the project, for an overall extent of approximately 22 acres (**Figure 3**). The project area is located in Section 16 of Township 4S, Range 6E, San Bernardino Baseline Meridian.

HDR carried out archival research, including a record search at the Eastern Information Center (EIC) of the California Historical Resources Information System and a review of available historical aerial photographs and maps to identify potential cultural resources that may be present within the project area. HDR also requested a review of the Sacred Lands File, held by the Native American Heritage Commission (NAHC). HDR staff archaeologists conducted an intensive pedestrian survey of the Project Area on June 16, 2023.

2. Archival Research

On June 12, 2023, HDR submitted to the NAHC a request for a search of the Sacred Lands File in correspondence with the project area. The NAHC responded on July 10, 2023, stating that the results of the Sacred Lands File search were negative and providing a contact list for twelve Native American tribes who may also have knowledge of cultural resources in the vicinity of the project area (**Appendix A**).

On October 18, 2023, HDR cultural resource specialist Daniel Leonard carried out a record search at the EIC, housed at the University of California, Riverside, to identify all previous cultural resource investigations and all previously recorded cultural resources within 0.25 miles of the project area. The EIC search identified two previous investigations within the record search area, one of which was carried out in 2000 and covered the entire expansion area (**Table 1**). One previously recorded resource — P-33-009665, a historic "jackrabbit homestead" — was identified approximately 500 feet south of the expansion area. However, this homestead is no longer extant as it was demolished during construction of the existing Ramon Substation. The results of the EIC record search are provided in **Appendix B**.

Table 1. Previous Cultural Resource Studies Within 0.25 Miles of the Project Area

Code	Year	Author	Title
*RI-08102	2000	Richard Perry / U.S. Army Corps of Engineers, Los Angeles District	Cultural Resources Survey of Approximately 720 Acres in the Western Coachella Valley, Riverside County, California for the Whitewater River Basin California, Flood Control Feasibility Study
RI-10461	2015	William T. Eckhardt, Matthew M. DeCarlo, Doug Mengers, Sherri Andrews, Don Laylander, and Tony Quach / ASM Affiliates	Archaeological Investigations and Monitoring for the Construction of the Devers-Palo Verde No. 2 Transmission Line Project, Riverside County, California

Note: An asterisk (*) indicates the study that intersects the project area.

HDR also conducted a review of and Bureau of Land Management General Land Office (GLO) records, historical aerial photographs (dating from 1959 to the present), and topographic maps (dating from 1904 to the present) to identify potential cultural resources within the project area. The GLO survey plat from 1856 shows Section 16, where the project area is located, as empty land. On the same GLO plat, an "Indian trail" is shown running northwest to southeast along the base of the Indio Hills, approximately 1.4 miles north-northeast of the project area. No land patents appear to have been filed for the project area. No features or structures within the project area are visible on historical topographic maps, including the 1904 Indio, California, 30-minute; the 1941 Edom, California, 15-minute; and the 1958 Myoma, California, 7.5-minute quadrangles. Aerial photographs show the project area as undeveloped open desert land prior to 2002. The homestead (P-33-009665) is visible between two tamarisk trees, as noted on the site record, on imagery dating between 1959 and 1996. Grading adjacent to the project area, within the footprint of the existing Ramon Substation, is visible on the 1984 aerial. Construction, landscaping, and incremental expansion of substation infrastructure in the area surrounding the project area are evident in more recent imagery. Between the 1996 and 2002 aerial images, construction of the substation resulted in the demolition of P-33-009665. During the same time period, two electrical transmission poles were installed within the project area, north of the substation. Additional generalized disturbance in the project area would have resulted from grading and other construction activities associated with the substation.

3. Survey Results

The project area is located in the northern Coachella Valley, an elongated rift valley that forms the northwestern extent of the Salton Trough. The project area is approximately two miles

southwest of the Indio Hills, a low range formed by uplift between the two main faults of the San Andreas fault system. The surface geology of the Coachella Valley consists of Quaternary alluvium. The majority of soils in the project area are classified by the U.S. Department of Agricultural National Cooperative Soil Survey as Myoma fine sand. Carsitas gravelly sand is found in approximately 15 percent of the project area north and east of the existing substation, and a small area (less than 5 percent of the total acreage) of Coachella fine sand exists in the far eastern part of the project area. These soils formed from recent alluvium and consist exclusively of C horizons.

On June 16, 2023, HDR cultural resource specialists James Whitaker and Amber Parron conducted a full-coverage, intensive pedestrian survey of the project area. The purpose of the survey was to document any cultural resources that may be present, note past disturbance, and assess the potential of the project area to contain buried cultural resources. All accessible portions of the project area were covered with survey transects using 10- to 15-meter spacing. Ground visibility at the time of the survey was 100 percent (**Photograph 1** through **Photograph 5**).

Vegetation in the project area consisted of species typical of the Colorado Desert Creosote Bush Scrub plant community, including creosote bush (*Larrea tridentata*), cheesebush (*Ambrosia salsola*), grasses, and palo verde (*Parkinsonia* sp.) planted for landscaping along East Ramon Road near the substation.

The results of the survey were negative for cultural resources. No artifacts, ecofacts, features, historic structures, midden soils, or other evidence of cultural resources were identified within the project area. Although no cultural resources were observed, modern debris was noted within the project area, especially north and east of the existing Ramon Substation (**Photograph 6**). Disturbance from vehicle activity, grading of the existing substation, installation of transmission poles, and other construction activities was observed throughout the project area.

4. Recommendations

Archival research and an intensive pedestrian survey identified no cultural resources within the project area. The negative results of the archival research and survey support a determination that the project would not result in a significant impact to cultural resources.

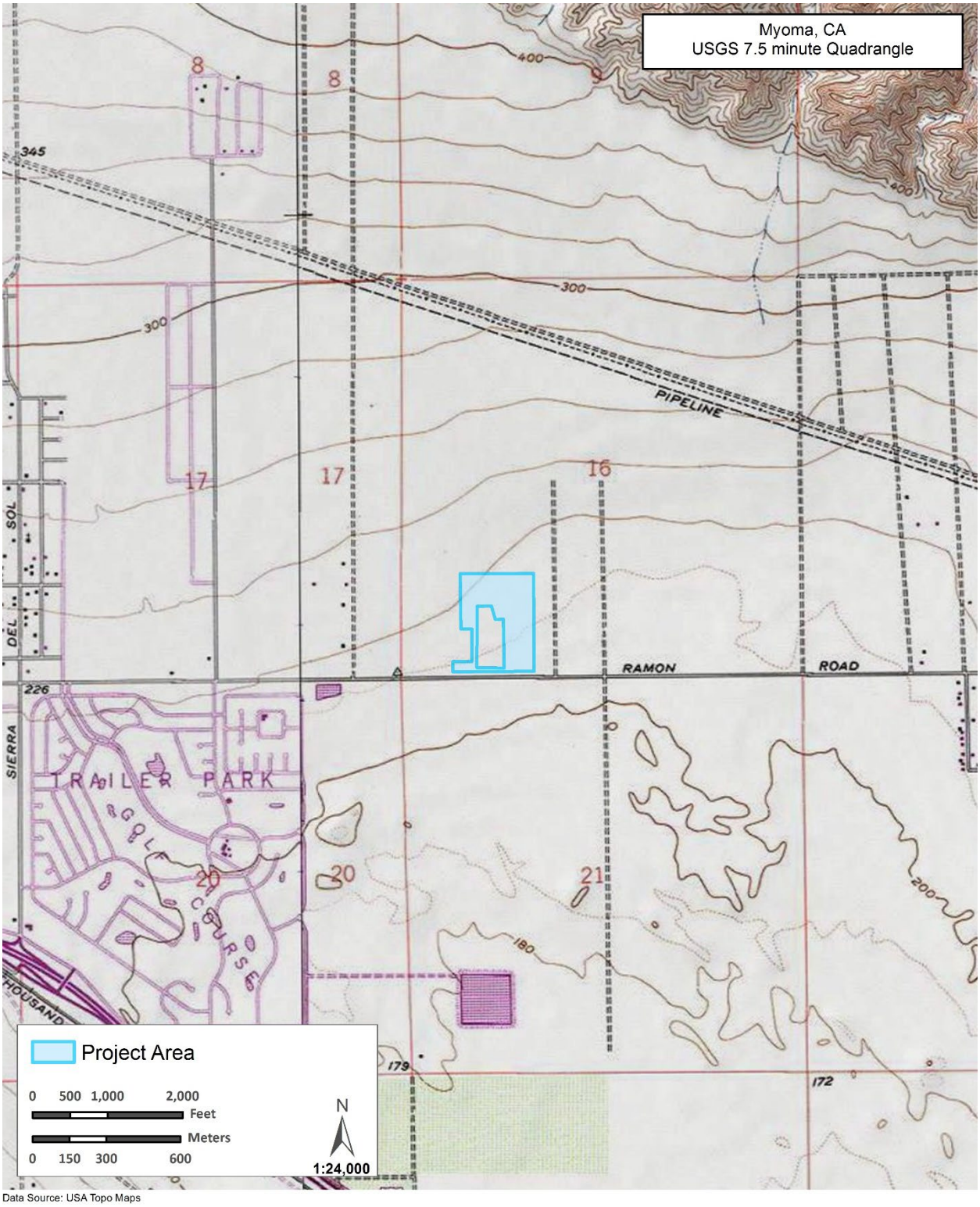
Because these soils in the project area are young and their geomorphic surfaces are unstable, the possibility exists for archaeological sites to be buried under them. In the northern Coachella Valley region, locations with high archaeological potential tend to occur near large drainages or springs, neither of which are present in the project area. Overall, therefore, the potential to encounter buried archaeological resources in the project area during construction is assessed as moderate.

HDR recommends the contractor specifications require the stoppage of all ground-disturbing activities within a 50-foot radius in the event of an unanticipated discovery of prehistoric or historic-period artifacts or features during construction until a professional archaeologist, in consultation with IID, can make an assessment of the resource's significance.

If human remains are inadvertently discovered during construction, all ground-disturbing activities in the vicinity of the discovery must cease immediately and a 50-foot-wide buffer will be established around the location of the discovery to secure it from further disturbance. California State law (Health and Safety Code Section 7050.5; Public Resources Code Sections 5097.94, 5097.98, and 5097.99) will be followed. These regulations specify that work will stop immediately in any areas where human remains or suspected human remains are encountered. The Riverside County Coroner's office must be contacted immediately. The coroner has two working days to examine the remains after being notified by IID. If the remains are determined to be Native American, the coroner has 24 hours to notify the NAHC, who will designate a most likely descendant. The NAHC will immediately notify the most likely descendant, who will have 48 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the remains and grave goods. If the most likely descendant does not make recommendations within 48 hours, the area of the property must be secured from further disturbance. If no recommendation is given, IID or its authorized representative will re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance. At all times, human remains should be treated with proper dignity and respect.

Data Source: World Street Map

Figure 1. Project vicinity



Data Source: USA Topo Maps

Figure 2. Project Area on the USGS 7.5-minute Myoma topographic quadrangle

Data Source: World Imagery; World Street Map

Figure 3. Project Area on aerial background

Photograph 1. Project Area west of the Ramon Substation, facing south.

Photograph 2. Project Area west of the Ramon Substation, facing north.

Photograph 3. Project Area east of the Ramon Substation, facing north.

Photograph 4. Project Area east of the Ramon Substation, facing west.

Photograph 5. Project Area north of the Ramon Substation, facing south.

Photograph 6. Modern debris in the Project Area north of the Ramon Substation, facing southwest.

Appendix A. Native American Heritage Commission Correspondence

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

July 10, 2023

Amber Parron
HDR Inc

Via Email to: Amber.Parron@hdrinc.com

Re: Ramon Substation Expansion Project, Riverside County

Dear Ms. Parron:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Riverside County
7/10/2023

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
Agua Caliente Band of Cahuilla Indians	F	Reid Milanovich, Chairperson	5401 Dinah Shore Drive Palm Springs, CA, 92264	(760) 699-6800	(760) 699-6919	laviles@aguacaliente.net	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Agua Caliente Band of Cahuilla Indians	F	Patricia Garcia-Plotkin, Director	5401 Dinah Shore Drive Palm Springs, CA, 92264	(760) 699-6907	(760) 699-6924	ACBCI-THPO@aguacaliente.net	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Augustine Band of Cahuilla Mission Indians	F	Amanda Vance, Chairperson	84-001 Avenue 54 Coachella, CA, 92236	(760) 398-4722	(760) 369-7161	hhaines@augustinetribe.com	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Cabazon Band of Mission Indians	F	Doug Welmas, Chairperson	84-245 Indio Springs Parkway Indio, CA, 92203	(760) 342-2593	(760) 347-7880	jstapp@cabazonindians-nsn.gov	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Cahuilla Band of Indians	F	BobbyRay Esaprza, Cultural Director	52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549		besparza@cahuilla-nsn.gov	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	6/28/2023
Cahuilla Band of Indians	F	Daniel Salgado, Chairperson	52701 CA Highway 371 Anza, CA, 92539	(951) 972-2568	(951) 763-2808	chairman@cahuilla-nsn.gov	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	6/28/2023
Cahuilla Band of Indians	F	Anthony Madrigal, Tribal Historic Preservation Officer	52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549		anthonymad2002@gmail.com	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	6/28/2023
Los Coyotes Band of Cahuilla and Cupeño Indians	F	Ray Chapparosa, Chairperson	P.O. Box 189 Warner Springs, CA, 92086-0189	(760) 782-0711	(760) 782-0712		Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Morongo Band of Mission Indians	F	Ann Brierty, THPO	12700 Pumarra Road Banning, CA, 92220	(951) 755-5259	(951) 572-6004	abrierty@morongo-nsn.gov	Cahuilla Serrano	Imperial,Los Angeles,Riverside,San Bernardino,San Diego	
Morongo Band of Mission Indians	F	Robert Martin, Chairperson	12700 Pumarra Road Banning, CA, 92220	(951) 755-5110	(951) 755-5177	abrierty@morongo-nsn.gov	Cahuilla Serrano	Imperial,Los Angeles,Riverside,San Bernardino,San Diego	
Quechan Tribe of the Fort Yuma Reservation	F	Jordan Joaquin, President, Quechan Tribal Council	P.O.Box 1899 Yuma, AZ, 85366	(760) 919-3600		executivesecretary@quechantribe.com	Quechan	Imperial,Kern,Los Angeles,Riverside,San Bernardino,San Diego	5/16/2023
Quechan Tribe of the Fort Yuma Reservation	F	Jill McCormick, Historic Preservation Officer	P.O. Box 1899 Yuma, AZ, 85366	(928) 261-0254		historicpreservation@quechantribe.com	Quechan	Imperial,Kern,Los Angeles,Riverside,San Bernardino,San Diego	5/16/2023
Quechan Tribe of the Fort Yuma Reservation	F	Manfred Scott, Acting Chairman - Kw'ts'an Cultural Committee	P.O. Box 1899 Yuma, AZ, 85366	(928) 210-8739		culturalcommittee@quechantribe.com	Quechan	Imperial,Kern,Los Angeles,Riverside,San Bernardino,San Diego	5/16/2023
Ramona Band of Cahuilla	F	John Gomez, Environmental Coordinator	P. O. Box 391670 Anza, CA, 92539	(951) 763-4105	(951) 763-4325	jgomez@ramona-nsn.gov	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	8/16/2016
Ramona Band of Cahuilla	F	Joseph Hamilton, Chairperson	P.O. Box 391670 Anza, CA, 92539	(951) 763-4105	(951) 763-4325	admin@ramona-nsn.gov	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Santa Rosa Band of Cahuilla Indians	F	Lovina Redner, Tribal Chair	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	lsaul@santarosa-nsn.gov	Cahuilla	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	
Soboba Band of Luiseno Indians	F	Isaiah Vivanco, Chairperson	P. O. Box 487 San Jacinto, CA, 92581	(951) 654-5544	(951) 654-4198	ivivanco@soboba-nsn.gov	Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Cultural Resource Department	P.O. BOX 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	
Torres-Martinez Desert Cahuilla Indians	F	Cultural Committee,	P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300	(760) 397-8146	Cultural-Committee@torresmartinez-nsn.gov	Cahuilla	Imperial,Riverside,San Bernardino,San Diego	
Twenty-Nine Palms Band of Mission Indians	F	Darrell Mike, Chairperson	46-200 Harrison Place Coachella, CA, 92236	(760) 863-2444	(760) 863-2449	29chairman@29palmsbomi-nsn.gov	Chemehuevi	Imperial,Inyo,Riverside,San Bernardino	
Twenty-Nine Palms Band of Mission Indians	F	Anthony Madrigal, Tribal Historic Preservation Officer	46-200 Harrison Place Coachella, CA, 92236	(760) 775-3259		amadrigal@29palmsbomi-nsn.gov	Chemehuevi	Imperial,Inyo,Riverside,San Bernardino	

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resour Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Ramon Substation Expansion Project, Riverside Cou

Record: PROJ-2023-003430
Report Type: List of Tribes
Counties: Riverside
NAHC Group: All

Appendix B. Record Search Results

ReportNum	Authors	CitYear	CitTitle	CitPublisher	ReportType
RI-08102	Richard Perry	2000	Cultural Resources Survey of Approximately 720 Acres in the Western Coachella Valley, Riverside County, California for the Whitewater River Basin California, Flood Control Feasibility Study	US Army Corps of Engineers Los Angeles District	Archaeological, Field study
RI-10461	William T. Eckhardt, Matthew M. DeCarlo, Doug Mengers, Sherri Andrews, Don Laylander, and Tony Quach	2015	Archaeological Investigations and Monitoring for the Construction of the Devers-Palo Verde No. 2 Transmission Line Project, Riverside County, California	ASM Affiliates	Archaeological, Field study, Monitoring

Resources

PrimaryString	TrinomialString	OtherIDs	ResType	Age	InfoBase	Attribs	RecordingEvents
P-33-009665	CA-RIV-006465H	Other - Jackrabbit Homestead (JH)	Building	Historic	Survey	HP02	2000 (Ed Collins, IID)

Geotechnical Report

Vega 6 Solar Project
Andre Road west of Garvey Road
Westmorland, California

Prepared for:

Apex Energy Solutions, LLC
750 W. Main Street
El Centro, CA 92243

LANDMARK
Geo-Engineers and Geologists

Prepared by:

Landmark Consultants, Inc.
780 N. 4th Street
El Centro, CA 92243
(760) 337-1100

November 2020

LANDMARK
Geo-Engineers and Geologists

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landmark@landmark-ca.com

77-948 Wildcat Drive
Palm Desert, CA 92211
(760) 360-0665
gchandra@landmark-ca.com

November 23, 2020

Ms. Jamie Nagel
Apex Energy Solution, LLC
750 W. Main Street
El Centro, CA 92243

Geotechnical Report
Proposed Vega 6 Solar Project
Andre Road west of Garvey Road
Westmorland, California
LCI Report No. LE20132

Dear Ms. Nagel:

This geotechnical report is provided for design and construction of the approximately 320-acre Vega 6 solar project located at the south side of Andre Road west of Garvey Road in a desert plain southwest of Westmorland, California. Our geotechnical exploration was conducted in response to your request for our services. The enclosed report describes our soil engineering site evaluation and presents our professional opinions regarding geotechnical conditions at the site to be considered in the design and construction of the project.

Based on the geotechnical conditions encountered at the points of exploration, the project site appears suitable for the proposed construction provided the professional opinions contained in this report are considered in the design and construction of this project.

We appreciate the opportunity to provide our findings and professional opinions regarding geotechnical conditions at the site. Please provide our office with a set of the foundation plans and civil plans for review to insure that the geotechnical site constraints have been included in the design documents. If you have any questions or comments regarding our findings, please call our office at (760) 370-3000.

Respectfully Submitted,
Landmark Consultants, Inc.

Jeffrey O. Lyon, PE
CEO/Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
JEFFREY O. LYON
No. 31921
EXPIRES 12-31-20
CIVIL
STATE OF CALIFORNIA

Steven K. Williams, PG, CEG
Senior Engineering Geologist

PROFESSIONAL GEOLOGIST
STEVEN K. WILLIAMS
CERTIFIED ENGINEERING GEOLOGIST
CEG 2261
STATE OF CALIFORNIA

Julian R. Avalos, PE
Senior Engineer

REGISTERED PROFESSIONAL ENGINEER
JULIAN R. AVALOS
No. 73339
EXPIRES 12-31-20
CIVIL
STATE OF CALIFORNIA

Peter E. LaBrucherie, PE
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
PETER E. LABRUCHERIE
No. 84812
CIVIL
STATE OF CALIFORNIA

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EXECUTIVE SUMMARY

This executive summary presents ***selected*** elements of our findings and professional opinions. This summary ***may not*** present all details needed for the proper application of our findings and professional opinions. Our findings, professional opinions, and application options are ***best related through reading the full report***, and are best evaluated with the active participation of the engineer of record who developed them. The findings of this study are summarized below:

Semi-colon

- The site soils are divided into two portions; the approximately northern ⅓ (B-1, B-4 and B-5) that consist of surficial hard silty clay/clay (CL-CH) soils to depths from 8 to 23 feet below surface, followed by interbedded layers of dense to very dense clayey/sandy silts (ML), sands/silty sands (SP-SM) and very stiff to hard clay soils (CL-CH). The southern ⅔ (B-2, B-3, B-6, B-7 and B-8) generally consists of surficial medium dense to very dense sand/silty sand (SP-SM) soils with interbedded layers of dense to very dense clayey/sandy silts (ML) and very stiff to hard clay soils (CL-CH).

- Since the O&M building, and electrical substation are planned to be located at the northwest corner of the site, where the surficial clay soils are encountered, the foundation design within these areas should mitigate expansive soil conditions by either the removal and replacement of the upper 3.0 feet of clay soils with non-expansive soil or design of foundations to resist expansive forces, such as flat plate structural mats, or grade-beam stiffened floor slabs. A combination of the methods described above may also be used.

- The granular soil encountered at the points of exploration at the project site is not considered to be susceptible to liquefaction. There is a very low risk of ground rupture and/or sand boil formation should liquefaction occur.

- Low sulfate and chloride levels were encountered in the soil samples tested for this study. However, in consideration of general corrosive environment in the vicinity, it is recommended that concrete should use Type V cement with a maximum water-cement ratio of 0.50 and a minimum compressive strength of 4,000 psi.

- All reinforcing bars, anchor bolts and hold down bolts shall have a minimum concrete cover of 3.0 inches unless epoxy coated (ASTM D3963/A934).

- All-weather accessways should consist of a minimum of 6 inches of Caltrans Class 2 aggregate base material placed over 12 inches of compacted native clay (90%) or 6-inches of polymer modified soil compacted to 95% if sands. The native clays become “slick” when wetted and will rut under prolonged wetting.

- Pavement structural sections should be designed with an R-value of 5 for exposed clay soil and R-value 50 for sand soils.

Section 1
INTRODUCTION

1.1 Project Description

This report presents the findings of our geotechnical exploration and soil testing for the proposed Vega 6 solar project located at the south side of Andre Road west of Garvey Road within a desert plain area southwest of Westmorland, California (See Vicinity Map, Plate A-1). The proposed project will consist of approximately 320 acres of PV solar panels mounted on steel racks supported by short piers, shallow driven steel posts or shallow spread footings. The proposed solar energy facility will have an operations maintenance/storage (O&M) building, battery storage facility, and an electrical substation with step-up transformers and dead-end A-frames for overhead power line connections. Also, the proposed solar energy facility will have ground mounted or pier supported inverter stations. The photovoltaic modules are planned to be ground mounted on single-axis tracker frames or fixed-tilt frames. A grading plan for the proposed power generation facility was not made available to us at the time that this report was prepared.

The electrical substation, O&M building, and battery storage area are planned to be located on the northwest corner of the project site, approximately where exploratory Boring B-1 is located (see Appendix A, Plate A-2). Footing loads at exterior bearing walls are estimated at 1 to 5 kips per lineal foot. Column loads are estimated to range from 5 to 30 kips. The O&M building and battery storage facility will consist of slab-on-grade foundation with steel frame and/or wood-frame construction. Site development will include site grading for the PV panel areas, building pad preparation for the O&M building, battery storage facility and electrical substation, underground utility installation, site paving and all-weather road surfacing.

1.2 Purpose and Scope of Work

The purpose of this geotechnical study was to investigate the subsurface soil at selected locations within the site for evaluation of physical/engineering properties and liquefaction potential during seismic events. Professional opinions were developed from field and laboratory test data and are provided in this report regarding geotechnical conditions at this site and the effect on design and construction.

The scope of our services consisted of the following:

- Field exploration and in-situ testing of the site soils at selected locations and depths.
- Laboratory testing for physical and/or chemical properties of selected samples.
- Review of the available literature and publications pertaining to local geology, faulting, and seismicity.
- Engineering analysis and evaluation of the data collected.
- Preparation of this report presenting our findings and professional opinions regarding the geotechnical aspects of project design and construction.

This report addresses the following geotechnical parameters:

- Subsurface soil and groundwater conditions
- Site geology, regional faulting and seismicity, near source factors, and site seismic accelerations
- Liquefaction potential and its mitigation
- Expansive soil and methods of mitigation
- Aggressive soil conditions to metals and concrete

Professional opinions with regard to the above parameters are provided for the following:

- Site grading and earthwork
- Building pad and foundation subgrade preparation
- Allowable soil bearing pressures and expected settlements
- Concrete slabs-on-grade
- Typical capacities for drilled piers and driven steel piles
- Excavation conditions and buried utility installations
- Mitigation of the potential effects of salt concentrations in native soil to concrete mixes and steel reinforcement
- Seismic design parameters

Our scope of work for this report did not include an evaluation of the site for the presence of environmentally hazardous materials or conditions, storm water infiltration, groundwater mounding, or landscape suitability of the soil.

1.3 Authorization

Authorization to proceed with our work was provided by signed agreement with Mr. Ziad Alaynan, President of Apex Energy Solution, LLC on August 26, 2020. We conducted our work according to our written proposal dated August 26, 2020.

Section 2
METHODS OF INVESTIGATION

2.1 Field Exploration

Subsurface exploration was performed on September 22 and 23, 2020 using 2R Drilling of Ontario, California to advance eight (8) borings to depths of 21.5 to 51.5 feet below existing ground surface. The borings were advanced with a truck-mounted, CME 75 drill rig using 8-inch diameter, hollow-stem, continuous-flight augers. The approximate boring locations were established in the field and plotted on the site map by sighting to discernible site features. The boring locations are shown on the Site and Exploration Plan (Plate A-2).

A professional engineer observed the drilling operations and maintained logs of the soil encountered with sampling depths. Soils were classified during drilling according to the Unified Soil Classification System using the visual-manual procedure in accordance with ASTM D2488. Relatively undisturbed and bulk samples of the subsurface materials were obtained at selected intervals. The relatively undisturbed soil samples were retrieved using a 2-inch outside diameter (OD) split-spoon sampler or a 3-inch OD Modified California Split-Barrel (ring) sampler lined with 6-inch stainless-steel sleeves. In addition, Standard Penetration Tests (SPT) were performed in accordance with ASTM D1586 and ASTM D6066. The samples were obtained by driving the samplers ahead of the auger tip at selected depths using a 140-pound CME automatic hammer with a 30-inch drop. The number of blows required to drive the samplers the last 12 inches of an 18-inch drive depth into the soil is recorded on the boring logs as “blows per foot”. Blow counts (N values) reported on the boring logs represent the field blow counts. No corrections have been applied to the blow counts shown on the boring logs for effects of overburden pressure, automatic hammer drive energy, drill rod lengths, liners, and sampler diameter. Pocket penetrometer readings were also obtained to evaluate the stiffness of cohesive soils retrieved from sampler barrels.

After logging and sampling the soil, the exploratory borings were backfilled with the excavated material. The backfill was loosely placed and was not compacted to the requirements specified for engineered fill.

The logs were edited in final form after a review of retrieved samples and the field and laboratory data. Logs of the subsurface boring logs are presented on Plates B-1 through B-8 in Appendix B. A key to the boring log symbols is presented on Plate B-9. The stratification lines shown on the subsurface logs represent the approximate boundaries between the various strata. However, the transition from one stratum to another may be gradual over some range of depth.

2.2 Field Electrical Resistivity Testing

Wenner 4-pin field resistivity testing was conducted by RF Yeager Engineering of Lakeside, California under sub-contract to Landmark at three (3) locations within the substation area and proposed solar array site in accordance with ASTM G57 standards. Tests were conducted with both North-South and East-West pin orientations. The tests were conducted at pin spacings of 2.5, 5, 10, 15 and 20 feet. Additionally, near surface soil samples (upper 5 feet) ware obtained for laboratory soil corrosivity testing at the select locations. The results of the electrical resistivity and soil corrosivity testing are presented in Appendix E.

2.3 Thermal Resistivity Testing

Laboratory soil thermal resistivity testing was conducted byRF Yeager Engineering at two (2) locations within the substation area and proposed solar array site. The tests were conducted at the locations shown on Figure 1 in Appendix E. The testing was conducted in accordance with ASTM D5334. Near surface soil samples were obtained from borings B-1 and B-6 as shown on Figure 1 in Appendix E.

The thermal resistivity testing consisted of determining a thermal dry-out curve at each test location. The results of the thermal resistivity testing are presented in Appendix E.

2.4 Laboratory Testing

Laboratory tests were conducted on selected bulk (auger cuttings) and relatively undisturbed soil samples obtained from the soil borings to aid in classification and evaluation of selected engineering properties of the site soils. The tests were conducted in general conformance to the procedures of the American Society for Testing and Materials (ASTM) or other standardized methods as referenced below.

The laboratory testing program consisted of the following tests:

- Plasticity Index (ASTM D4318)
- Particle Size Analyses (ASTM D422)
- Unit Dry Densities (ASTM D2937)
- Moisture Contents (ASTM D2216)
- Direct Shear (ASTM D3080)
- Unconfined Compression (ASTM D2166)
- Chemical Analyses (soluble sulfates & chlorides, pH, and resistivity) (Caltrans Method)

The laboratory test results are presented on the subsurface logs (Appendix B) and in Appendix C and E.

Engineering parameters of soil strength, compressibility and relative density utilized for developing design criteria provided within this report were obtained from the field and laboratory testing program.

Section 3
DISCUSSION

3.1 Site Conditions

The project site is located at the south side of Andre Road within a desert plain area west of Garvey Road approximately 4 miles southwest of Westmorland, California. The project site is rectangular in plan view and slopes gently (about 1.5 to 2%) to the north-northeast. The site consists of approximately 320 acres of vacant desert land with an orange tree orchard located northeast of the property. A portion of the project property (around the mid-southeast portion of the property) has been used as an "borrow pit" source that has resulted in a depression of about 10 to 20 feet below the surrounding ground.

The project site is crossed (southwest to northeast) by a few dry desert washes. Adjacent properties are flat-lying and are approximately at the same elevation with this site, consisting of desert land to the south, west and east. Active agricultural fields are located adjacent to the north side of the property and an orange tree orchard is located to the northeast.

The project site ranges in elevation from approximately 125 to 25 feet below mean sea level (MSL) (El. 875 to 975 local datum) in the Imperial Valley region of the California low desert. The surrounding properties lie on terrain, which is planar, part of a large agricultural valley, which was previously an ancient lake bed covered with fresh water to an elevation of 43± feet above MSL. Annual rainfall in this arid region is less than 3 inches per year with four months of average summertime temperatures above 100 ^{o}F. Winter temperatures are mild, seldom reaching freezing.

3.2 Geologic Setting

The project site is located in the Salton Trough region of the Colorado Desert physiographic province of southeastern California. The Salton Trough is a topographic and geologic structural depression resulting extending from the San Gorgonio Pass to the Gulf of California (Norris & Webb, 1990). The Salton Trough is bounded on the northeast by the San Andreas Fault and Chocolate Mountains and the southwest by the Peninsular Range and faults of the San Jacinto Fault Zone.

The Salton Trough represents the northward extension of the Gulf of California, containing both marine and non-marine sediments deposited since the Miocene Epoch (Morton, 1977). Tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of seismicity. Figure 1 shows the location of the site in relation to regional faults and physiographic features.

The Imperial Valley is directly underlain by lacustrine deposits, which consist of interbedded lenticular and tabular silt, sand, and clay. The Late Pleistocene to Holocene (present) lake deposits are probably less than 100 feet thick and derived from periodic flooding of the Colorado River which intermittently formed a fresh water lake (Lake Cahuilla). Older deposits consist of Miocene to Pleistocene non-marine and marine sediments deposited during intrusions of the Gulf of California. Basement rock consisting of Mesozoic granite and Paleozoic metamorphic rocks are estimated to exist at depths between 15,000 - 20,000 feet.

3.3 Subsurface Soil

The site is divided into two portions; the northern ⅓ (B-1, B-4 and B-5) consisting of surficial hard silty clay/clay (CL-CH) soils to depths from 8 to 23 feet below surface, followed by interbedded layers of dense to very dense clayey/sandy silts (ML), sands/silty sands (SP-SM) and very stiff to hard clay soils (CL-CH). The southern ⅔ (B-2, B-3, B-6, B-7 and B-8) generally consists of surficial medium dense to very dense sand/silty sand (SP-SM) soils with interbedded layers of dense to very dense clayey/sandy silts (ML) and very stiff to hard clay soils (CL-CH).

The subsurface logs (Plates B-1 through B-8) depict the stratigraphic relationships of the subsurface soil encountered at the points of exploration. Variations in subsurface stratigraphy may occur between the points of exploration. The stratification lines shown on the subsurface log represent the approximate boundaries between the various strata. However, the transition from one stratum to another may be gradual over some range of depth.

The subsurface soils at the electrical substation and O&M building area are predominately hard fat clay soils (B-1). The native surface clays likely exhibit high swell potential (Expansion Index, EI = 91 to 130) when correlated to Plasticity Index tests (ASTM D4318) performed on the native soils.

The clay is expansive when wetted and can shrink with moisture loss (drying). Large shrinkage cracks and blocky fracturing of the clays occur with long periods of drying. The dried clays become very hard. Development of building foundations, concrete flatwork, and asphaltic concrete pavements should include provisions for mitigating potential swelling forces and reduction in soil strength, which can occur from saturation of the soil.

Causes for soil saturation include standing storm water, broken utility lines, or capillary rise in moisture upon sealing the ground surface to evaporation. Moisture losses can occur with lack of landscape watering, close proximity of structures to downslopes and root system moisture extraction from deep rooted shrubs and trees placed near the foundations. Typical measures used for light industrial projects to remediate expansive soil include:

- Replacement of expansive silts/clays (3.0 feet) with non-expansive sands or silts.
- Moisture conditioning subgrade soils to a minimum of 5% above optimum moisture (ASTM D1557) within the drying zone of surface soils.
- Design of foundations that are resistant to shrink/swell forces of silt/clay soil.
- A combination of the methods described above

3.4 Groundwater

Groundwater was encountered in Boring B-1 at about 48 feet at the time of exploration.

3.5 Faulting

The project site is located in the seismically active Imperial Valley of southern California with numerous mapped faults traversing the region including the San Andreas, San Jacinto, and Elsinore Fault Zones in southern California. The Imperial fault represents a transition from the more continuous San Andreas fault to a more nearly echelon pattern characteristic of the faults under the Gulf of California (USGS, 1990). We have performed a computer-aided search of known faults or seismic zones that lie within a 33 mile (53 kilometer) radius of the project site (Table 1).

A fault map illustrating known active faults relative to the site is presented on Figure 1, *Regional Fault Map*. Figure 2 shows the project site in relation to local faults. The criterion for fault classification adopted by the California Geological Survey defines Earthquake Fault Zones along Holocene-active or pre-Holocene faults (CGS, 2019b). Earthquake Fault Zones are regulatory zones that address the hazard of surface fault rupture. A Holocene-active fault is one that has ruptured during Holocene time (within the last 11,700 years). A pre-Holocene fault is a fault that has not ruptured in the last 11,700 years. Pre-Holocene faults may still be capable of surface rupture in the future, but are not regulated by the A-P act.

Review of the current Earthquake Fault Zone maps (CGS, 2019a) indicates that the nearest zoned fault is the Superstition Hills fault located approximately 4.5 miles southwest of the project site.

3.6 General Ground Motion Analysis

The project site is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. Ground motions are dependent primarily on the earthquake magnitude and distance to the seismogenic (rupture) zone. Acceleration magnitudes also are dependent upon attenuation by rock and soil deposits, direction of rupture and type of fault; therefore, ground motions may vary considerably in the same general area.

2019 CBC General Ground Motion Parameters: The California Building Code (CBC) requires that a site-specific ground motion hazard analysis be performed in accordance with ASCE 7-16 Section 11.4.8 for structures on Site Class D and E sites with S_1 greater than or equal to 0.2 and Site Class E sites with S_s greater than or equal to 1.0. **This project site has been classified as Site Class D and has a S_1 value of 0.6, which would require a site-specific ground motion hazard analysis**. However, ASCE 7-16 Section 11.4.8 provides three exceptions which permit the use of conservative values of design parameters for certain conditions for Site Class D and E sites in lieu of a site specific hazard analysis. The exceptions are:

- Exception 1: Structures on Site Class E sites with S_s greater than or equal to 1.0, provided the site coefficient F_a is taken as equal to that of Site Class C.
- Exception 2: Structures on Site Class D sites with S_1 greater than or equal to 0.2, provided the value of the seismic response coefficient C_s is determined by Equations 12.8-2 for values of $T \leq 1.5T_S$ and taken as equal to 1.5 times the value computed in accordance with either Equation 12.8-3 for $T_L \geq T > 1.5T_S$ or Equation 12.8-4 for $T > T_L$.
- Exception 3: Structures on Site Class E sites with S_1 greater than or equal to 0.2, provided that T is less than or equal to T_S and the equivalent static force procedure is used for design.

The project structural engineer should confirm that an exception applies to the project. If none of the exceptions apply, our office should be consulted to perform a site-specific ground motion hazard analysis.

The 2019 CBC general ground motion parameters are based on the Risk-Targeted Maximum Considered Earthquake (MCE_R). The Structural Engineers Association of California (SEAOC) and Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps Web Application (SEAOC, 2020) was used to obtain the site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters.

Design spectral response acceleration parameters are defined as the earthquake ground motions that are two-thirds (2/3) of the corresponding MCE_R ground motions. The Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration adjusted for soil site class effects (PGA_M) value to be used for liquefaction and seismic settlement analysis in accordance with 2019 CBC Section 1803.5.12 ($PGA_M = F_{PGA}*PGA$) is estimated at 0.61g for the project site. **Design earthquake ground motion parameters are provided in Table 2.**

3.7 Seismic and Other Hazards

- **Groundshaking.** The primary seismic hazard at the project site is the potential for strong groundshaking during earthquakes along the San Andreas, Elmore Ranch, and Imperial faults.
- **Surface Rupture.** The California Geological Survey (2016) has established Earthquake Fault Zones in accordance with the 1972 Alquist-Priolo Earthquake Fault Zone Act. The Earthquake Fault Zones consists of boundary zones surrounding well defined, active faults or fault segments. The project site does not lie within an A-P Earthquake Fault Zone; therefore, surface fault rupture is considered to be low at the project site.
- **Liquefaction and lateral spreading.** Due to the high density of the subsurface sandy soils and since groundwater is deeper than 40 feet, liquefaction is unlikely to be a potential hazard at the site.

Other Potential Geologic Hazards.

- **Landsliding.** The hazard of landsliding is unlikely due to the regional planar topography. No ancient landslides are shown on geologic maps, aerial photographs and topographic maps of the region and no indications of landslides were observed during our site investigation.
- **Volcanic hazards.** The site is not located proximal to any known volcanically active area and the risk of volcanic hazards is considered low. Obsidian Butte and Red Hill, located at the south end of the Salton Sea approximately 11.5 miles southeast of the project site, are small remnants of volcanic domes. The domes erupted about 1,800 to 2,500 years ago (Wright et al, 2015). The subsurface brine fluids around the domes have a high heat flow and are currently being utilized to produce geothermal energy.

- **Tsunamis and seiches.** Tsunamis are giant ocean waves created by strong underwater seismic events, asteroid impact, or large landslides. Seiches are large waves generated in enclosed bodies of water in response to strong ground shaking. The site is not located near any large bodies of water, so the threat of tsunami, seiches, or other seismically-induced flooding is considered unlikely.
- **Flooding.** Based on our review of FEMA (2008) FIRM Panel 06025C0425C which encompasses the project site, the project site is located in Flood Zone X, an area determined to be outside the 0.2% annual chance (500-year) floodplain.
- **Collapsible soils.** Collapsible soil generally consists of dry, loose, low-density material that have the potential collapse and compact (decrease in volume) when subjected to the addition of water or excessive loading. Soils found to be most susceptible to collapse include loess (fine grained wind-blown soils), young alluvium fan deposits in semi-arid to arid climates, debris flow deposits and residual soil deposits. Due to the cohesive nature of the subsurface soils and the natural density (dense to very dense) of the granular soils, the potential for hydro-collapse of the subsurface soils at this project site is considered very low.
- **Expansive soils.** Heavy clays which are highly expansive exist in the northern ⅓ of the site. The expansive soil conditions are discussed in more detail in Section 3.3.

3.8 Liquefaction

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations. Four conditions are generally required for liquefaction to occur:

(1) the soil must be saturated (relatively shallow groundwater);
(2) the soil must be loosely packed (low to medium relative density);
(3) the soil must be relatively cohesionless (not clayey); and
(4) groundshaking of sufficient intensity must occur to function as a trigger mechanism.

The granular soil encountered at the points of exploration at the project site is not considered to be susceptible to liquefaction due to the high density of the sands and groundwater being encountered deeper than 40 feet.

Mitigation: Mitigation for liquefaction induced settlement is not required at this project site.

Section 4
DESIGN CRITERIA

4.1 Site Preparation

Clearing and Grubbing: All debris or natural vegetation on the site at the time of construction should be removed from the construction area. Root balls should be completely excavated. Organic strippings should be stockpiled and not used as engineered fill.

Grading in Cohesive (Clays) Areas: Prior to placing any fills, the surface 12 inches of native clay/silt soils shall be uniformly moisture conditioned to a minimum of 2% over optimum, and recompacted to at least 90% of ASTM D1557 maximum density. Onsite native clays/silts placed as engineer fill should be uniformly moisture conditioned by discing and wetting or drying to optimum plus 2 to 8% and compacted to a minimum of 90% relative compaction. Clods shall be reduced by discing to a maximum dimension of 1.0 inch prior to being placed as fill.

Grading Non-Cohesive (Sandy) Areas: In areas designated for fill in sandy soil areas, the surface 12 inches of native soil shall be scarified uniformly moisture conditioned to within 2% of optimum and compacted to at least 90% of ASTM D1557 maximum density. Onsite native soils used for fill should be placed in lifts no greater than 8 inches in loose thickness and compacted to a minimum of 90% of ASTM D1557 maximum dry density at optimum moisture ±2%.

Building Pad Preparation for Foundations Placed on Native Clay Soils: Since the O&M building, and electrical substation are planned to be located at the northwest corner of the property, where the surficial clay soils are encountered, the soil within these foundation areas should be removed to 36 inches below the building pad elevation or existing natural surface grade (whichever is lower) extending five (5) feet beyond all exterior wall/column lines (including concreted areas adjacent to the building). Exposed subgrade should be scarified to a depth of 8 inches, uniformly moisture conditioned to 5 to 10% above optimum moisture content and recompacted to 85 to 90% of the maximum density determined in accordance with ASTM D1557 methods.

The native soil is suitable for use as general fill provided it is free from concentrations of organic matter or other deleterious material. However, special foundation designs are required when native clays are used. The fill soil should be uniformly moisture conditioned by discing and watering to the limits specified above, placed in maximum 8-inch lifts (loose), and compacted to the limits specified above. Clay soil should not be overcompacted because highly compacted soil will result in increased swelling. Imported fill soil (for foundations designed for expansive soil conditions) should have a Plasticity Index less than 25 and sulfates (SO_4) less than 1,000 ppm.

Building Pad Preparation for Foundations Placed on Imported Non-expansive Soil: If foundation designs are to be utilized which do not include provisions for expansive soil, an engineered building support pad consisting of 3.0 feet of imported non-expansive soil should be used. The existing soils within the building pad/foundation areas should be overexcavated to a minimum depth of 36 inches below the existing natural surface grade and should extend at least five (5) feet beyond all exterior wall/column lines (including concreted areas adjacent to the building). The imported non-expansive fill material shall be placed in maximum 8-inch lifts (loose), compacted to a minimum of 90% of ASTM D1557 maximum density at 2% below to 4% above optimum moisture, should be placed below the bottom of the slab. The imported non-expansive soils should be placed over a minimum of 12 inches of uniformly moisture conditioned native soil (5-10% above optimum moisture content) which has been compacted to 85-90% of ASTM D1557 maximum dry density.

The imported soils should meet the USCS classifications of ML (non-plastic), SM, SP-SM, or SW-SM with a maximum rock size of 3 inches and no less than 5% passing the No. 200 sieve. The geotechnical engineer should approve imported fill soil sources before hauling material to the site. Imported fill should be placed in lifts no greater than 8 inches in loose thickness and compacted to a minimum of 90% of ASTM D1557 maximum dry density at optimum moisture ±2%.

Sidewalk and Concrete Hardscape Areas: In areas other than the building pad which are to receive sidewalks or area concrete slabs, the ground surface should be presaturated to a minimum depth of 24 inches and then scarified to 8 inches, moisture conditioned to a minimum of 2% over optimum, and recompacted to 85-90% of ASTM D1557 maximum density just prior to concrete placement.

Subgrade Preparation for Mat Foundations in Clay Soils: The native clay soil within planned mat foundation area should be removed to 12 inches below the bottom of the mat foundations to 2 feet beyond the edges of the foundation. Exposed subgrade should be scarified to a depth of 12 inches, uniformly moisture conditioned to a minimum of 2% above optimum moisture content, and recompacted to a minimum of 90% of the maximum density determined in accordance with ASTM D1557 methods.

A 12 inch layer of Caltrans Class 2 aggregate base, compacted in maximum 6 inch lifts to at least 95% of ASTM D1557 maximum density at 2% below to 4% above optimum moisture, shall be placed over the compacted subgrade prior to placing mat foundations. Design soil pressure = 2,000 psf.

Subgrade Preparation for Mat Foundations in Non-Cohesive (Sandy) Areas: The native sandy soil within mat foundation areas should be removed to 12 inches below the bottom of the mat foundations to 2 feet beyond the edges of the foundation. Exposed subgrade should be scarified to a depth of 12 inches, uniformly moisture conditioned to ±2% of optimum moisture content, and recompacted to a minimum of 95% of the maximum density determined in accordance with ASTM D1557 methods.

A minimum of 6-inches of Caltrans Class 2 aggregate base compacted to at least 95% of ASTM D1557 maximum density, shall be placed over the compacted subgrade prior to placing mat foundations.

Utility Trench Backfill: On-site soil free of debris, vegetation, and other deleterious matter may be suitable for use as utility trench backfill above pipezone, but may be difficult to uniformly maintain at specified moistures and compact to the specified densities. Native backfill should only be placed and compacted after encapsulating buried pipes or direct burial cables with suitable granular bedding materials and pipe envelope material.

Backfill soil of utility trenches within paved areas should be placed in layers not more than 6 inches in thickness and mechanically compacted to a minimum of 90% of the ASTM D1557 maximum dry density.

Observation and Density Testing: All site preparation and fill placement should be observed and tested by a representative of a qualified geotechnical engineering firm. The geotechnical firm that provides observation and testing during construction shall assume the responsibility of "*geotechnical engineer of record*" and, as such, shall perform additional tests and investigation as necessary to satisfy themselves as to the site conditions and the recommendations for site development.

4.2 Foundations and Settlements

Shallow spread footings in clay soils are suitable to support the O&M Building provided they are structurally tied with grade-beams to continuous perimeter wall footings to resist differential movement associated with expansive soils. The foundations may be designed using an allowable soil bearing pressure of 1,500 psf for compacted native clay or silt soil and 2,000 psf when foundations are supported on imported sands (extending a minimum of 1.0 feet below footings). The allowable soil pressure may be increased by 20% for each foot of embedment depth of the footings in excess of 18 inches and by one-third for short term loads induced by winds or seismic events. The maximum allowable soil pressure at increased embedment depths shall not exceed 3,000 psf (clays).

As an alternative to shallow spread foundations, flat plate structural mats or grade-beam reinforced foundations may be used to mitigate expansive soil heave related movement.

Flat Plate Structural Mats (Clay Soils): Structural concrete mat foundations may be designed using an allowable soil bearing pressure of 2,000 psf when the foundation is supported on 12 inches of compacted Class 2 aggregate base. The allowable soil pressure may be increased by one-third for short term loads induced by winds or seismic events. Design criteria for mat foundations are provided below. The structural mat shall have a double mat of steel and a minimum thickness of 12 inches, except inverters slabs may be 8 inches thick.

Structural mats may be designed for a modulus of subgrade reaction (Ks) of 150 pci when placed on 12 inches of compacted Class 2 aggregate base (clay soils). An allowable friction coefficient of 0.35 may also be used at the base of the mat to resist lateral sliding.

Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the base of footings. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 250 pcf to resist lateral loadings. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral sliding.

Grade-beam Reinforced Foundations in Cohesive (Clay) Soils: Specific soil data for structures with grade-beam reinforced foundations placed on the native clays are presented below in accordance with the design method given in CBC Chapter 18 Section 1808.6.2 (*WRI/CRSI Design of Slab-on-Ground Foundations*):

Weighted Plasticity Index (PI) = 37
Slope Coefficient (C_s) = 1.0
Strength Coefficient (C_o) = 0.8
Climatic Rating (C_w) = 15
Effective PI = 30
Maximum Grade-beam Spacing = 18 feet

All exterior footings in clay soils should be embedded a minimum of 24 inches (18 inches for silt and sand sites) below the building support pad or lowest adjacent final grade, whichever is deeper. Minimum embedment depth of interior footings should be at least 12 inches into the building support pad to account for variable environmental conditions.

Interior and exterior embedment depths listed herein are minimum depths and greater depths/widths may be required by the structural engineer/designer and should be sufficient to limit differential movement to L/480 for center lift and L/720 for edge lift to comply with the current standards. Continuous wall footings should have a minimum width of 12 inches. Spread footings should have a minimum dimension of 24 inches and should be structurally tied to perimeter footings or grade beams. Concrete reinforcement and sizing for all footings should be provided by the structural engineer.

Flat Plate Structural Mats in Non-Cohesive (Sandy) Areas: Structural concrete mat foundations may be designed using an allowable soil bearing pressure of 2,000 psf when the foundation is supported on 6 inches of compacted Class 2 aggregate base. The allowable soil pressure may be increased by one-third for short term loads induced by winds or seismic events. Design criteria for mat foundations are provided below.

Structural mats may be designed for a modulus of subgrade reaction (Ks) of 175 pci when placed on compacted native soil and 200 pci when placed on compacted 6 inches Class 2 aggregate base. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral loading. Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 300 pcf to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral loading.

Non-expansive Soil Engineered Building Pad: Shallow spread or continuous conventional footings are suitable to support the building provided they are structurally tied with grade-beams to continuous perimeter wall footings to resist differential movement associated with potential soil liquefaction at depth. Exterior footings shall be founded a minimum of 18 inches below the surface of the building support pad when supported on a non-expansive granular fill as described in Section 4.1. Interior footings shall have a minimum embedment depth of 12 inches.

The foundations may be designed using an allowable soil bearing pressure of 2,000 psf when foundations are supported on imported sands (extending a minimum of 1.0 feet below footings). The allowable soil pressure may be increased by 20% for each foot of embedment depth of the footings in excess of 18 inches and by one-third for short term loads induced by winds or seismic events. The maximum allowable soil pressure at increased embedment depths shall not exceed 3,000 psf.

Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 300 pcf to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.35 may also be used at the base of the footings to resist lateral loading.

Settlements: Foundation movement under the estimated static (non-seismic) loadings and static site conditions are estimated to not exceed 1 inch with differential movement of about two-thirds of total movement for the loading assumptions stated above when the subgrade preparation guidelines given above are followed. Foundation movements under the seismic loading due to liquefaction settlements are provided in Section 3.8 of this report.

4.3 Drilled Piers and Driven Steel Piles

Drilled Piers: Individual short piers should be adequate to support solar panel frames, inverter frames, and security camera poles. Embedment depth for short piers to resist lateral loads where no lateral constraint at the ground surface is provided may be designed using the following formula per 2019 CBC Section 1807.3.2.1:

$$d = A/2\ [1 + (1+4.36h/A)^{1/2}]$$

where:

$A = 2.34P/S_1b$

b = Pier diameter in feet

d = Embedment depth in feet (but not over 12 feet for purpose of computing lateral pressure)

h = Distance in feet from ground surface to point of application of "P"

P = Applied lateral force in pounds

S_1 = Allowable lateral soil bearing pressure (basic value of 150 psf/ft. Isolated piers such solar panel short piers that are not adversely affected by a 0.5 inch motion at the ground surface due to short-term lateral loads are permitted to be designed using lateral soil bearing pressures equal to two times the provided value (300 psf/ft). Reduced lateral soil bearing pressures should be used for the security camera pole foundation designs.

The short pier foundations may be designed using an allowable soil bearing pressure of 2,000 psf and a cohesion of 150 psf for the native clay soil. The cohesion value shall be multiplied by the contact area, as limited by Section 1806.3 of the 2019 CBC. Uplift capacity may be determined by using ⅔ of the cohesion value.

***Installation*:** Excavation for piers should be inspected by the geotechnical consultant. A tremie pipe should be used to pour concrete from the bottom up and to ensure less than five feet of free fall. Groundwater is expected to be encountered at around 40 feet below ground surface. The structural steel and concrete should be placed immediately after drilling. Prior to placing any structural steel or concrete, loose soil or slough material should be removed from the bottom of the drilled pier excavation.

Driven Steel Piles: The use of driven steel posts requires special provisions for corrosion protection due to the corrosive nature of the subsurface soils. Steel posts for PV panel mounting frames have been preliminary sized as W8x10 (frame and axle supports).

Vertical Capacity: Vertical capacity for the preliminary W8x10 steel post section is presented in Tables 3 (Clay Areas) and 4 (Sand Areas). End bearing and skin friction parameters have been used to determine the allowable shaft capacity. The allowable capacities include a factor of safety of 2.5. The allowable vertical compression capacities may be increased by 33 percent to accommodate temporary loads from wind or seismic forces. The allowable vertical shaft capacities are based on the supporting capacity of the soil.

Lateral Capacity: The allowable lateral capacity for a W8x10 steel post section at 5, 6 and 8 feet embedment depths are given in Tables 3 (Clay Areas) and 4 (Sand Areas). The allowable lateral capacity is based on a deflection of one-half inch at the top of the steel post section. If greater deflection can be tolerated, lateral load capacity can be increased directly in proportion to a maximum of one inch deflection. Axial and lateral loads were applied at 4 feet above ground surface.

Table 3: Allowable Capacities of Driven Steel Posts (Clay Areas)

Pile Type:	Driven W8x10		
Pile Length (ft):	**9 ft**	**10 ft**	**12 ft**
Specified Tip Depth (ft):	**5 ft**	**6 ft**	**8 ft**
Height Above Ground (ft):	**4 ft**	**4 ft**	**4 ft**
Allowable Axial Capacity (kips) – FS=2.5:	7.3	8.8	12.0
Allowable Uplift Capacity (kips) – FS=2.5:	6.0	7.3	10.0
Lateral Load – Free Head Condition (kips):	1.2	1.6	1.7
Top Deflection (in) – Free Head Condition	0.50	0.50	0.50
Maximum Moment from Lateral Load, Free Head Condition (ft-kips):	6.0	8.0	8.8
Depth of Maximum Moment (from Top of Post), Free Head (ft):	5.5	5.7	5.9

Table 4: Allowable Capacities of Driven Steel Posts (Sand Areas)

Pile Type:	Driven W8x10		
Pile Length (ft):	**9 ft**	**10 ft**	**12 ft**
Specified Tip Depth (ft):	**5 ft**	**6 ft**	**8 ft**
Height Above Ground (ft):	**4 ft**	**4 ft**	**4 ft**
Allowable Axial Capacity (kips) – FS=2.5:	1.0	1.4	2.1
Allowable Uplift Capacity (kips) – FS=2.5:	0.4	0.6	0.95
Lateral Load – Free Head Condition (kips):	0.8	1.10	1.3
Top Deflection (in) – Free Head Condition	0.50	0.50	0.50
Maximum Moment from Lateral Load, Free Head Condition (ft-kips):	4.2	6.0	7.3
Depth of Maximum Moment (from Top of Post), Free Head (ft):	5.7	6.1	6.5

Recommendations for other post sections can be made available upon request.

Soil Parameters: Interpretive soil parameters of the subsoil for AllPile software are presented in Tables 5 (Clay) and 6 (Sand) below.

Table 5: Soil Strength Parameters for AllPile Program (Clay Areas)

Layer Type	Depth (ft)	Unit Weight (pcf)	Friction Angle (deg)	Cohesion (ksf)	Strain Factor, E50 or Dr (%)	Lateral Soil Modulus, k (pci) (*)
CL-CH	0 to 12	125	0º	2.0	0.55	700

(*) k value for static loading. For cycling loading, use 50% of listed value.

Table 6: Soil Strength Parameters for AllPile Program (Sand Areas)

Layer Type	Depth (ft)	Unit Weight (pcf)	Friction Angle (deg)	Cohesion (ksf)	Strain Factor, E50 or Dr (%)	Lateral Soil Modulus, k (pci) (*)
SP/SM	0 to 12	115	36º	0.0	55.0	125

(*) k value for static loading. For cycling loading, use 50% of listed value

Settlement: Total settlements of less than ¼ inch, and differential movement of about two-thirds of total movement for single piles designed according to the preceding recommendations.

Axial Load Group Effect: Reduction in axial load capacity shall be considered necessary for group effect. The axial load capacity shall be reduced by an efficiency factor, η. Efficiency factor, η should be 0.65 for shafts with spacing center to center equal to 2.5 shaft diameters and increases linearly to 1.0 for shafts with center to center spacing equal to 6.0 shaft diameters or more. The factor of safety of the group is the same as that of individual shaft elements.

Note: Due to the existing hard surface clays and dense to very dense sands, heavier steel post sections may be necessary to drive the steel posts for the PV panel mounting frames.

4.4 Drilled Pier Foundations

Substation structural components such as the A-frame structures, bus supports, dead-end frames, masts, switch, surge arrester and CVT stands may be supported on cast-in-place drilled piers.

***Vertical Capacity*:** Vertical capacity for 24 and 36 inch diameter shafts are presented in Plate F-1 in Appendix F. Capacities for other shaft sizes can be determined in direct proportion to shaft diameters. Point bearing and skin friction parameters have been used to determine the allowable shaft capacity. The allowable capacities include a factor of safety of 2.5. The allowable vertical compression capacities may be increased by 33 percent to accommodate temporary loads that result from wind or seismic forces.

***Lateral Capacity*:** The allowable lateral capacity for 24 and 36 inch diameter shafts are given in the table shown below. The horizontal deflection at the top of the drilled pier for the lateral loads indicated is one-half inch (0.50 inch).

Table 7: Lateral Capacities of Auger Cast or Drilled Piers

Shaft Diameter (in.)	**24**		**36**	
Head Condition	Free	Fixed	Free	Fixed
Allowable Head Deflection (in.)	0.5	0.5	0.5	0.5
Minimum Length (ft.)	**10**	**10**	**10**	**10**
Lateral Capacity (kips)	30	88	38.8	121
Maximum Moment (foot-kips)	65.6	-465	82.3	-655
@Depth from Pier Head (ft.)	4.3	0	4.3	0
Minimum Length (ft.)	**20**	**20**	**20**	**20**
Lateral Capacity (kips)	53.5	104.5	87.3	173
Maximum Moment (foot-kips)	196.7	-493.3	381.7	-1208.3
@Depth from Pier Head (ft.)	7.1	0	8.5	0
Minimum Length (ft.)	**30**	**30**	**30**	**30**
Lateral Capacity (kips)	54	107	101	201
Maximum Moment (foot-kips)	199.2	506.7	509.2	-1316.7
@Depth from Pier Head (ft.)	7.2	0	9.8	0

Settlement: Total static (non-seismic) settlements of less than ¼ inch are anticipated for single piles designed according to the preceding recommendations. If pile spacing is a least 2.5 pile diameters center-to-center, no reduction in axial load capacity is considered necessary for a group effect.

Uplift Capacity: Pier capacity in tension should be taken as 50% of the compression capacity.

Soil Parameters: Interpretive engineering soil parameters of the subsurface soil for Allpile Computer Program are presented in the table below.

Table 8: Drilled Pier Soil Parameters

Layer Type	Depth (ft)	Unit Weight (pcf)	Friction Angle (deg)	Cohesion (ksf)	Modulus of Subgrade Reaction (pci)	E50 or Dr
CL-CH	0 to 22	125	0°	2.0	700	0.55
ML-SM	22 to 28	115	36°	0.0	125	60.0
CL	28 to 45	125	0°	2.5	850	0.50
SP-SM	45 to 50	115	38°	0.0	185	70.0

***Installation*:** The drilled piers shall be placed in conformance to ACI 336 guidelines. Excavation for piers should be inspected by the geotechnical consultant. The bottom of the excavation for piers should be reasonably free of loose or slough material. A tremie pipe should be used to place concrete from the bottom up and to ensure less than five feet of free fall. Steel reinforcement and concrete shall be placed immediately after drilling.

Due to the presence of granular soils at a depth below 22 feet, drilled piers shall be cased below this depth to prevent caving or lateral deformation. Groundwater was encountered at about 48 feet at the time of exploration but may rise with time to approximately 40 feet below ground surface at this site. The structural steel and concrete should be placed immediately after drilling. Prior to placing any structural steel or concrete, loose soil or slough material should be removed from the bottom of the drilled pier excavation.

4.5 Slabs-On-Grade

Concrete slabs and flatwork placed on the native silty clay should be a minimum of 6 inches thick due to expansive soil conditions. If concrete slab and flatwork are placed on non-cohesive (granular) soils, the concrete slab should have a minimum thickness of 5 inches. Concrete floor slabs shall be monolithically placed with the footings (no cold joints). The concrete slabs should be underlain by a 10-mil polyethylene vapor retarder that works as a capillary break to reduce moisture migration into the slab section. The vapor retarder should be properly lapped and continuously sealed. The vapor retarder should be overlain by 2 inches of clean sand (Sand Equivalent SE>30). Concrete slabs may be placed without a sand cover directly over a 15-mil vapor retarder (Stego-Wrap or equivalent).

Concrete slab and flatwork reinforcement should consist of chaired rebar slab reinforcement (minimum of No. 4 bars at 16-inch centers, both horizontal directions) placed at slab mid-height to resist potential swell forces and cracking.

Slab thickness and steel reinforcement are minimums only and should be verified by the structural engineer/designer knowing the actual project loadings. All steel components of the foundation system should be protected from corrosion by maintaining a 3-inch minimum concrete cover of densely consolidated concrete at footings (by use of a vibrator). The construction joint between the foundation and any sidewalks placed adjacent to foundations should be sealed with a polyurethane based non-hardening sealant to prevent moisture migration between the joint. Epoxy coated embedded steel components or permanent waterproofing membranes placed at the exterior footing sidewall may also be used to mitigate the corrosion potential of concrete placed in contact with native soil.

Control joints should be provided in all concrete slabs-on-grade at a maximum spacing (in feet) of 2 to 3 times the slab thickness (in inches) as recommended by American Concrete Institute (ACI) guidelines. All joints should form approximately square patterns to reduce randomly oriented contraction cracks. Contraction joints in the slabs should be tooled at the time of the pour or sawcut (¼ of slab depth) within 6 to 8 hours of concrete placement. Construction (cold) joints in foundations and area flatwork should either be thickened butt-joints with dowels or a thickened keyed-joint designed to resist vertical deflection at the joint. All joints in flatwork should be sealed to prevent moisture, vermin, or foreign material intrusion. Precautions should be taken to prevent curling of slabs in this arid desert region (refer to ACI guidelines).

All independent flatwork (housekeeping slabs) should be placed on a minimum of 2 inches of concrete sand or aggregate base, dowelled to the perimeter foundations where adjacent to the building and sloped 2% or more away from the building. A minimum of 24 inches of moisture conditioned (minimum of optimum) and 8 inches of compacted subgrade (90% min) should underlie all independent flatwork. All flatwork should be jointed in square patterns and at irregularities in shape at a maximum spacing of 10 feet or the least width of the sidewalk.

4.5 Concrete Mixes and Corrosivity

Selected chemical analyses for corrosivity were conducted on bulk samples of the near surface soil from the project site (Appendix C). The native soils were found to have S0 (low) levels of sulfate ion concentration (60 to 330 ppm). Sulfate ions in high concentrations can attack the cementitious material in concrete, causing weakening of the cement matrix and eventual deterioration by raveling.

The following table provides American Concrete Institute (ACI) recommended cement types, water-cement ratio and minimum compressive strengths for concrete in contact with soils:

Table 9. Concrete Mix Design Criteria due to Soluble Sulfate Exposure

Sulfate Exposure Class	Water-soluble Sulfate (SO_4) in soil, ppm	Cement Type	Maximum Water-Cement Ratio by weight	Minimum Strength f'c (psi)
S0	0-1,000	–	–	–
S1	1,000-2,000	II	0.50	4,000
S2	2,000-20,000	V	0.45	4,500
S3	Over 20,000	V (plus Pozzolon)	0.45	4,500

Note: From ACI 318-14 Table 19.3.1.1 and Table 19.3.2.1

However, in consideration of general corrosive environment in the vicinity, it is recommended a minimum of 6.0 sacks per cubic yard of concrete (4,000 psi) of Type V Portland Cement with a maximum water/cement ratio of 0.50 (by weight) should be used for concrete placed in contact with native soil on this project (sitework including sidewalks, driveways, housekeeping slabs and foundations). Admixtures may be required to allow placement of this low water/cement ratio concrete.

The native soil has low to moderate levels of chloride ion concentration (70 to 490 ppm). Chloride ions can cause corrosion of reinforcing steel, anchor bolts and other buried metallic conduits. Resistivity determinations on the soil indicate moderate to very severe potential for metal loss because of electrochemical corrosion processes. Mitigation of the corrosion of steel can be achieved by using steel elements coated with epoxy corrosion inhibitors, asphaltic and epoxy coatings, cathodic protection or by zinc galvanizing.

Foundation designs shall provide a minimum concrete cover of three (3) inches around steel reinforcing or embedded components (anchor bolts, etc.) exposed to native soil or landscape water (to 18 inches above grade). If the 3-inch concrete edge distance cannot be achieved, all embedded steel components (anchor bolts, etc.) shall be epoxy dipped for corrosion protection or a corrosion inhibitor and a permanent waterproofing membrane shall be placed along the exterior face of the exterior footings. Additionally, the concrete should be thoroughly vibrated at footings during placement to decrease the permeability of the concrete.

4.6 Seismic Design

This site is located in the seismically active southern California area and the site structures are subject to strong ground shaking due to potential fault movements along the San Andreas Fault, Superstition Hills Fault, and Brawley Seismic Zone. Engineered design and earthquake-resistant construction are the common solutions to increase safety and development of seismic areas. Designs should comply with the latest edition of the CBC for Site Class D using the seismic coefficients given in Section 3.4 of this report.

4.8 Pavements and Unpaved Roads

Pavements should be designed according to CALTRANS or other acceptable methods. Traffic indices were not provided by the project engineer or owner; therefore, we have provided structural sections for several traffic indices for comparative evaluation. The public agency or design engineer should decide the appropriate traffic index for the site. Maintenance of proper drainage is necessary to prolong the service life of the pavements.

Based on the current State of California CALTRANS method, an R-value of 5 (for exposed clay soil) and 50 (for sand soils) and assumed traffic indices, the following tables provides our estimates for asphaltic concrete (AC) and Portland Cement Concrete (PCC) pavement sections.

Tables 10 and 11. Pavement Structural Sections

R-Value of Subgrade Soil – 5 (clay soil) Design Method - CALTRANS 2017

Traffic Index (assumed)	Flexible Pavements		Rigid (PCC) Pavements	
	Asphaltic Concrete Thickness (in.)	Aggregate Base Thickness (in.)	Concrete Thickness (in.)	Aggregate Base Thickness (in.)
4.0	3.0	6.5	5.0	6.0
5.0	3.0	10.0	5.5	6.0
6.0	4.0	11.5	6.0	8.0
6.5	4.0	14.0	7.0	8.0

R-Value of Subgrade Soil – 50 (sand soil) Design Method - CALTRANS 2017

Traffic Index (assumed)	Flexible Pavements		Rigid (PCC) Pavements	
	Asphaltic Concrete Thickness (in.)	Aggregate Base Thickness (in.)	Concrete Thickness (in.)	Aggregate Base Thickness (in.)
4.0	3.0	4.0	5.0	4.0
5.0	3.0	4.0	5.5	4.0
6.0	3.0	6.0	6.0	4.0
6.5	3.0	8.0	7.0	6.0

Notes:

1) Asphaltic concrete shall be Caltrans, Type B, ¾ inch maximum (½ inch maximum for parking areas), medium grading with PG70-10 asphalt cement, compacted to a minimum of 95% of the Hveem density (CAL 366).
2) Aggregate base shall conform to Caltrans Class 2 (¾ in. maximum), compacted to a minimum of 95% of ASTM D1557 maximum dry density.
3) Place pavements on 12 inches of moisture conditioned (minimum 4% above optimum if clays) native clay soil compacted to a minimum of 90% (95% if sand subgrade) of the maximum dry density determined by ASTM D1557.
4) Portland cement concrete for pavements should have Type V cement, a minimum compressive strength of 4,500 psi at 28 days, and a maximum water-cement ratio of 0.45.
5) Typical Street Classifications (Imperial County)
   - Parking Areas: TI = 4.0
   - Cul-de-Sacs: TI = 5.0
   - Local Streets: TI = 6.0
   - Minor Collectors: TI = 6.5

Unpaved Roads: Unpaved roads may be used for stabilized roadways. The unpaved roads should consist of 12 inches of native soils compacted to a minimum of 90% (clays) and 95% (sands) of ASTM D1557 maximum density at a minimum of 4% above optimum moisture if clays and within 2% of optimum moisture if sand, with a 6-inch layer of Class 2 aggregate base compacted to a minimum of 95% of ASTM D1557 maximum density placed over the compacted subgrade. Sand soils may be improved by polymer modification of the top 6 to 8 inches of soil and compacting to a minimum of 90%.

Section 5
LIMITATIONS AND ADDITIONAL SERVICES

5.1 Limitations

The findings and professional opinions within this report are based on current information regarding the proposed 320-acre Vega 6 solar project located at the south side of Andre Road west of Garvey Road southwest of Westmorland, California. The conclusions and professional opinions of this report are invalid if:

- Structural loads change from those stated or the structures are relocated.
- The Additional Services section of this report is not followed.
- This report is used for adjacent or other property.
- Changes of grade or groundwater occur between the issuance of this report and construction other than those anticipated in this report.
- Any other change that materially alters the project from that proposed at the time this report was prepared.

This report was prepared according to the generally accepted *geotechnical engineering standards of practice* that existed in Imperial County at the time the report was prepared. No express or implied warranties are made in connection with our services.

Findings and professional opinions in this report are based on selected points of field exploration, geologic literature, limited laboratory testing, and our understanding of the proposed project. Our analysis of data and professional opinions presented herein are based on the assumption that soil conditions do not vary significantly from those found at specific exploratory locations. Variations in soil conditions can exist between and beyond the exploration points or groundwater elevations may change. The nature and extend of such variations may not become evident until, during or after construction. If variations are detected, we should immediately be notified as these conditions may require additional studies, consultation, and possible design revisions.

Environmental or hazardous materials evaluations were not performed by Landmark for this project. Landmark will assume no responsibility or liability whatsoever for any claim, damage, or injury which results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials.

The client has responsibility to see that all parties to the project including designer, contractor, and subcontractor are made aware of this entire report within a reasonable time from its issuance. This report should be considered invalid for periods after two years from the date of report issuance without a review of the validity of the findings and professional opinions by our firm, because of potential changes in the Geotechnical Engineering Standards of Practice. This report is based upon government regulations in effect at the time of preparation of this report. Future changes or modifications to these regulations may require modification of this report. Land or facility use, on and off-site conditions, regulations, design criteria, procedures, or other factors may change over time, which may require additional work. Any party other than the client who wishes to use this report shall notify Landmark of such intended use. Based on the intended use of the report, Landmark may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Landmark from any liability resulting from the use of this report by any unauthorized party and client agrees to defend, indemnify, and hold Landmark harmless from any claim or liability associated with such unauthorized use or non-compliance.

This report contains information that may be useful in the preparation of contract specifications. However, the report is not worded is such a manner that we recommend its use as a construction specification document without proper modification. The use of information contained in this report for bidding purposes should be done at the contractor's option and risk.

5.2 Plan Review

Landmark Consultants, Inc. should be retained during development of design and construction documents to check that the geotechnical professional opinions are appropriate for the proposed project and that the geotechnical professional opinions are properly interpreted and incorporated into the documents. Landmark should have the opportunity to review the final design plans and specifications for the project prior to the issuance of such for bidding.

Governmental agencies may require review of the plans by the geotechnical engineer of record for compliance to the geotechnical report.

5.3 Additional Services

We recommend that Landmark Consultant be retained to provide the tests and observations services during construction. *The geotechnical engineering firm providing such tests and observations shall become the geotechnical engineer of record and assume responsibility for the project.*

Landmark Consultants, Inc. professional opinions for this site are, to a high degree, dependent upon appropriate quality control of subgrade preparation, fill placement, and foundation construction. Accordingly, the findings and professional opinions in this report are made contingent upon the opportunity for Landmark Consultants to observe grading operations and foundation excavations for the proposed construction.

If parties other than Landmark Consultants, Inc. are engaged to provide observation and testing services during construction, such parties must be notified that they will be required to assume complete responsibility as the geotechnical engineer of record for the geotechnical phase of the project by concurring with the professional opinions in this report and/or by providing alternative professional guidance.

Additional information concerning the scope and cost of these services can be obtained from our office.

TABLES

Table 1
Summary of Characteristics of Closest Known Active Faults

Fault Name	Approximate Distance (miles)	Approximate Distance (km)	Maximum Moment Magnitude (Mw)	Fault Length (km)	Slip Rate (mm/yr)
Superstition Hills	4.5	7.1	6.6	23 ± 2	4 ± 2
Elmore Ranch	7.6	12.1	6.6	29 ± 3	1 ± 0.5
Superstition Mountain	7.7	12.3	6.6	24 ± 2	5 ± 3
Imperial	10.4	16.7	7	62 ± 6	20 ± 5
Brawley *	13.4	21.4			
Painted Gorge Wash*	15.4	24.6			
San Jacinto - Borrego	16.7	26.7	6.6	29 ± 3	4 ± 2
Yuha Well *	19.1	30.5			
Shell Beds	19.6	31.4			
Unnamed 1*	19.7	31.5			
Vista de Anza*	20.8	33.2			
Yuha*	21.4	34.2			
Rico *	22.3	35.6			
Unnamed 2*	23.0	36.8			
Laguna Salada	23.1	37.0	7	67 ± 7	3.5 ± 1.5
Ocotillo*	23.2	37.1			
San Andreas - Coachella	23.2	37.2	7.2	96 ± 10	25 ± 5
Elsinore - Coyote Mountain	24.8	39.6	6.8	39 ± 4	4 ± 2
Hot Springs *	25.2	40.4			
San Jacinto - Anza	29.6	47.3	7.2	91 ± 9	12 ± 6
Borrego (Mexico)*	31.8	50.8			
San Jacinto - Coyote Creek	33.4	53.4	6.8	41 ± 4	4 ± 2

* Note: Faults not included in CGS database.

Table 2
2019 California Building Code (CBC) and ASCE 7-16 Seismic Parameters

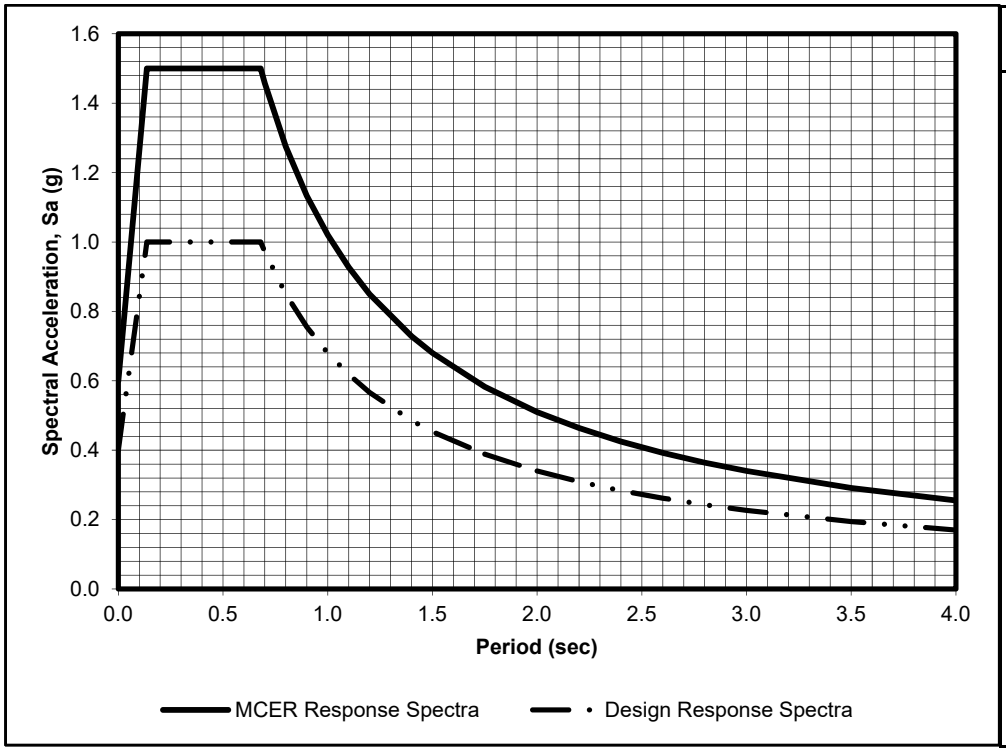
		ASCE 7-16 Reference
Soil Site Class:	**D**	Table 20.3-1
Latitude:	33.0150 N	
Longitude:	-115.7005 W	
Risk Category:	III	
Seismic Design Category:	D	

Maximum Considered Earthquake (MCE) Ground Motion

Mapped MCE_R Short Period Spectral Response	S_s	1.500 g	ASCE Figure 22-1	
Mapped MCE_R 1 second Spectral Response	S_1	0.600 g	ASCE Figure 22-2	
Short Period (0.2 s) Site Coefficient	F_a	1.00	ASCE Table 11.4-1	
Long Period (1.0 s) Site Coefficient	F_v	1.70	ASCE Table 11.4-2	
MCE_R Spectral Response Acceleration Parameter (0.2 s)	S_{MS}	1.500 g	= Fa * S_s	ASCE Equation 11.4-1
MCE_R Spectral Response Acceleration Parameter (1.0 s)	S_{M1}	1.020 g	= Fv * S_1	ASCE Equation 11.4-2

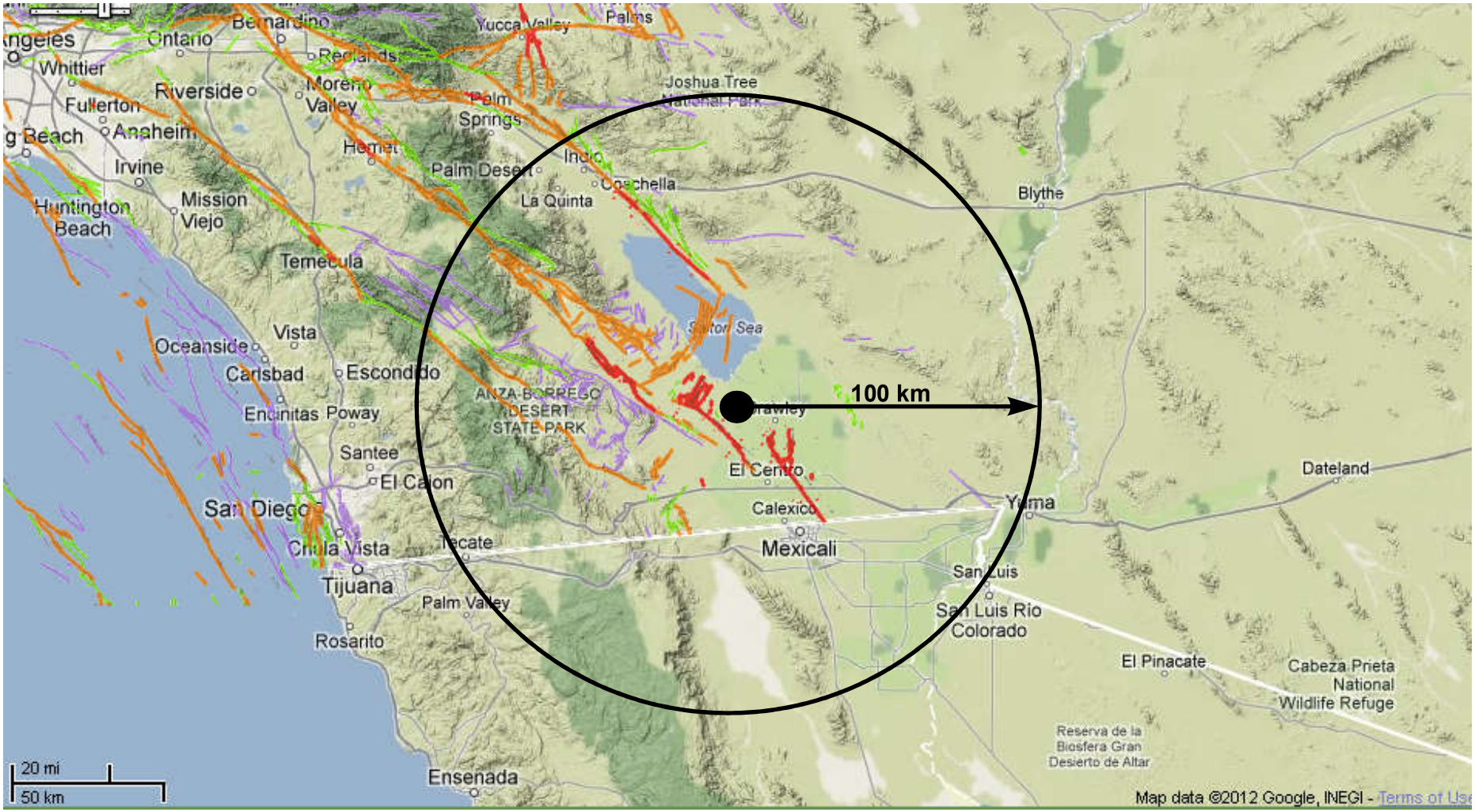
Design Earthquake Ground Motion

Design Spectral Response Acceleration Parameter (0.2 s)	S_{DS}	1.000 g	= 2/3*S_{MS}	ASCE Equation 11.4-3
Design Spectral Response Acceleration Parameter (1.0 s)	S_{D1}	0.680 g	= 2/3*S_{M1}	ASCE Equation 11.4-4
Risk Coefficient at Short Periods (less than 0.2 s)	C_{RS}	0.961		ASCE Figure 22-17
Risk Coefficient at Long Periods (greater than 1.0 s)	C_{R1}	0.933		ASCE Figure 22-18
	T_L	8.00 sec		ASCE Figure 22-12
	T_O	0.14 sec	=0.2*S_{D1}/S_{DS}	
	T_S	0.68 sec	=S_{D1}/S_{DS}	
Peak Ground Acceleration	PGA_M	0.61 g		ASCE Equation 11.8-1



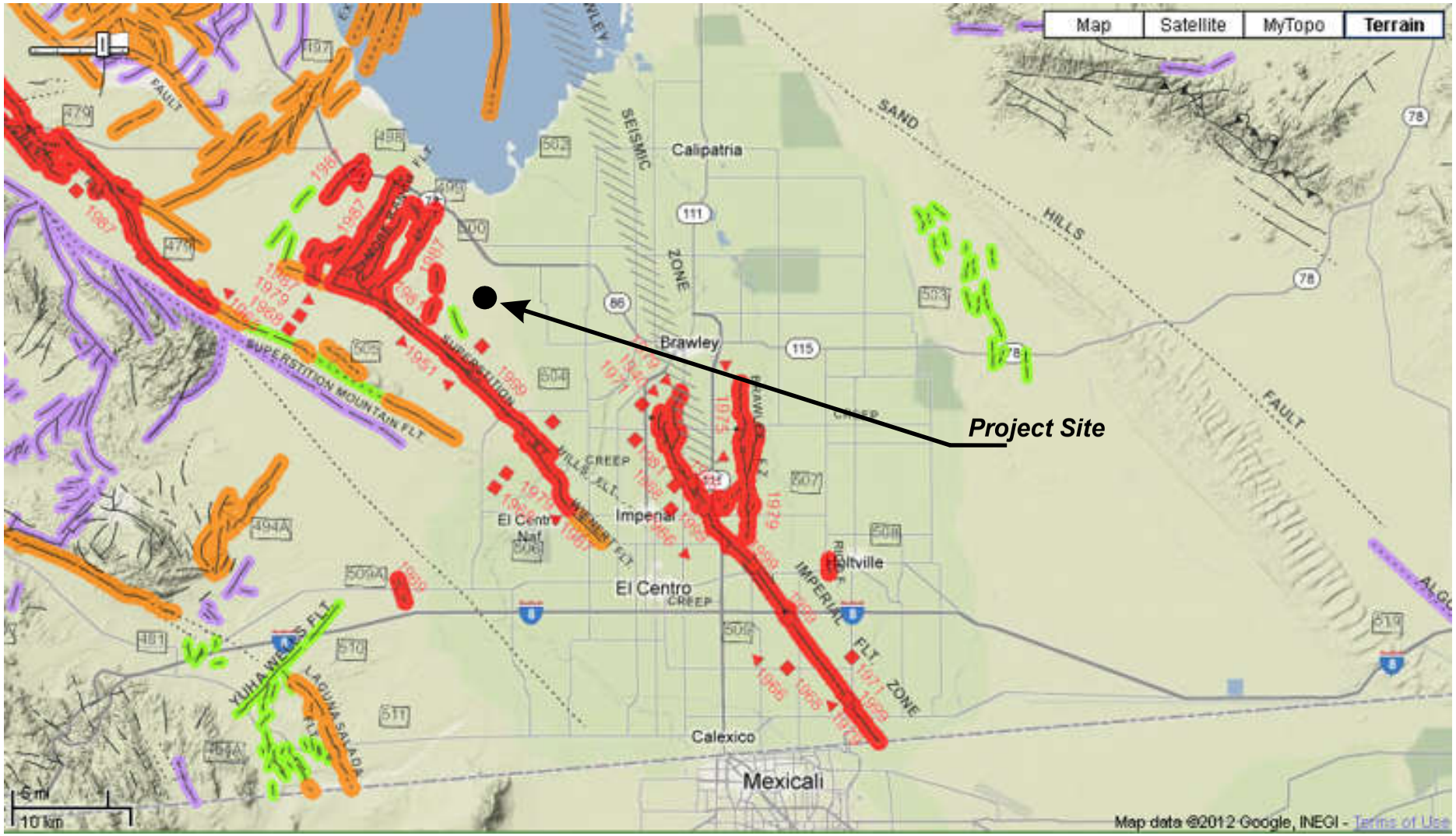
Period T (sec)	Sa (g)	MCE_R Sa (g)
0.00	0.40	0.60
0.14	1.00	1.50
0.68	1.00	1.50
0.70	0.97	1.46
0.80	0.85	1.28
0.90	0.76	1.13
1.00	0.68	1.02
1.10	0.62	0.93
1.20	0.57	0.85
1.20	0.57	0.85
1.40	0.49	0.73
1.50	0.45	0.68
1.75	0.39	0.58
2.00	0.34	0.51
2.20	0.31	0.46
2.40	0.28	0.43
2.60	0.26	0.39
2.80	0.24	0.36
3.00	0.23	0.34
3.50	0.19	0.29
4.00	0.17	0.26

FIGURES



Source: California Geological Survey 2010 Fault Activity Map of California
http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html#

LANDMARK Geo-Engineers and Geologists **Project No.: LE20132**	**Regional Fault Map**	**Figure 1**



Source: California Geological Survey 2010 Fault Activity Map of California
http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html#

LANDMARK Geo-Engineers and Geologists **Project No.: LE20132**	**Map of Local Faults**	**Figure 2**

EXPLANATION

Fault traces on land are indicated by solid lines where well located, by dashed lines where approximately located or inferred, and by dotted lines where concealed by younger rocks or by lakes or bays. Fault traces are queried where continuation or existence is uncertain. Concealed faults in the Great Valley are based on maps of selected subsurface horizons, so locations shown are approximate and may indicate structural trend only. All offshore faults based on seismic reflection profile records are shown as solid lines where well defined, dashed where inferred, queried where uncertain.

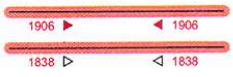
FAULT CLASSIFICATION COLOR CODE
(Indicating Recency of Movement)

Fault along which historic (last 200 years) displacement has occurred and is associated with one or more of the following:

(a) a recorded earthquake with surface rupture. (Also included are some well-defined surface breaks caused by ground shaking during earthquakes, e.g. extensive ground breakage, not on the White Wolf fault, caused by the Arvin-Tehachapi earthquake of 1952). The date of the associated earthquake is indicated. Where repeated surface ruptures on the same fault have occurred, only the date of the latest movement may be indicated, especially if earlier reports are not well documented as to location of ground breaks.

(b) fault creep slippage - slow ground displacement usually without accompanying earthquakes.

(c) displaced survey lines.

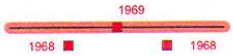


A triangle to the right or left of the date indicates termination point of observed surface displacement. Solid red triangle indicates known location of rupture termination point. Open black triangle indicates uncertain or estimated location of rupture termination point.

Date bracketed by triangles indicates local fault break.

No triangle by date indicates an intermediate point along fault break.

Fault that exhibits fault creep slippage. Hachures indicate linear extent of fault creep. Annotation (creep with leader) indicates representative locations where fault creep has been observed and recorded.



Square on fault indicates where fault creep slippage has occured that has been triggered by an earthquake on some other fault. Date of causative earthquake indicated. Squares to right and left of date indicate terminal points between which triggered creep slippage has occurred (creep either continuous or intermittent between these end points).

Holocene fault displacement (during past 11,700 years) without historic record. Geomorphic evidence for Holocene faulting includes sag ponds, scarps showing little erosion, or the following features in Holocene age deposits: offset stream courses, linear scarps, shutter ridges, and triangular faceted spurs. Recency of faulting offshore is based on the interpreted age of the youngest strata displaced by faulting.

Late Quaternary fault displacement (during past 700,000 years). Geomorphic evidence similar to that described for Holocene faults except features are less distinct. Faulting may be younger, but lack of younger overlying deposits precludes more accurate age classification.

Quaternary fault (age undifferentiated). Most faults of this category show evidence of displacement sometime during the past 1.6 million years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age. Unnumbered Quaternary faults were based on Fault Map of California, 1975. See Bulletin 201, Appendix D for source data.

Pre-Quaternary fault (older that 1.6 million years) or fault without recognized Quaternary displacement. Some faults are shown in this category because the source of mapping used was of reconnaissnce nature, or was not done with the object of dating fault displacements. Faults in this category are not necessarily inactive.

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Fault Map Legend

Figure 3a

ADDITIONAL FAULT SYMBOLS

Bar and ball on downthrown side (relative or apparent).

Arrows along fault indicate relative or apparent direction of lateral movement.

Arrow on fault indicates direction of dip.

Low angle fault (barbs on upper plate). Fault surface generally dips less than 45° but locally may have been subsequently steepened. On offshore faults, barbs simply indicate a reverse fault regardless of steepness of dip.

OTHER SYMBOLS

Numbers refer to annotations listed in the appendices of the accompanying report. Annotations include fault name, age of fault displacement, and pertinent references including Earthquake Fault Zone maps where a fault has been zoned by the Alquist-Priolo Earthquake Fault Zoning Act. This Act requires the State Geologist to delineate zones to encompass faults with Holocene displacement.

Structural discontinuity (offshore) separating differing Neogene structural domains. May indicate discontinuities between basement rocks.

Brawley Seismic Zone, a linear zone of seismicity locally up to 10 km wide associated with the releasing step between the Imperial and San Andreas faults.

Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
						ON LAND	OFFSHORE
Quaternary	Late Quaternary	Historic				Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	200		? ? ?	Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
		Pleistocene	11,700		? ?	Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary		700,000		?	Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			1,600,000*			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
			4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

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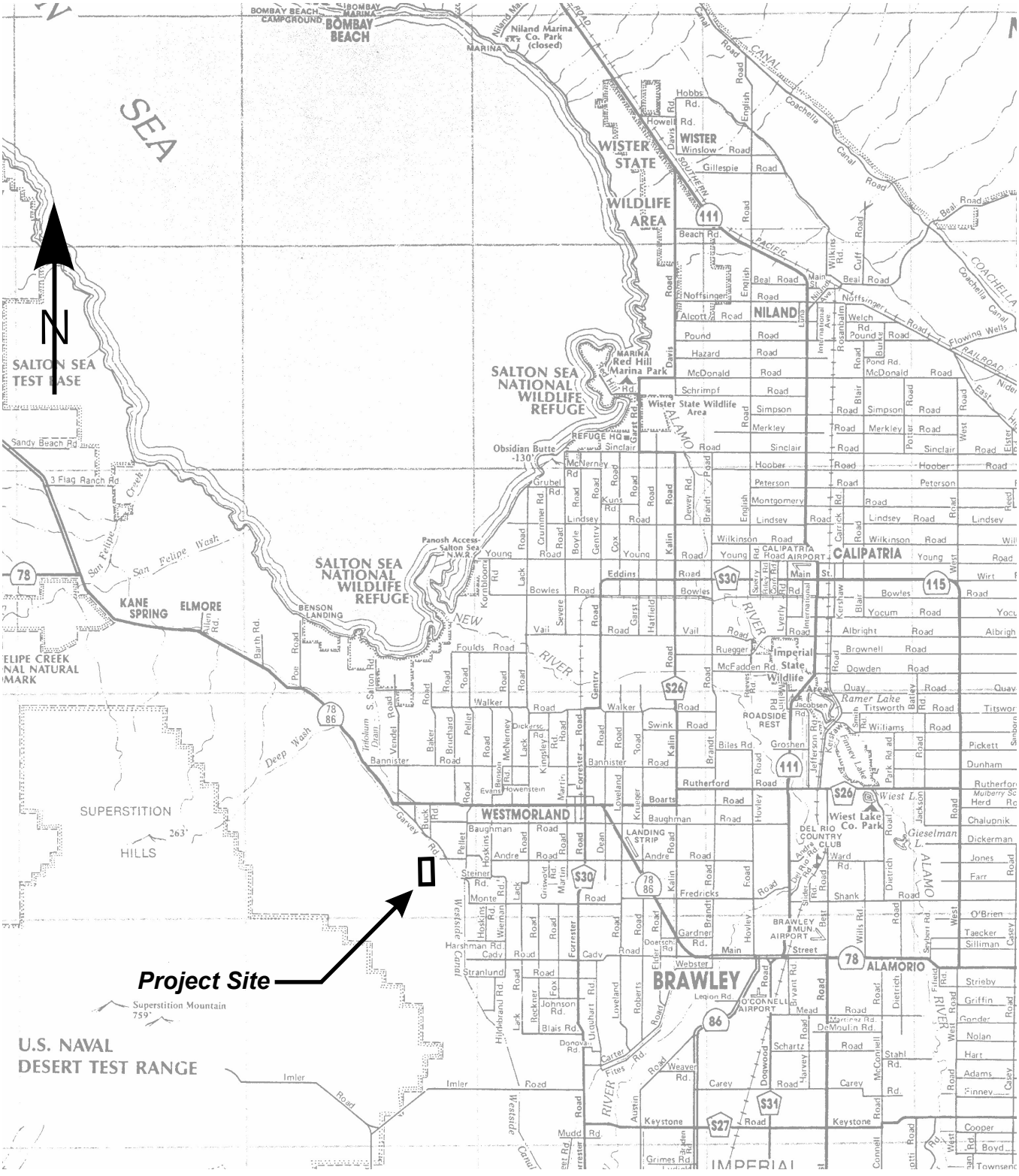
Fault Map Legend

Figure 3b

APPENDIX A



LANDMARK Geo-Engineers and Geologists **Project No.: LE20132**	**Vicinity Map**	**Plate A-1**

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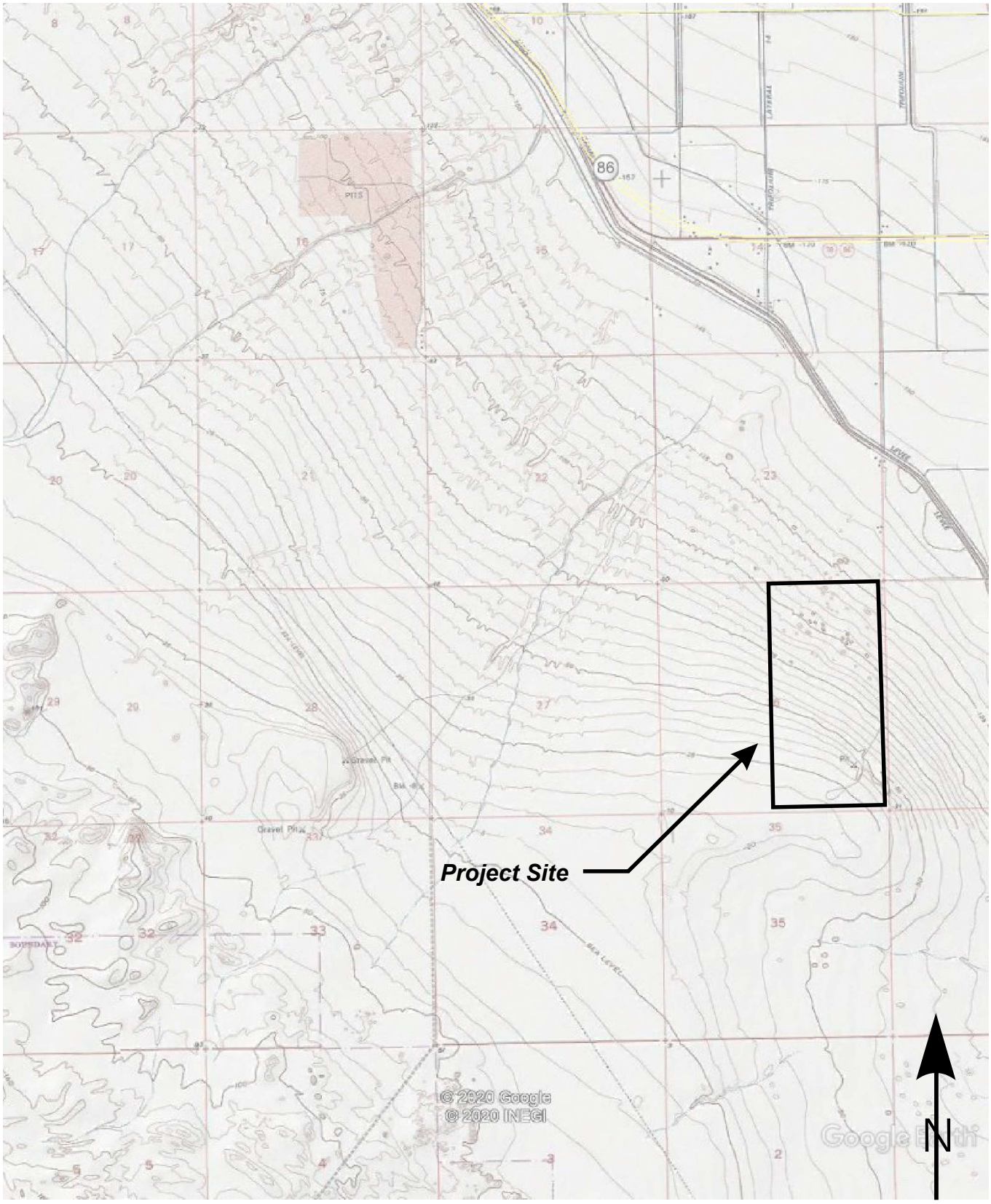
Site and Exploration Map

Plate
A-2



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Topographic Map

Plate
A-3

APPENDIX B

LOG OF BORING No. B-1

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
					FAT CLAY (CH): Light brown, dry, hard, high plasticity			LL=50% PI=37%
5			50/6"	4.5+	Moist	115.9	12.0	c=3.49 tsf
10			29	4.5+	Some very fine sand, olive			
15			75	4.5+	Brown with some orange veins	108.4	19.3	c=3.72 tsf
20			20	4.5+				
25			50/6"		SANDY SILT (ML): Gray-orange-brown, moist, hard, with very fine sand	95.1	7.2	Passing #200 = 70.9%
30			29	2.0	SILTY CLAY (CL): Gray-orange, moist, very stiff, medium plasticity			
35			61	4.5+	Gray-brown, hard			
40			27	3.0	FAT CLAY (CH): Brown, very moist, very stiff, high plasticity			
45			72/10"	4.5+	Very moist, with fine grained sand	102.9	23.9	Passing #200 = 76.8%
					SAND/SILTY SAND (SP-SM): Gray-orange, wet, very dense, fine to medium grained sand GW=48 ft Saturated			
50			80					
					Groundwater measured at 48.0 feet below ground surface at time of drilling. Borehole backfilled with excavated soils.			
55								
60								

DATE DRILLED: 9/22/20 | TOTAL DEPTH: 51.5 Feet | DEPTH TO WATER: 48 ft.

LOGGED BY: P. LaBrucherie | TYPE OF BIT: Hollow Stem Auger | DIAMETER: 8 in.

SURFACE ELEVATION: Approximately -100' | HAMMER WT.: 140 lbs. | DROP: 30 in.

PROJECT No. LE20132

LANDMARK Geo-Engineers and Geologists

PLATE B-1

LOG OF BORING No. B-2

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
5			48		SILTY SAND (SM): Gray-light brown, dry, fine grained sand Very dense			
10			25				2.6	Passing #200 = 43.5%
15			50/6"		CLAYEY SANDY SILT (ML): Gray-light brown, dry, very dense, with very fine to fine grained sand, low plasticity			
20			50/5"		SILTY SAND (SM): Light brown, some moisture, very dense, very fine to fine grained sand			
25					Groundwater was not encountered at time of drilling. Borehole backfilled with excavated soils.			
30								
35								
40								
45								
50								
55								
60								

DATE DRILLED: 9/22/20 | TOTAL DEPTH: 21.5 Feet | DEPTH TO WATER: —

LOGGED BY: P. LaBrucherie | TYPE OF BIT: Hollow Stem Auger | DIAMETER: 8 in.

SURFACE ELEVATION: Approximately -65' | HAMMER WT.: 140 lbs. | DROP: 30 in.

PROJECT No. LE20132

LANDMARK Geo-Engineers and Geologists

PLATE B-2

LOG OF BORING No. B-3

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
5			85/11"		SILTY SAND (SM): Gray-light brown, dry, fine to medium grained sand Very dense	113.1	0.5	Passing #200 = 14.4% c=0.085 tsf Φ=28°
10			58		SANDY SILT (ML): Light brown, some moisture, dense, with very fine grained sand	105.4	3.5	c=0.063 tsf Φ=26°
15			72	4.5+	SILTY CLAY (CL): Light brown, some moisture, hard, medium plasticity			
20			86/11"		CLAYEY SANDY SILT (ML): Orange-light brown, some moisture, very dense, with very fine to fine grained sand, low plasticity			
25					Groundwater was not encountered at time of drilling. Borehole backfilled with excavated soils.			
30								
35								
40								
45								
50								
55								
60								

DATE DRILLED: 9/22/20 | TOTAL DEPTH: 21.5 Feet | DEPTH TO WATER: —

LOGGED BY: P. LaBrucherie | TYPE OF BIT: Hollow Stem Auger | DIAMETER: 8 in.

SURFACE ELEVATION: Approximately -75' | HAMMER WT.: 140 lbs. | DROP: 30 in.

PROJECT No. LE20132

LANDMARK Geo-Engineers and Geologists

PLATE B-3

LOG OF BORING No. B-4

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
0					SILTY CLAY/CLAY (CL-CH): Light brown, dry, high plasticity			LL=50% PI=37%
5			18	4.5+	hard, thin interbedded sand layer			
10			75/8"		SANDY SILT (ML): Light brown, some moisture, very dense, with very fine grained sand	105.7	3.2	c=0.0 tsf Φ=30°
15			15		Medium dense			
20			24	4.5+ 3.0	SILTY CLAY/CLAY (CL-CH): Gray-brown, moist, hard, medium to high plasticity			
25					Groundwater was not encountered at time of drilling. Borehole backfilled with excavated soils.			
30								
35								
40								
45								
50								
55								
60								

DATE DRILLED: 9/23/20 | TOTAL DEPTH: 21.5 Feet | DEPTH TO WATER: —

LOGGED BY: P. LaBrucherie | TYPE OF BIT: Hollow Stem Auger | DIAMETER: 8 in.

SURFACE ELEVATION: Approximately -115' | HAMMER WT.: 140 lbs. | DROP: 30 in.

PROJECT No. LE20132

LANDMARK Geo-Engineers and Geologists

PLATE B-4

LOG OF BORING No. B-5

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
					SANDY SILT/SILTY SAND (ML-SM): Light brown, dry, very fine grained sand with some 3/8" aggregate max. size			
5			37	4.5+	SILTY CLAY/CLAY (CL-CH): Gray-brown, moist, hard, medium to high plasticity		13.8	
10			33	4.5+	Light brown			
15			50/6"	4.5+	Some very fine grained sand			
20			35		SANDY CLAYEY SILT (ML): Light brown, moist, dense, low plasticity, with very fine grained sand			
25					Groundwater was not encountered at time of drilling. Borehole backfilled with excavated soils.			
30								
35								
40								
45								
50								
55								
60								

DATE DRILLED: 9/23/20 | TOTAL DEPTH: 21.5 Feet | DEPTH TO WATER: —

LOGGED BY: J. Avalos | TYPE OF BIT: Hollow Stem Auger | DIAMETER: 8 in.

SURFACE ELEVATION: Approximately -95' | HAMMER WT.: 140 lbs. | DROP: 30 in.

PROJECT No. LE20132

LANDMARK Geo-Engineers and Geologists

PLATE B-5

LOG OF BORING No. B-6

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
					SANDY SILTY CLAY (CL): Light brown, dry, medium plasticity, with very fine grained sand			
5			40		SILTY SAND (SM): Light brown, dry, dense to very dense, fine to medium size sand		1.0	Passing #200 = 12.8%
10			50/6”		Light brown	101.6	1.0	c=0.0 tsf Φ=33°
15			35				2.1	Passing #200 = 41.8%
20			50/6”	4.5+	SANDY SILTY CLAY (CL): Light brown, some moisture, hard, low to medium plasticity, with very fine grained sand			
25					Groundwater was not encountered at time of drilling. Borehole backfilled with excavated soils.			
30								
35								
40								
45								
50								
55								
60								

DATE DRILLED: 9/23/20 | TOTAL DEPTH: 21.5 Feet | DEPTH TO WATER: —

LOGGED BY: J. Avalos | TYPE OF BIT: Hollow Stem Auger | DIAMETER: 8 in.

SURFACE ELEVATION: Approximately -50' | HAMMER WT.: 140 lbs. | DROP: 30 in.

PROJECT No. LE20132

LANDMARK Geo-Engineers and Geologists

PLATE B-6

LOG OF BORING No. B-7

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
5			40		SAND/SILTY SAND (SP-SM): Light brown, dry, medium to fine grained sand Dense			
10			42				0.6	Passing #200 = 6.6%
15			38		SILTY SAND/SANDY SILT (SM/ML): Light brown, dry, medium dense, with very fine to fine grained sand			
20			29					
25					Groundwater was not encountered at time of drilling. Borehole backfilled with excavated soils.			
30								
35								
40								
45								
50								
55								
60								

DATE DRILLED: 9/23/20 | TOTAL DEPTH: 21.5 Feet | DEPTH TO WATER: —

LOGGED BY: J. Avalos | TYPE OF BIT: Hollow Stem Auger | DIAMETER: 8 in.

SURFACE ELEVATION: Approximately -25' | HAMMER WT.: 140 lbs. | DROP: 30 in.

PROJECT No. LE20132

LANDMARK Geo-Engineers and Geologists

PLATE B-7

LOG OF BORING No. B-8

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
5			12		SAND (SP): Light brown, dry, medium to fine grained sand Medium dense			Passing #200 = 4.8%
10			17					
15			26		SILTY SAND/SANDY SILT (SM/ML): Light brown, dry, medium dense, with very fine to fine grained sand			
20			28					
25					Groundwater was not encountered at time of drilling. Borehole backfilled with excavated soils.			
30								
35								
40								
45								
50								
55								
60								

DATE DRILLED: 9/23/20
LOGGED BY: J. Avalos
SURFACE ELEVATION: Approximately -30'

TOTAL DEPTH: 21.5 Feet
TYPE OF BIT: Hollow Stem Auger
HAMMER WT.: 140 lbs.

DEPTH TO WATER: —
DIAMETER: 8 in.
DROP: 30 in.

PROJECT No. LE20132

LANDMARK
Geo-Engineers and Geologists

PLATE B-8

DEFINITION OF TERMS

PRIMARY DIVISIONS			SYMBOLS	SECONDARY DIVISIONS
Coarse grained soils More than half of material is larger that No. 200 sieve	**Gravels** More than half of coarse fraction is larger than No. 4 sieve	Clean gravels (less than 5% fines)	**GW**	Well graded gravels, gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels, or gravel-sand mixtures, little or no fines
		Gravel with fines	**GM**	Silty gravels, gravel-sand-silt mixtures, non-plastic fines
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
	Sands More than half of coarse fraction is smaller than No. 4 sieve	Clean sands (less than 5% fines)	**SW**	Well graded sands, gravelly sands, little or no fines
			SP	Poorly graded sands or gravelly sands, little or no fines
		Sands with fines	**SM**	Silty sands, sand-silt mixtures, non-plastic fines
			SC	Clayey sands, sand-clay mixtures, plastic fines
Fine grained soils More than half of material is smaller than No. 200 sieve	**Silts and clays** Liquid limit is less than 50%		**ML**	Inorganic silts, clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravely, sandy, or lean clays
			OL	Organic silts and organic clays of low plasticity
	Silts and clays Liquid limit is more than 50%		**MH**	Inorganic silts, micaceous or diatomaceous silty soils, elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silts
Highly organic soils			**PT**	Peat and other highly organic soils

GRAIN SIZES

Silts and Clays	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		
200	40	10	4	3/4"	3"	12"	

US Standard Series Sieve — Clear Square Openings

Sands, Gravels, etc.	Blows/ft. *
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	Over 50

Clays & Plastic Silts	Strength **	Blows/ft. *
Very Soft	0-0.25	0-2
Soft	0.25-0.5	2-4
Firm	0.5-1.0	4-8
Stiff	1.0-2.0	8-16
Very Stiff	2.0-4.0	16-32
Hard	Over 4.0	Over 32

* Number of blows of 140 lb. hammer falling 30 inches to drive a 2 inch O.D. (1 3/8 in. I.D.) split spoon (ASTM D1586).

** Unconfined compressive strength in tons/s.f. as determined by laboratory testing or approximated by the Standard Penetration Test (ASTM D1586), Pocket Penetrometer, Torvane, or visual observation.

Type of Samples:

Ring Sample — Standard Penetration Test — Shelby Tube — Bulk (Bag) Sample

Drilling Notes:

1. Sampling and Blow Counts
   - Ring Sampler - Number of blows per foot of a 140 lb. hammer falling 30 inches.
   - Standard Penetration Test - Number of blows per foot.
   - Shelby Tube - Three (3) inch nominal diameter tube hydraulically pushed.
2. P. P. = Pocket Penetrometer (tons/s.f.).
3. NR = No recovery.
4. GWT = Ground Water Table observed @ specified time.

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Project No. LE20132

Key to Logs

Plate B-9

APPENDIX C

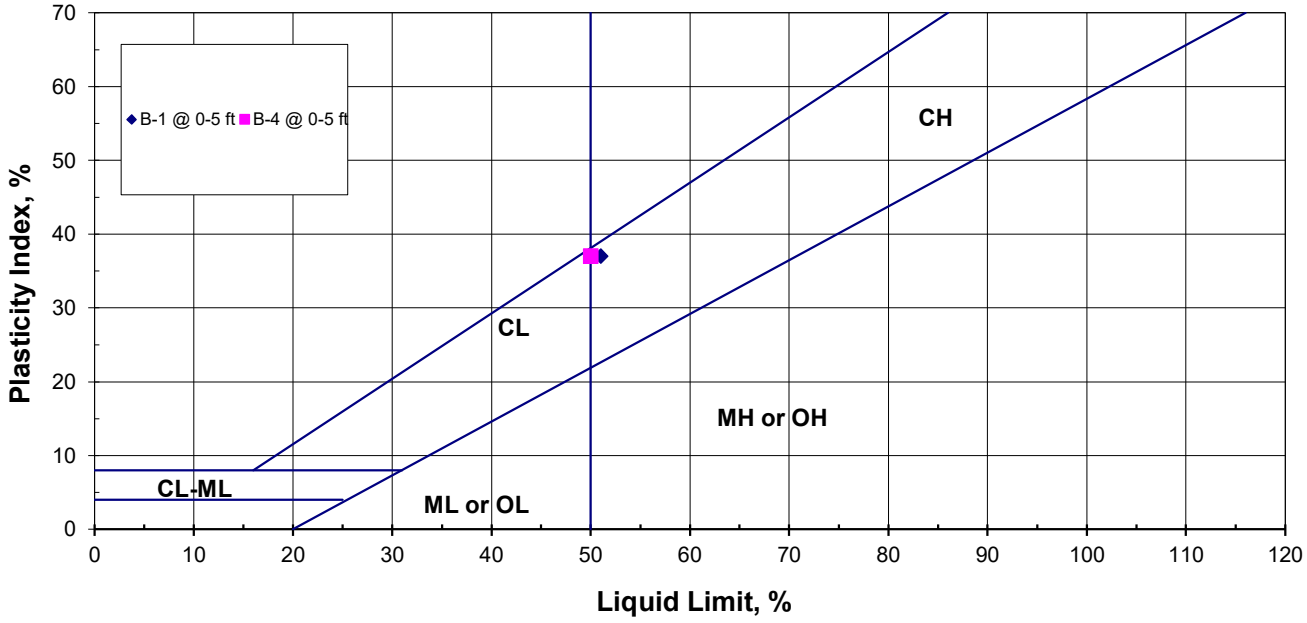
LANDMARK CONSULTANTS, INC.

CLIENT: Apex Energy Solutions, LLC
PROJECT: Vega 6 Solar Site, Westmoreland, CA
JOB No.: LE20132
DATE: 02/17/20

ATTERBERG LIMITS (ASTM D4318)

Sample Location	Sample Depth (ft)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	USCS Classification
B-1	0-5	51	14	37	CH
B-4	0-5	50	13	37	CL-CH

PLASTICITY CHART



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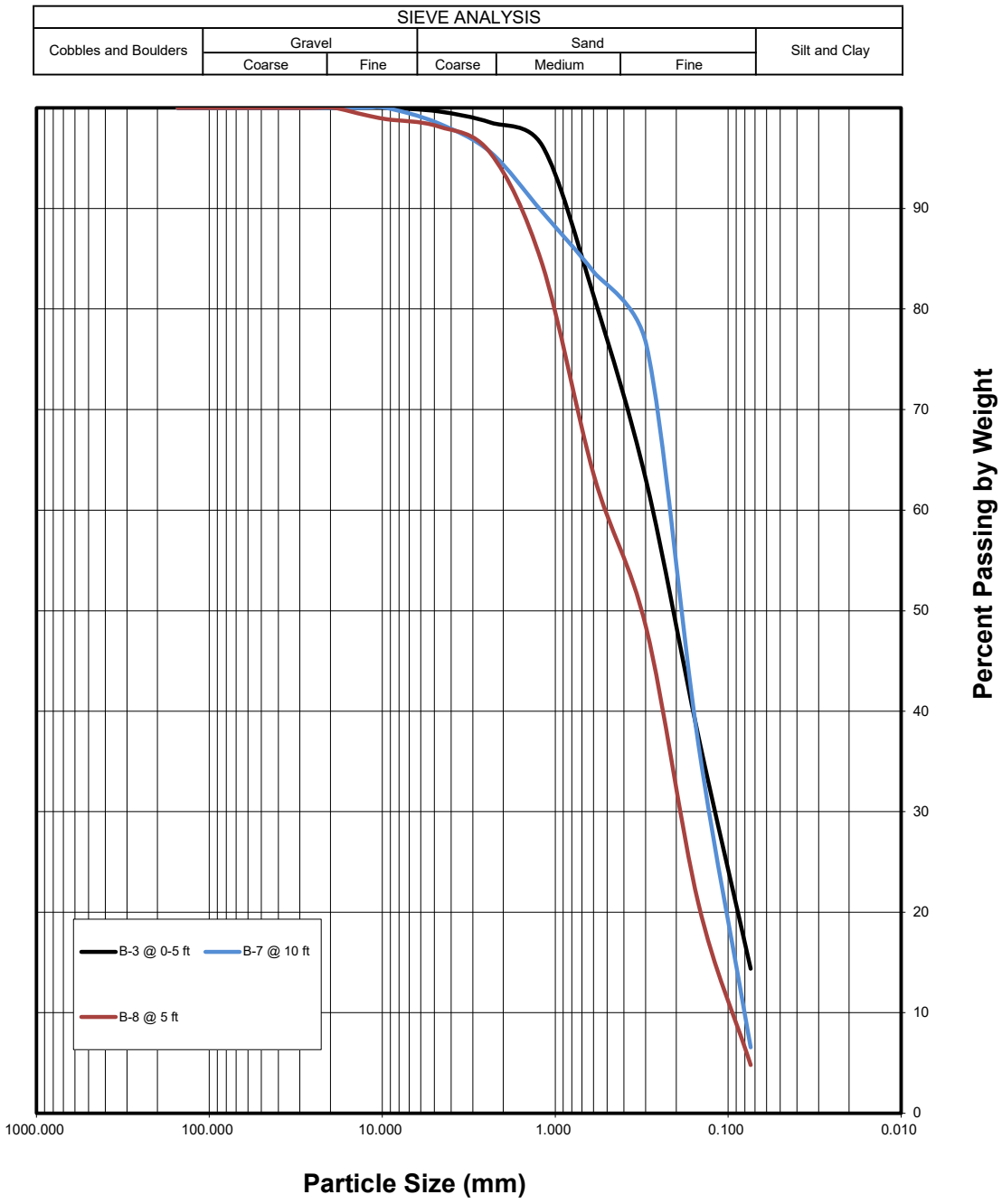
Geo-Engineers and Geologists

Project No.: LE20132

Atterberg Limits Test Results

Plate C-1



LANDMARK
Geo-Engineers and Geologists

Project No.: LE20132

Grain Size Analysis

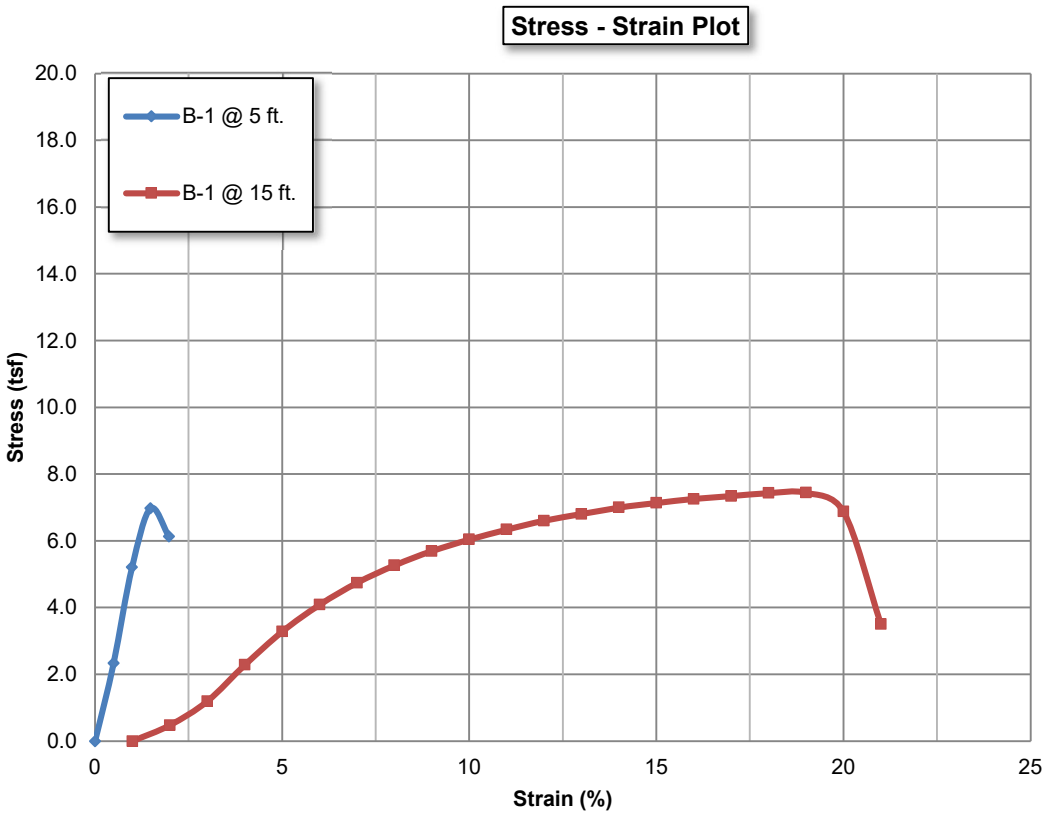
Plate C-2

LANDMARK CONSULTANTS, INC.

CLIENT: Apex Energy Solutions, LLC
PROJECT: Vega 6 Solar Site - Westmoreland, CA
JOB NO: LE20132
DATE: 10/28/2020

UNCONFINED COMPRESSION TEST (ASTM D2166)

Boring No.	Sample Depth (ft)	Natural Moisture Content (%)	Unit Dry Weight (pcf)	Maximum Compressive Strength (tsf)	Cohesion (tsf)	Failure Strain (%)
B-1	5	12.0	115.9	6.97	3.49	1.5
B-1	15	19.3	108.4	7.44	3.72	7.4



LANDMARK Geo-Engineers and Geologists

Project No.: LE20132

Unconfined Compression Test Results

Plate C-3

LANDMARK CONSULTANTS, INC.

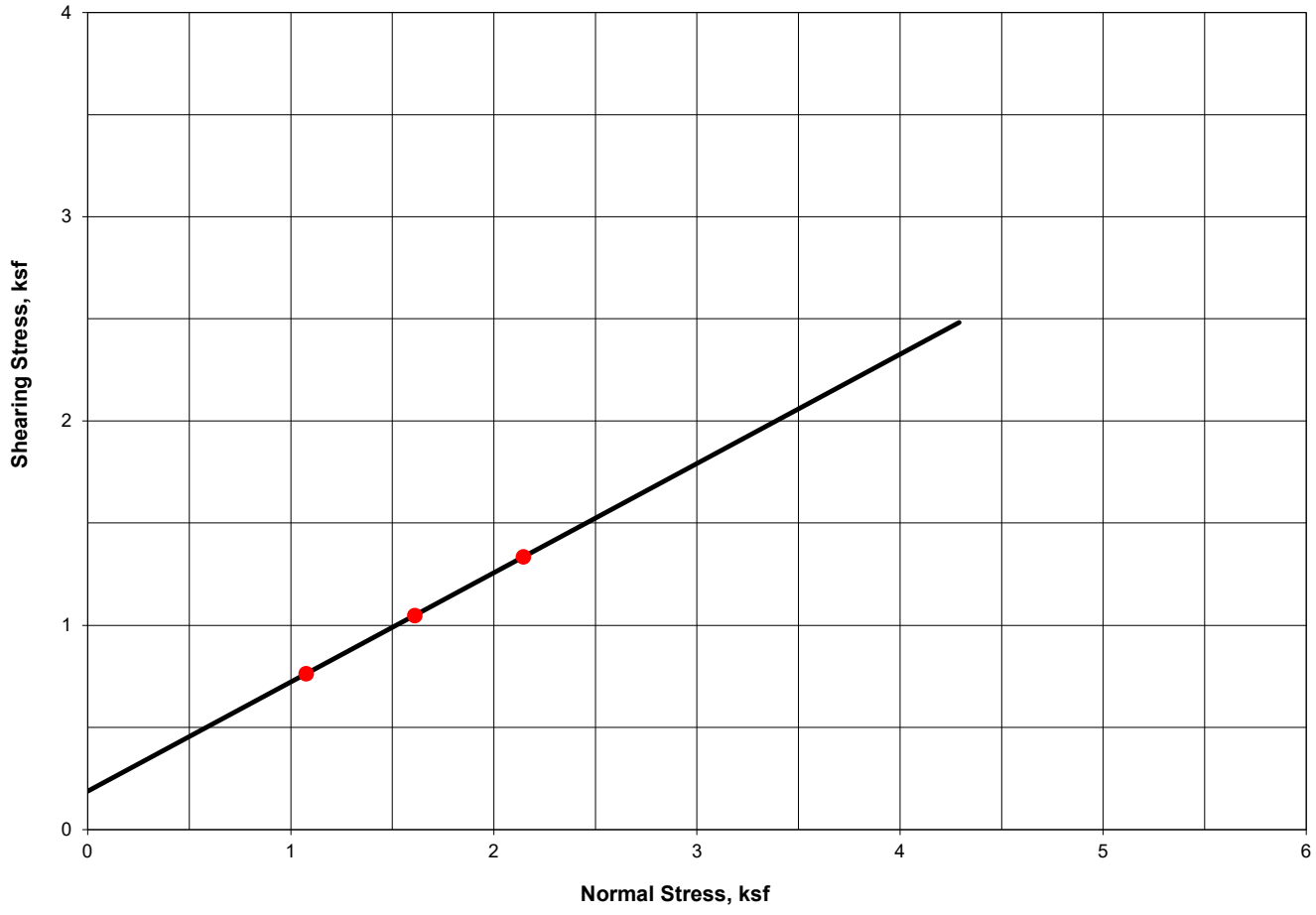
CLIENT: Apex Energy Solutions, LLC
PROJECT: Vega 6 Solar Site - Westmoreland, CA
PROJECT No: LE20132 **DATE:** 10/5/2020

DIRECT SHEAR TEST - INSITU (ASTM D3080)

SAMPLE LOCATION: B-3 @ 5 ft
SAMPLE DESCRIPTION: Silty Sand (SM)

Angle of Internal Friction: 28º
Cohesion: 0.19 ksf
Initial Dry Density: 113.1 pcf
Initial Moisture Content: 0.5%

DIRECT SHEAR TEST RESULTS



LANDMARK Geo-Engineers and Geologists
PROJECT No: LE20132

Direct Shear Test Results

Plate C-4

LANDMARK CONSULTANTS, INC.

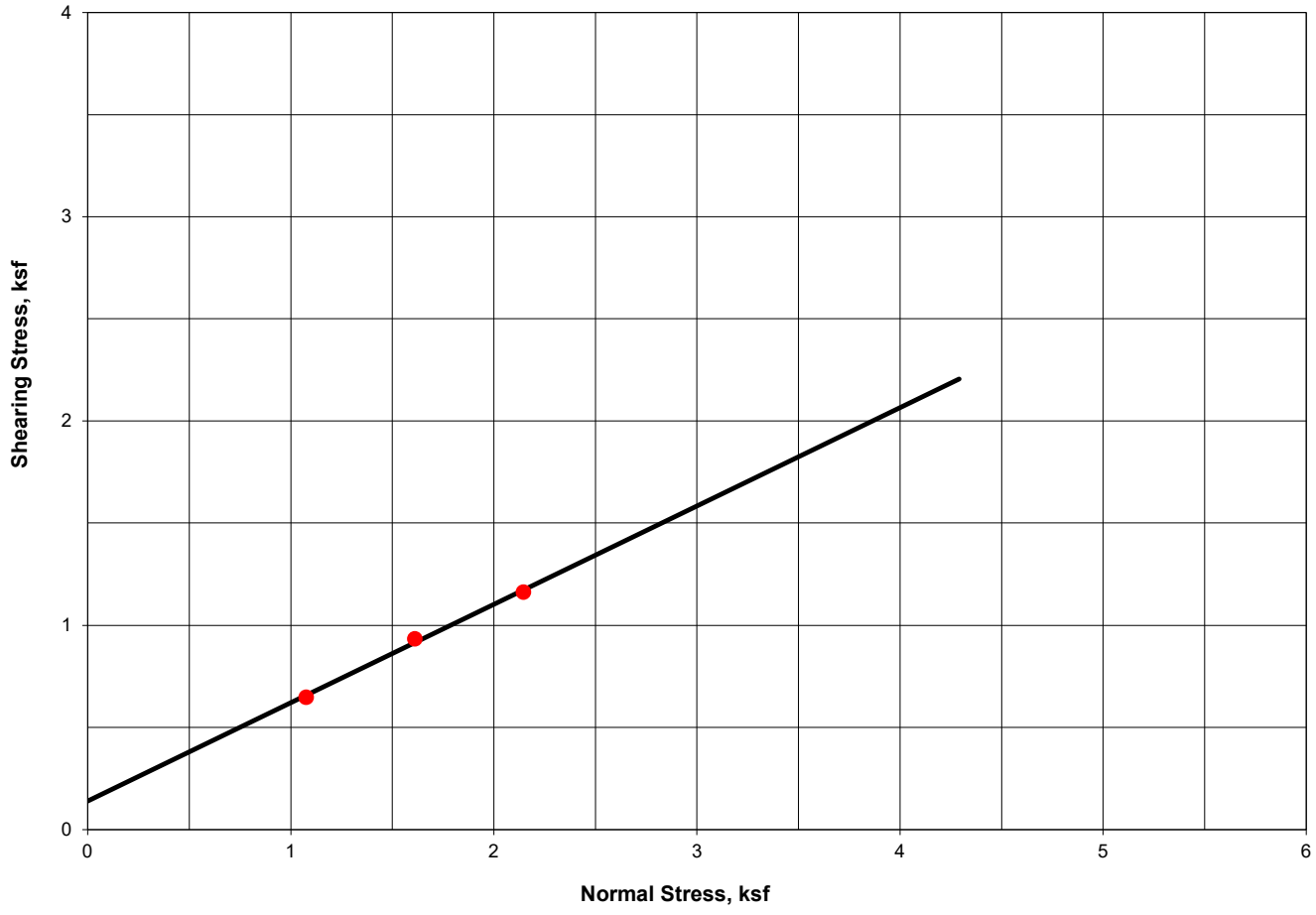
CLIENT: Apex Energy Solutions, LLC
PROJECT: Vega 6 Solar Site - Westmoreland, CA
PROJECT No: LE20132 **DATE:** 10/5/2020

DIRECT SHEAR TEST - INSITU (ASTM D3080)

SAMPLE LOCATION: B-3 @ 10 ft
SAMPLE DESCRIPTION: Sandy Silt (ML)

Angle of Internal Friction: 26º
Cohesion: 0.14 ksf
Initial Dry Density: 105.4 pcf
Initial Moisture Content: 3.5%

DIRECT SHEAR TEST RESULTS



LANDMARK Geo-Engineers and Geologists
PROJECT No: LE20132

Direct Shear Test Results

Plate C-5

LANDMARK CONSULTANTS, INC.

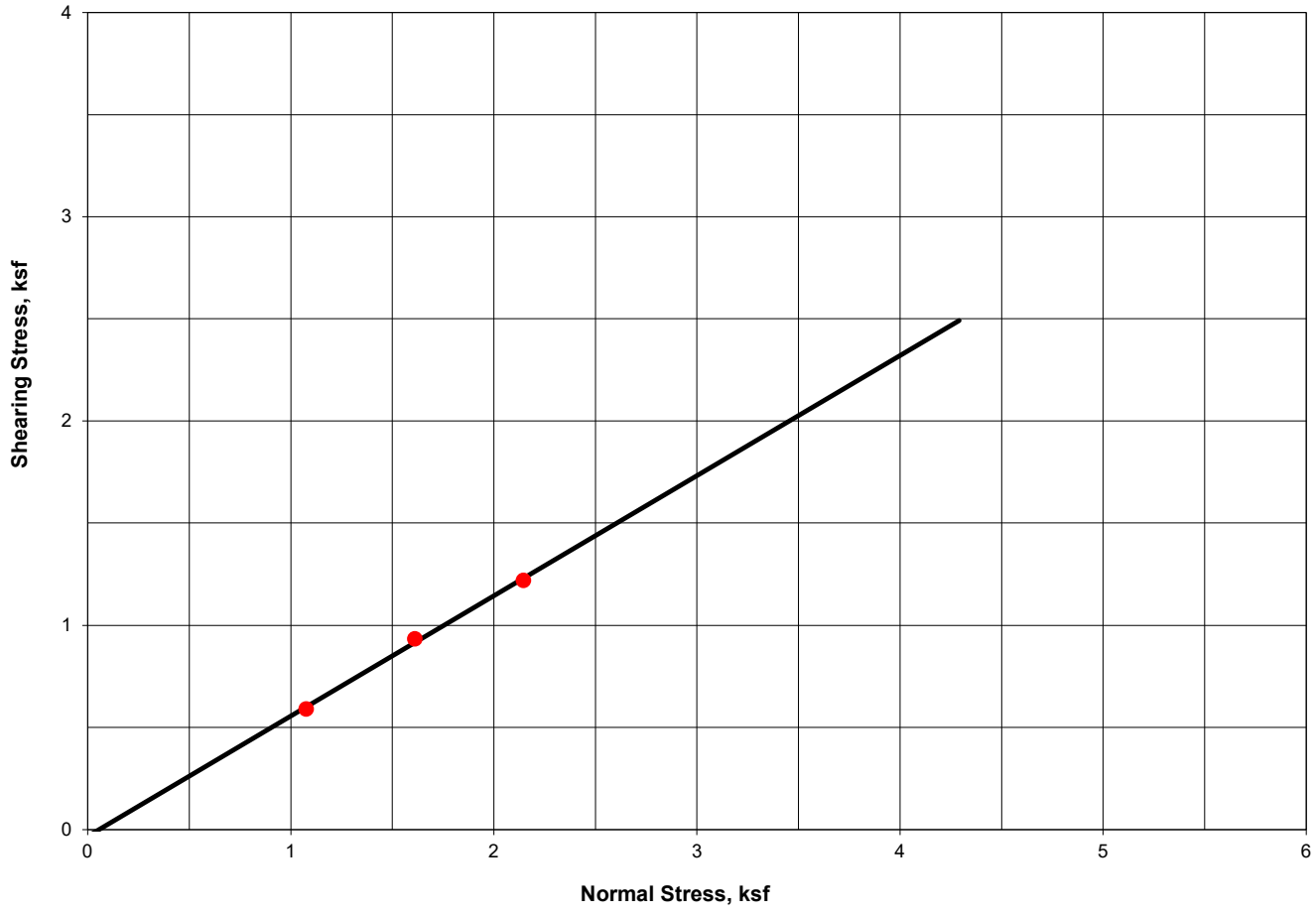
CLIENT: Apex Energy Solutions, LLC
PROJECT: Vega 6 Solar Site - Westmoreland, CA
PROJECT No: LE20132 **DATE:** 10/5/2020

DIRECT SHEAR TEST - INSITU (ASTM D3080)

SAMPLE LOCATION: B-4 @ 10 ft
SAMPLE DESCRIPTION: Sandy Silt (ML)

Angle of Internal Friction: 30º
Cohesion: 0 ksf
Initial Dry Density: 105.7 pcf
Initial Moisture Content: 3.2%

DIRECT SHEAR TEST RESULTS



LANDMARK Geo-Engineers and Geologists
PROJECT No: LE20132

Direct Shear Test Results

Plate C-6

LANDMARK CONSULTANTS, INC.

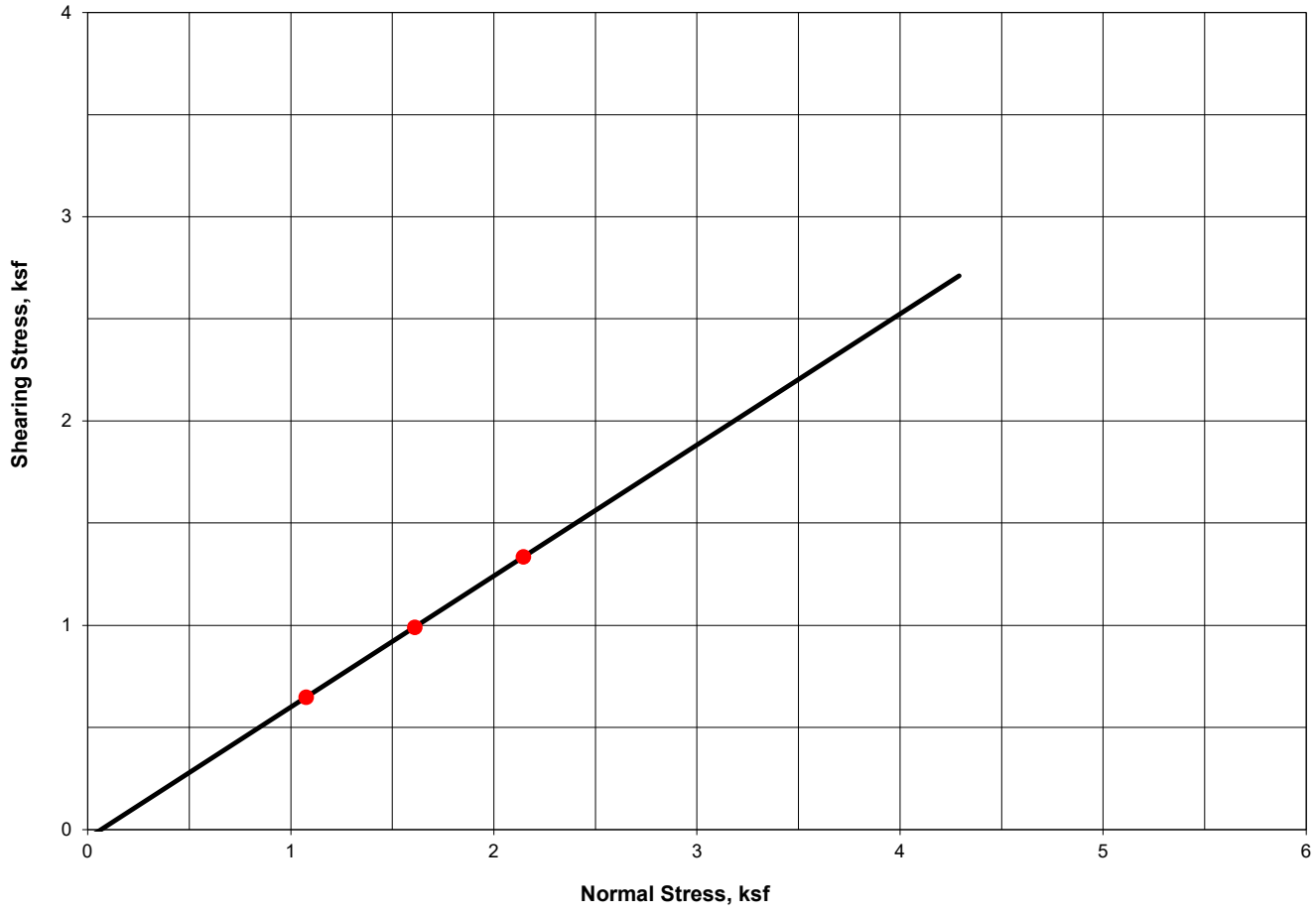
CLIENT: Apex Energy Solutions, LLC
PROJECT: Vega 6 Solar Site - Westmoreland, CA
PROJECT No: LE20132 **DATE:** 10/5/2020

DIRECT SHEAR TEST - INSITU (ASTM D3080)

SAMPLE LOCATION: B-6 @ 10 ft
SAMPLE DESCRIPTION: Silty Sand (SM)

Angle of Internal Friction: 33º
Cohesion: 0 ksf
Initial Dry Density: 101.6 pcf
Initial Moisture Content: 1%

DIRECT SHEAR TEST RESULTS

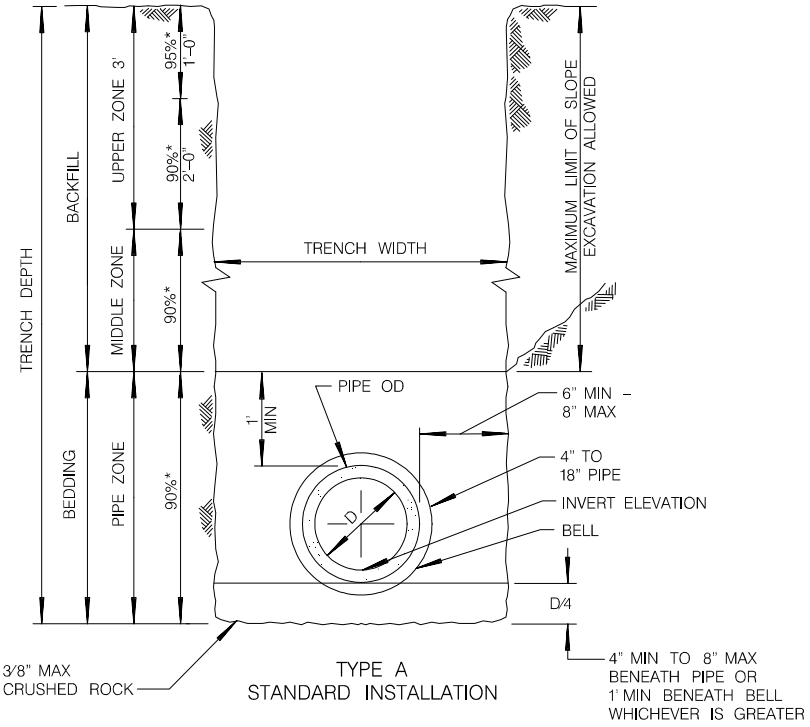


LANDMARK Geo-Engineers and Geologists
PROJECT No: LE20132

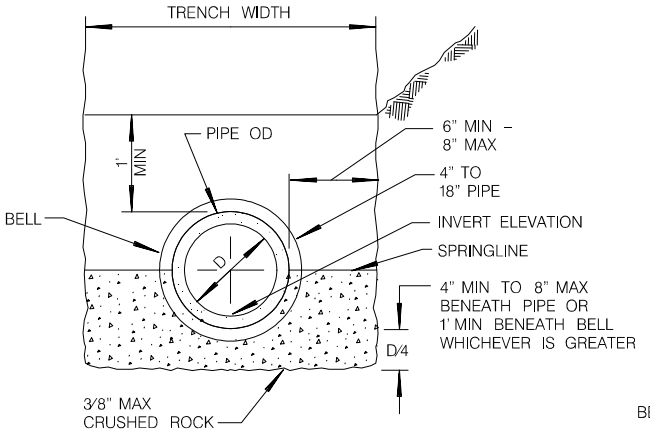
Direct Shear Test Results

Plate C-7

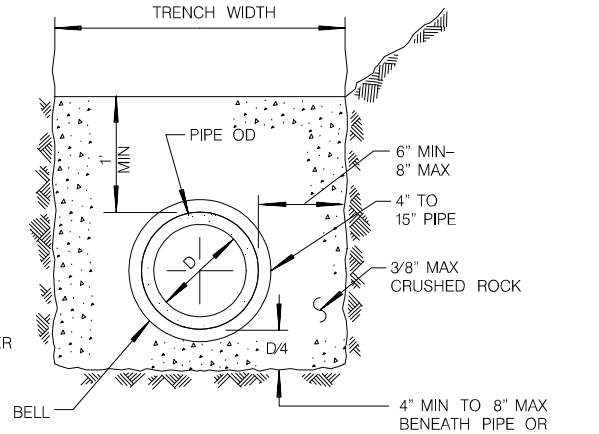
APPENDIX D



TYPE A
STANDARD INSTALLATION



TYPE B
ROCK TO SPRINGLINE



TYPE C
ROCK ENVELOPE

NOTES

1. FOR TRENCH RESURFACING IN IMPROVED STREETS, SEE STANDARD DRAWINGS SDG–107 AND SDG–108.
2. (*) INDICATES MINIMUM RELATIVE COMPACTION.
3. MINIMUM DEPTH OF COVER FROM THE TOP OF PIPE TO FINISH GRADE FOR PVC SDR 35 SEWER MAIN SHALL BE 5'. FOR SHALLOWER DEPTH, SPECIAL DESIGN IS REQUIRED. SEE SDS–101.
4. SEE TYPE A INSTALLATION FOR DETAILS NOT SHOWN FOR TYPES B AND C.
5. FOR PIPE SIZE ENCASEMENT LARGER THAN 15", MAXIMUM SIDE WALL CLEARANCE SHALL BE 12" OR AS SHOWN ON THE PLANS.
6. 6" METAL TAPE SHALL BE INSTALLED ABOVE PIPE 4" BELOW TRENCH CAP AND 12" BELOW FINISH GRADE IN UNIMPROVED STREETS.
7. 1' SAND CUSHION OR A 6" MINIMUM SAND CUSHION WITH 1" NEOPRENE PAD SHALL BE PLACED FOR CROSSINGS UTILITIES WHEN VERTICAL CLEARANCE IS 1' OR LESS. THE NEOPRENE PAD SHALL BE PLACED ON THE MOST FRAGILE UTILITY.

From: City of San Diego Standard Drawing SDS-110 (2016)

LANDMARK Geo-Engineers and Geologists **Project No.: LE20132**	**Pipe Bedding and Trench Backfill Recommendations**	**Plate D-1**

APPENDIX E

VEGA SOLAR – SITE NO. 6
SITE CORROSIVITY ASSESSMENT REPORT

Presented To:

Landmark Consultants

Prepared by:

R F Yeager
ENGINEERING

NOVEMBER 18, 2020

INTRODUCTION

RFYeager Engineering has completed an electrical and thermal resistivity assessment at the proposed Site No. 6 of the Vega Solar Project located near Westmorland, California. The electrical resistivity assessment was conducted in the field. The thermal resistivity assessment was conducted at RFYeager Engineering's office on soil samples prepared by Landmark Consultants (Landmark). A chemical analysis of three (3) soil samples provided by Landmark was also conducted. The objective of this study is to determine the thermal and electrical resistivity, as well as to determine the corrosivity of the soil at the project site.

The location and numbering of the assessment sites is shown in Figure 1 at the end of this report. Figure 1 is based upon the site map provided by Landmark.

SCOPE

The electrical resistivity of the soil was determined by using the Wenner 4 pin method in accordance with ASTM G57 standards. Five readings were obtained and recorded for each assessment site based upon pin spacings of 20, 15, 10, 5, and 2.5 feet. Readings were recorded at three locations within the Site No. 6 boundaries. All resistivity readings were recorded utilizing a Soil Resistance Meter (Megger Model DET4T2).

The soil corrosivity was evaluated based on the results of the field soil electrical resistivity assessment and the chemical analyses of the three soil samples. The soil samples were obtained by Landmark from a depth of approximately 3 feet. The samples were analyzed for pH, soluble salts (chlorides and sulfates) as well as resistivity (in the as-received and saturated condition).

The thermal resistivity was determined using a Decagon KD2 Pro Portable Thermal Properties Analyzer (KD2 Pro) outfitted with the 100 mm long, 2.4 mm diameter TR-1 sensor. The KD2 Pro works in accordance with ASTM D5334-08 using a transient heat method. Soil samples from two locations were tested. The samples, as prepared by Landmark per ASTM D1557, were tested in a 2.50 inch diameter by 6.75 inch deep holder.

CONCLUSIONS

The following are significant conclusions resulting from this assessment:

1. The results of the field electrical resistivity assessment are provided in Table 1 on the following page. Resistivity readings between each assessment location were varied. The

readings from Tests No. 1 and No. 3 (located on the north and south sides of Site 6, respectively) were relatively high, ranging between 9,154 ohm-cm and 72,100 ohm-cm. The readings Test No. 2 (located near the eastern edge of Site 6) were much lower, ranging from 728 ohm-cm to 1,972 ohm-cm. It is noted that the dry, loose soil conditions at some locations made it challenging to obtain accurate field data. Large amounts of water had to be poured at each pin location in order to achieve good electrical contact with the earth.

Table 1 – Vega Solar Site No. 6
Electrical Resistivity Data
Prepared by: RFYeager Engineering
Test Date: 10.19.2020

Test No.	Assessment Site ID	Soil Resistivity (Ohm-cm) Ave. Soil Depth (feet) 20	15	10	5	2.5
1	1	9154	11691	17656	40502	61089
2	2	728	1120	1360	1877	1972
3	3	11873	23583	36672	44237	72100

1 - See Figure 1 for soil assessment location relative to project site

2. The chemical analysis results were also varied (see Table 2 below). Samples B-1 and B-7 (located on the north and south sides of Site 6, respectively) had relatively low concentrations of chlorides (i.e. less than 300 ppm) and sulfates (i.e. less than 1,000 ppm). Sample B-3 (located near the eastern edge of Site 6) had a relatively high concentration of chlorides. The Sample B-3 sulfate concentration was relatively low. The saturated soil resistivities of Samples B-1 and B-7 were 2,800 ohm-cm and 3,400 ohm-cm, respectively. The Sample B-3 saturated soil resistivity was lower at 580 ohm-cm. The pH readings for all soil samples are indicative of slightly alkaline soil conditions.

Table 2 – Vega Solar Site No. 6
Chemical Analysis Data
Prepared by: RFYeager Engineering

Sample ID[1]	Min. Soil Box Resistivity - CalTest 643 (ohm-cm)	Chloride Concentration - CalTest 422 (ppm)	Sulfate Concentration - CalTest 417 (ppm)	pH CalTest 643
B-1	2,800	150	100	8.5
B-3	580	490	330	8.6
B-7	3,400	70	60	8.8

1 - See Figure 1 for soil sample location. Soil sample taken from a depth of 3 feet

3. It is noted that the saturated soil box resistivities measured from the three soil samples are lower than the Wenner 4-pin resistivities taken in the field. This is likely due to the relatively dry soil conditions at the project site during the field assessment. The dryer the soil, the lesser the impact soluble soil salts have on resistivity. The saturated (minimum) soil box measurements represent the lowest, most corrosive conditions whereby the soils become fully saturated and have the lowest resistivity.

4. The results of the field electrical resistivity assessment and soil sample analysis at the Project's Site 6 indicate varying levels of soil corrosivity. The soil in the northern and southern end of Site 6 is considered moderately corrosive to buried metallic structures. The soil on the eastern side of Site 6 is considered highly corrosive to buried metallic structures. However, for all locations, the soil is considered aggressive enough to initiate and support the corrosion of buried metallic utilities. Accordingly, supplemental corrosion control measures are recommended in order to prevent premature failures.

5. The soil thermal resistivity is provided in Table 3 below. The corresponding Time vs. Temperature graphs for each assessment site is provided in Appendix A.

Table 3 – Vega Solar Site No. 6
Thermal Resistivity Data
Prepared by: RFYeager Engineering

Sample ID[1]	Thermal Resistivity[2] ($m\ ^0CW^{-1}$)
B-1	0.62
B-6	1.94

1 - See Figure 1 for sample location relative to project site
2 – ASTM D5334-08.

DISCUSSION

Electrical Resistivity Assessment

Soil electrical resistivity (inverse of conductivity) measures the ability of an electrolyte (soil) to support electrical current flow. The most common method of measuring soil electrical resistivity is the Wenner 4-Pin Method which uses four pins (electrodes) that are driven into the earth and equally spaced apart in a straight line. The Wenner 4-pin Method provides an average resistivity of a hemisphere (essentially) of soil whose diameter is approximately equal to the pin spacing. For example, the electrical resistivity value obtained with the pins spaced at

5 feet apart is the average resistivity of a hemisphere of soil from the surface to a depth of 5 feet. By taking readings at different pin spacings (or depths), average soil electrical resistivity conditions can be obtained within areas at, above, and below trench zones.

Corrosion versus Resistivity

Corrosion is an electrochemical process, whereby the reaction rate is largely dependent upon the electrical conductivity of the surrounding electrolyte. Accordingly, the lower the electrical resistivity, then the greater the current flow and the greater the corrosion rate assuming all other factors are equal.

One common relationship between corrosivity and soil electrical resistivity used by corrosion engineers is provided on the following page.

Corrosivity	Electrical Resistivity
Very Corrosive	0-1000 ohm-cm
Corrosive	1001-2000 ohm-cm
Fairly Corrosive	2001-5000 ohm-cm
Moderately Corrosive	5001-12000 ohm-cm
Slightly Corrosive	12001-30000 ohm-cm
Relatively Non-Corrosive	Greater than 30001 ohm-cm

Thermal Resistivity Assessment

Thermal resistivity was measured on soil samples from two locations at Site 6. The samples were obtained by Landmark from an approximate depth of 5 feet. For each sample, the thermal resistivity was measured two times with the average provided in Table 3. The assessment was conducted in general accordance with the standard method ASTM D5334-08 which calculates thermal resistivity by monitoring the dissipation of heat from a line heat source. The assessment consists of inserting a thermal sensor into the soil with a known current and voltage applied. The corresponding temperature rise in the soil over a period of time is recorded. The thermal resistivity is obtained from an analysis of the time series temperature data during the heating and cooling cycle of the sensor.

For purposes of this report, the thermal resistivity values are provided as “data only” in order to assist others in the project design.

Thank you for this opportunity to provide these corrosion engineering services. Please contact me if you have any questions.

Randy J. Geving, PE
Registered Professional Engineer – Corrosion No.1060
RGeving@RFYeager.com, 760.715.2358

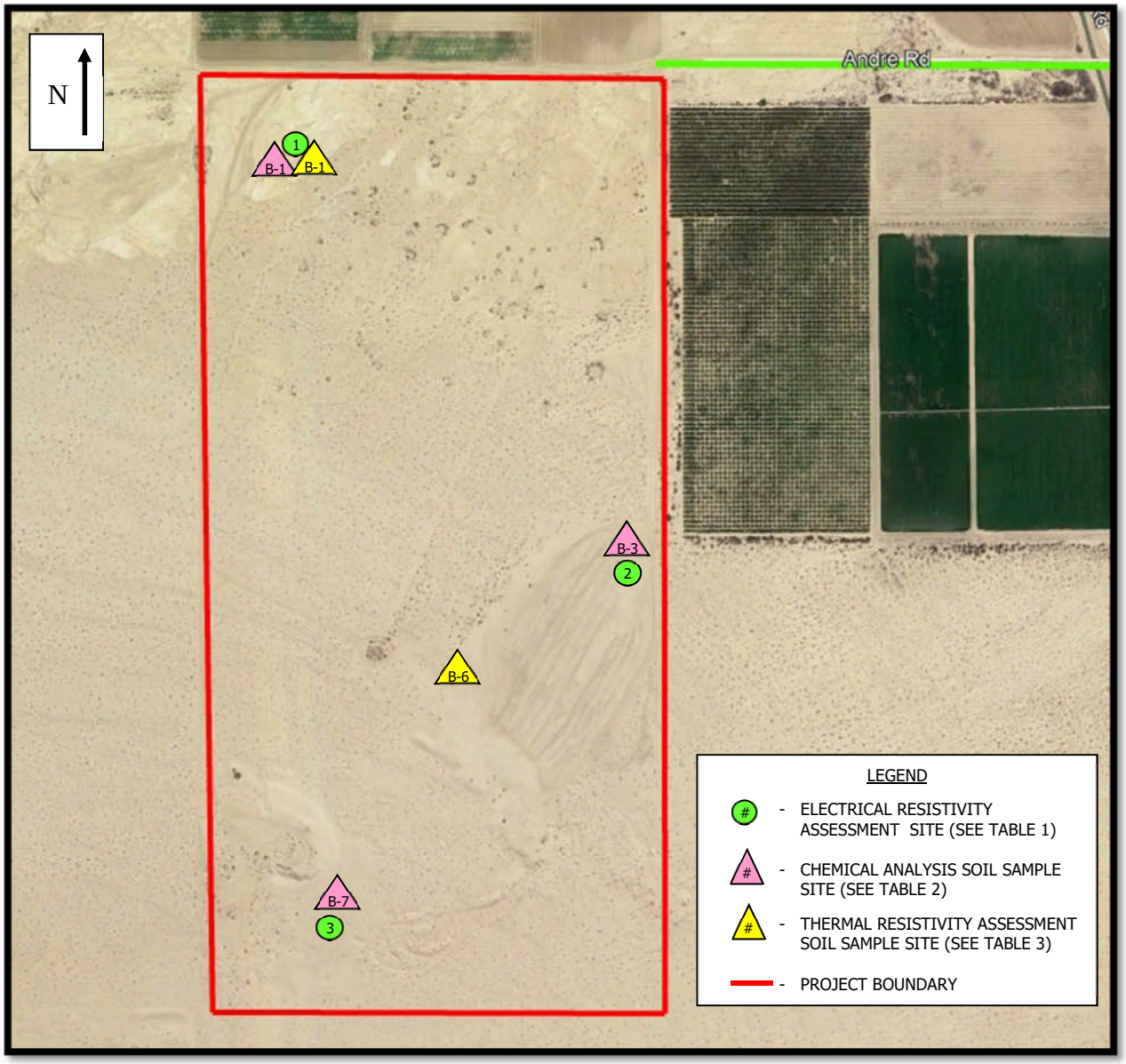


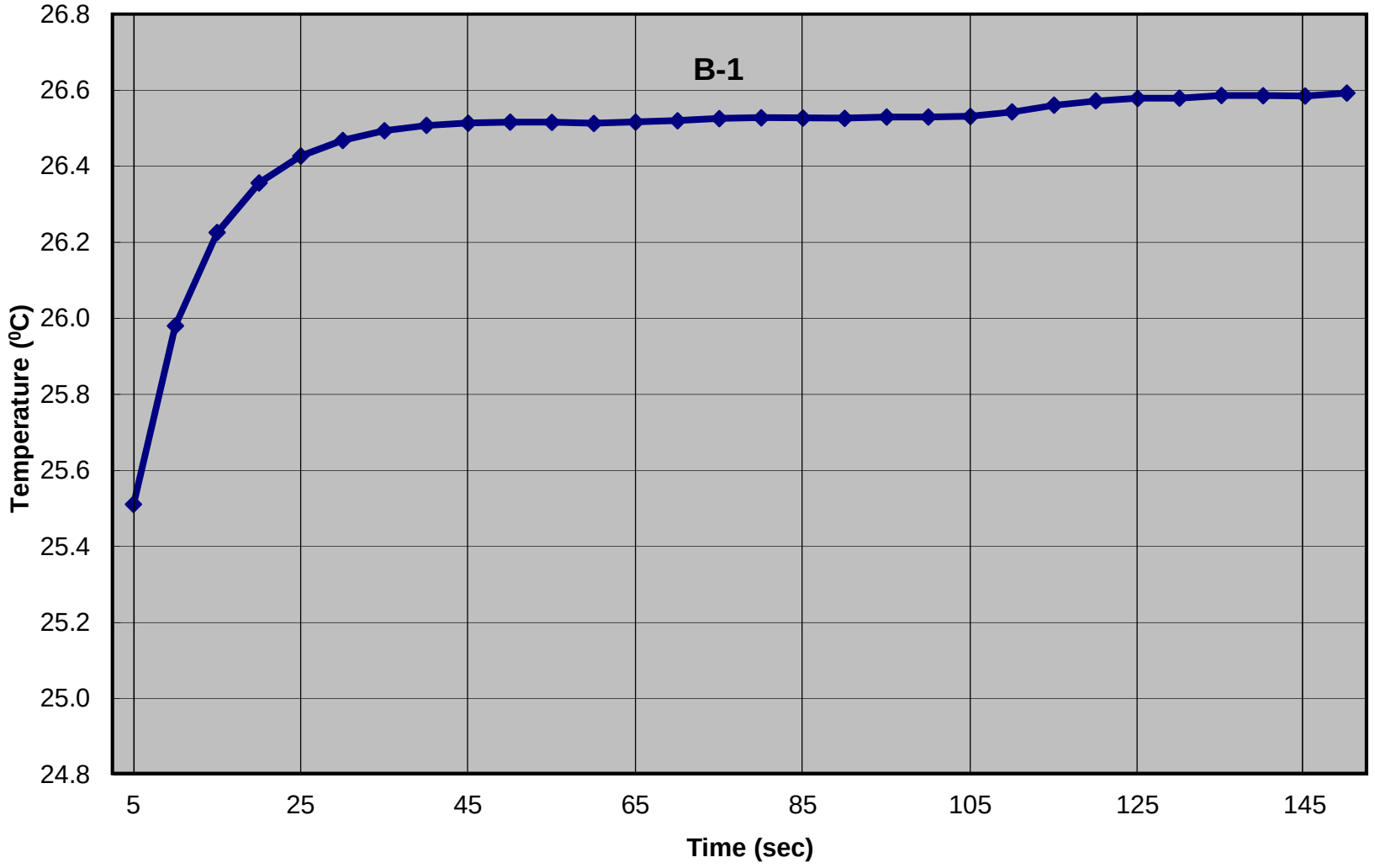
Figure 1 – Vega Solar Site No. 6 Assessment Locations

APPENDIX A

THERMAL RESISTIVITY

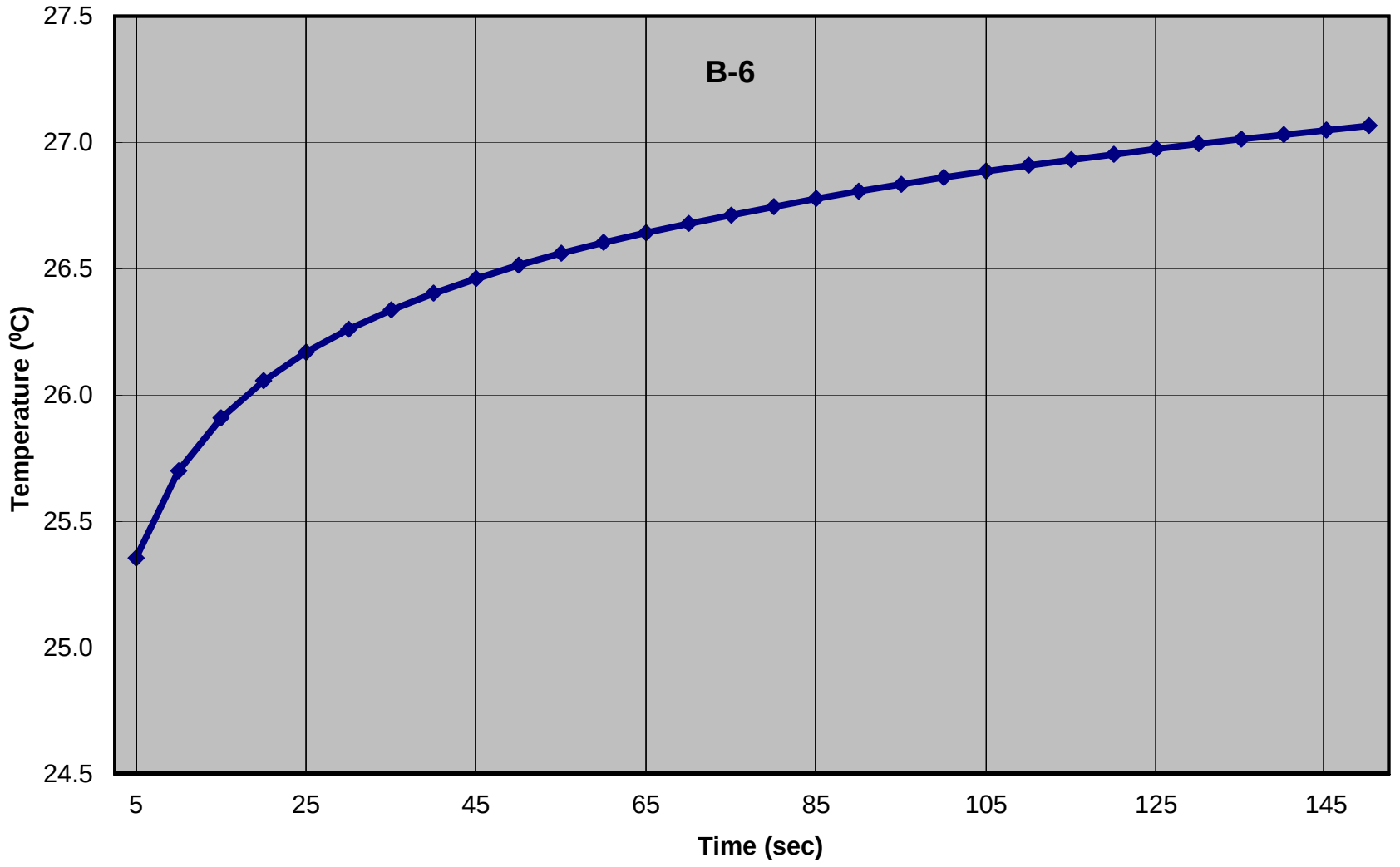
TEMPERATURE VS. TIME GRAPHS

Vega Solar - Site 6
Thermal Resistivity Temperature vs. Time Graph
Test Date: October 30, 2020



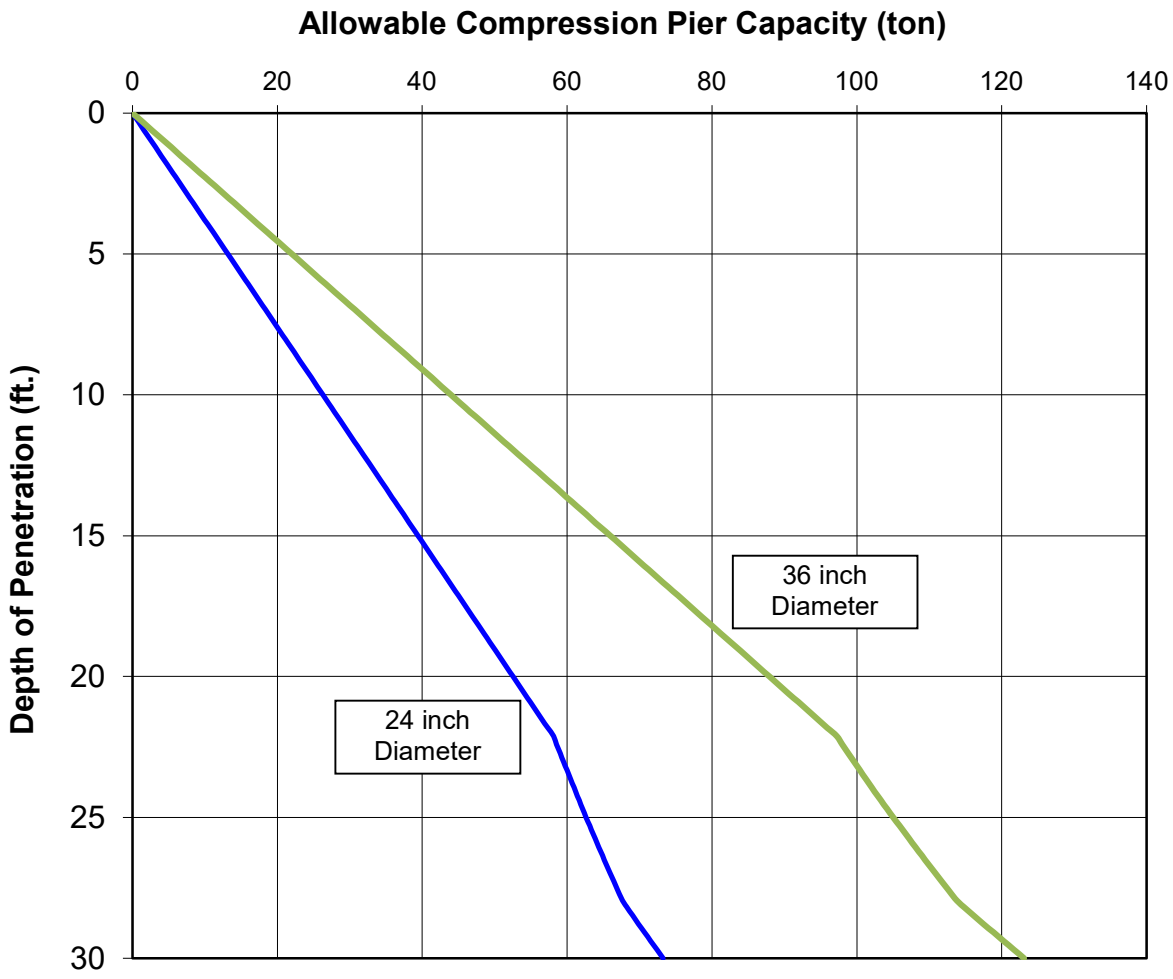
RFYeager Engineering

Vega Solar - Site 6
Thermal Resistivity Temperature vs. Time Graph
Test Date: October 30, 2020



RFYeager Engineering

APPENDIX F



Notes:

1. Compression load capacity are based on skin friction and end-bearing capacity. The structural capacity of the piers should be checked.
2. The indicated capacities are for sustained (dead plus live) vertical compression load, and include a factor of safety of at least 2.5
3. For temporary wind or seismic load, the above values may be increased by one-third.
4. Capacities of other pier sizes are in direct proportion to the pile diameter.
5. Pier capacity in tension should be taken as 50% of the compression capacity.

LANDMARK Geo-Engineers and Geologists **Project No.: LE20132**	**Drlled Piers Compression Capacity Chart** **Boring B-1** **Vega 6 Solar Project** **Westmoreland, California**	**Plate** **F-1**

APPENDIX G

REFERENCES

American Concrete Institute (ACI), 2013, ACI Manual of Concrete Practice 302.1R-04

American Society of Civil Engineers (ASCE), 2010, Minimum Design Loads for Buildings and Other Structures: ASCE Standard 7-10.

California Building Standards Commission, 2017, 2016 California Building Code. California Code of Regulations, Title 24, Part 2, Vol. 2 of 2.

Caltrans, 2012, Highway Design Manual.

California Division of Mines and Geology (CDMG), 1996, California Fault Parameters: available at http://www.consrv.ca.gov/dmg/shezp/fltindex.html.

California Geological Survey (CGS), 2008, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A, 98p.

California Geological Survey (CGS), 2018, Fault Activity Map of California http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html#.

California Geological Survey (CGS), 2018, Alquist-Priolo Earthquake Fault Zone Maps. http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps

Cetin, K. O., Seed, R. B., Der Kiureghian, A., Tokimatsu, K., Harder, L. F., Jr., Kayen, R. E., and Moss, R. E. S., 2004, Standard penetration test-based probabilistic and deterministic assessment of seismic soil liquefaction potential: ASCE JGGE, Vol., 130, No. 12, p. 1314-1340.

Geologismiki, 2017, CLiq Computer Program, www.geologismiki.gr

Ishihara, K. (1985), Stability of natural deposits during earthquakes, Proc. 11th Int. Conf. On Soil Mech. And Found. Engrg., Vol. 1, A. A. Balkema, Rotterdam, The Netherlands, 321-376.

Jones, A. L., 2003, An Analytical Model and Application for Ground Surface Effects from Liquefaction, PhD. Dissertation, University of Washington, 362 p.

McCrink, T. P., Pridmore, C. L., Tinsley, J. C., Sickler, R. R., Brandenberg, S. J., and Stewart, J. P., 2011, Liquefaction and Other Ground Failures in Imperial County, California, from the April 4, 2010, El Mayor—Cucapah Earthquake, CGS Special Report 220, USGS Open File Report 2011-1071, 84 p.

Morton, P. K., 1977, Geology and mineral resources of Imperial County, California: California Division of Mines and Geology, County Report No. 7, 104 p.

Post-Tensioning Institute (PTI), 2007a, Standard Requirements for Analysis of Shallow Concrete Foundations on Expansive Soils (3rd Edition).

Post-Tensioning Institute (PTI), 2007b, Standard Requirements for Design of Shallow Post-Tensioned Concrete Foundations on Expansive Soils (2nd Edition).

Robertson, P. K., 2014, Seismic liquefaction CPT-based methods: EERI 1st Workshop on Geotechnical Earthquake Engineering – Liquefaction Evaluation, Mapping, Simulation and Mitigation. UC San Diego Campus, 10/12/2014.

Robertson, P. K. and Wride, C. E., 1997, Cyclic Liquefaction and its Evaluation based on the SPT and CPT, Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils, NCEER Technical Report 97-0022, p. 41-88.

Rymer, M.J., Treiman, J.A., Kendrick, K.J., Lienkaemper, J.J., Weldon, R.J., Bilham, R., Wei, M., Fielding, E.J., Hernandez, J.L., Olson, B.P.E., Irvine, P.J., Knepprath, N., Sickler, R.R., Tong, .X., and Siem, M.E., 2011, Triggered surface slips in southern California associated with the 2010 El Mayor-Cucapah, Baja California, Mexico, earthquake: U.S. Geological Survey Open-File Report 2010-1333 and California Geological Survey Special Report 221, 62 p., available at http://pubs.usgs.gov/of/2010/1333/.

U.S. Geological Survey (USGS), 1990, The San Andreas Fault System, California, Professional Paper 1515.

U.S. Geological Survey (USGS), 2017, US Seismic Design Maps Web Application, available at http://geohazards.usgs.gov/designmaps/us/application.php

Wire Reinforcement Institute (WRI/CRSI), 2003, Design of Slab-on-Ground Foundations, Tech Facts TF 700-R-03, 23 p.

Youd, T. L., 2005, Liquefaction-induced flow, lateral spread, and ground oscillation, GSA Abstracts with Programs, Vol. 37, No. 7, p. 252.

Youd, T. L. and Garris, C. T., 1995, Liquefaction induced ground surface disruption: ASCE Geotechnical Journal, Vol. 121, No. 11.

Zimmerman, R. P., 1981, Soil survey of Imperial County, California, Imperial Valley Area: U.S. Dept. of Agriculture Soil Conservation Service, 112 p.

Phase I ESA Report

Vega 6 (Hensler) Solar Site
Andre Road west of Garvey Road
Westmorland, California

Prepared for:

Apex Energy Solutions, LLC
750 Main Street
El Centro, CA 92243

Prepared by:

GS Lyon Consultants, Inc.
780 N. 4th Street
El Centro, CA 92243
(760) 337-1100

December 2020

GSL Lyon

Engineering And
Information Technology

December 17, 2020

Mr. Ziad Alaynon
Apex Energy Solutions, LLC
750 Main Street
El Centro, CA 92243

Phase I Environmental Site Assessment Report
Vega 6 (Hensler) Solar Site
Andre Road west of Garvey Road
Westmorland, California
GSL Report No. GS2017

Dear Mr. Alaynon:

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-13 of the approximately 320-acre property located on the south side of Andre Road west of Garvey Road west of Westmorland, California. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. **This assessment has revealed the following recognized environmental conditions (REC's) in connection with the property:**

- Several used oil filters were noted in the northwest corner of the site and used tires were found scattered throughout the subject site. ***The used oil filters and tires should be cleaned up and properly disposed.***
- Several areas of illegal dumping of household debris were noted throughout the subject site. ***The debris should be cleaned up and properly disposed.***

We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR §312 and we have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Attached is our report which describes the procedures used and results of the assessment. If you have any questions or require additional information, please do not hesitate to contact the undersigned at (760) 337-1100. We appreciate the opportunity to provide our professional review for this subject property.

Respectfully Submitted,
GS Lyon Consultants, Inc.

Jeffrey O. Lyon, PE
Principal Engineer

Steven K. Williams, PG, CEG
Consulting Geologist

Peter E. LaBrucherie, PE
Consulting Engineer

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

1.1 Purpose

GS Lyon Consultants, Inc. was retained by Apex Energy Solutions, LLC to conduct a Phase I Environmental Site Assessment (ESA) for the Property (herein referred to as the subject property or subject site in this Phase I ESA Report) as a prerequisite to property transaction (purchase, sale, refinance, etc.). The approximately 320-acre property is located on the south side of Andre Road west of Garvey Road west of Westmorland, California. See Plate 1 in Appendix B for a Vicinity Map of the subject property.

The purpose of this Phase I Environmental Site Assessment (ESA) is to identify, to the extent feasible, recognized environmental conditions (RECs) associated with past and present activities on the subject property or in the immediate subject property vicinity in general conformance to ASTM Standard E1527-13 "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*" that may affect future uses of the subject property.

This report is intended to satisfy the Phase I ESA portion of "*all appropriate inquiry*" into the previous ownership and uses of the subject property as defined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at Title 42 of the United States Code (U.S.C.) §9601(35)(B) and in accordance with 40 Code of Federal Regulations (CFR) Part 312, Standards and Practices for All Appropriate Inquiries; Final Rule (AAI Rule).

1.2 Scope of Services

The scope of work for this ESA is in general accordance with the requirements of ASTM Standard E1527-13. This assessment included:

- Reconnaissance of the subject property and adjacent properties
- Review user-provided information
- Interviews with persons with significant knowledge of the subject property
- Review of a regulatory database report provided by a third-party vendor
- Review readily-available historical sources (including but not limited to: aerial photographs, fire insurance maps, property tax files, recorded land title records, and topographical maps)
- Prepare report of findings

1.3 Limitations

No Phase I ESA can completely eliminate uncertainty regarding the potential for RECs in connection with a property. Conformance of this assessment with ASTM Standard E1527-13 is intended to reduce, but not eliminate uncertainty regarding the potential for RECs in connection with the Subject Property. While GS Lyon has made reasonable effort to discover and interpret available historical and current information on the property within the time available, the possibility of undiscovered contamination remains. Our assessment of the subject property and surrounding areas was conducted in accordance with ASTM guidelines and the *generally accepted environmental engineering standard of practice* which existed in Imperial County, California at the time that the report was prepared. No warranty, express or implied, is made.

GS Lyon Consultants, Inc. derived the data in this report primarily from visual inspections, examination of public records and information in the public domain, informal interviews with individuals, and readily available information about the subject property. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration of the subject property, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in this report.

The findings, observations, and conclusions expressed by GS Lyon Consultants in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the subject property with any federal, state or local law or regulation.

This report should not be relied upon after **180 days** from the date of issuance, unless additional services are performed as defined in ASTM E1527-13 - Section 4.7.

1.4 Deviations or Data Gaps

ASTM Standard E1527-13 requires any significant data gaps, deviations, and deletions from the ASTM Standard to be identified and addressed in the Phase I ESA. A significant data gap would be one that affected the ability to identify a REC on the subject property or adjacent properties.

Through the course of this assessment, *data failures* or *data gaps* may have been encountered. These failures or gaps, if any, are discussed below. The following provides the opinion of the Environmental Professional as to the significance of the data gaps in terms of defining *recognized environmental conditions* at the subject property. Data failures may or may not be significant data gaps, and the discussion also provides information pertaining to whether the data failures resulted in significant data gaps.

1.4.1 Data Failures

Data failure is a failure to achieve the historical (property use) research objectives specified in the ASTM Standard Practice even after reviewing the eight standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. No *data failures w*ere encountered during this investigation.

1.4.2 Data Gaps

A *data gap* is a lack of or inability to obtain information required by the ASTM Standard Practice, despite good faith efforts by the Environmental Professional (EP) to gather such information. This could include any component of the Practice, e.g., standard environmental records, interviews, or a complete reconnaissance. A data gap by itself is not inherently significant, but if other information and/or the EP's experience raises reasonable concerns about the gap, it may be judged to be significant.

Due to the location of the subject property, Sanborn Fire Insurance maps were not available for the subject property. Because there is no historical data or physical indications that the property has ever been developed or occupied by a business that would have produced hazardous materials, the lack of Sanborn Fire Insurance maps is not considered a significant data gap.

Aerial photographs and other historical records were not available at 5 year intervals as required under the ASTM E1527-13 standard. This resulted in a data gap for years that records were not available regarding the area of the subject property. However, based upon other historical information reviewed, the subject property has been vacant desert land that has been used sporadically for mining of sand and clay. Therefore, this data gap is not considered to be significant.

Interviews with past owners, operators and occupants were not reasonably ascertainable and thus constitute a data gap. Based on information obtained from other historical sources (as discussed in Section 3.0), this data gap is not expected to alter the findings of this assessment.

1.5 Significant Assumptions

In preparing this report, GS Lyon Consultants, Inc. has relied upon and presumed accurate certain information (or the absence thereof) about the subject property and adjacent properties by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, GS Lyon Consultants has not attempted to verify the accuracy or completeness of any such information.

1.6 User Reliance

This report has been prepared on behalf of and for the exclusive use of Apex Energy Solutions, LLC for the particular subject property identified in this report, and is subject to and issued in connection with the referenced Agreement and the provisions thereof. This report should not be relied upon by any party other than the client, its legal counsel, and financial institution without the express permission of GS Lyon Consultants, Inc. Any reliance on this report by other parties shall be at such party's sole risk. Any future consultation or provision of services to third parties related to the subject property requires written authorization from Apex Energy Solutions, LLC or their representatives. Any such services may be provided at GS Lyon Consultants sole discretion and under terms and conditions acceptable to GS Lyon Consultants, including potential additional compensation.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The approximately 320-acre subject property is located on the south side of Andre Road west of Garvey Road (APN 034-160-002) west of Westmorland, California. A gen-tie line route is also included in this evaluation and extends from the north side of the subject site northwest approximately 4 miles. The subject property and gen-tie line location are depicted on Plate 1, Site Map.

2.2 Current Property Use and Description

The subject property currently consists of approximately 320 acres of vacant desert land. The subject property is rectangular in plan view, elongate in the north-south direction. There is a commercial borrow area in the northwest corner of the site where clay soils have been removed for export from the site. There are borrow pits in the southern and east-central portions of the subject site where sand soils have been removed for export offsite. Several dirt trails cross the site.

A gen-tie power line is proposed to extend approximately 4 miles north and west of the subject site. The gen-tie line route is planned along the margins of the agricultural fields and orchards to the north, then west along Garvey Road to an existing power line through vacant desert land.

2.3 Adjoining Property Use

The subject property is located at the transition between vacant desert land to the west and south and agricultural lands to the north and east. Adjacent properties consist of vacant desert land to the south and west. A citrus orchard is located to the east and farm fields are locate to the north.

The gen-tie line passes along the southern boundary of the Clean Harbors Hazardous Waste Landfill. The hazardous material is located within geo-synthetic lined and monitored waste cells approximately ½ mile north of the southern boundary of the waste facility.

2.4 Physical Site Characteristics

Topography: Topographic maps (USGS 7.5 minute Westmorland West, CA Quadrangle) indicate that the subject property elevation is approximately 15 to 130 feet below mean sea level (MSL) or Elevation 985 to 870 (local datum). The Imperial Irrigation District, which supplies power and raw (irrigation) water to the area, established local datum by equating mean sea level to El. 1000.00 feet.

Geologic Setting: The subject property is located in the Colorado Desert Physiographic province of southern California. The dominant feature of the Colorado Desert province is the Salton Trough, a geologic structural depression resulting from large-scale regional faulting. The trough is bounded on the northeast by the San Andreas Fault and the southwest by faults of the San Jacinto Fault Zone. The Salton Trough represents northward extension of the Gulf of California, which has experienced continual in-filling with both marine and non-marine sediments since the Miocene Epoch (25 million years before present). The tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of historic seismicity.

The subject property is directly underlain by Holocene (0-11,000 years before present) Cahuilla Lake sediments, which consist of interbedded lenticular and tabular sand, silt, and clay. The predominant surface soil is silty clay. The Holocene lake deposits are considered to be less than 100 feet thick and are characterized by surficial clay and silt deposits with varying amounts of fine sand. The topography of the Imperial Valley is relatively flat, with few significant land features. The valley floor slopes gently to the north (less than 0.5 percent) from an elevation of sea level at Calexico to approximately 225 feet below sea level at the Salton Sea.

Soil Conditions: The U. S. Soil Conservation Service compiled a map of surface soil conditions and published a soil survey report including maps in 1980. The soil survey maps did not include the subject property, but soil mapping of adjacent parcels indicate that surficial deposits at the subject property and surrounding area consist predominantly of silty clay and silty clay loams of the Imperial soil group and silty sands of the Rositas soil group (see Appendix B). These loams are formed in sediment and alluvium of mixed origin (Colorado River overflows and fresh-water lake-bed sediments). Based on Unified Soil Classification System presented in the Soils Survey Report, the permeability of these soils is expected to be low to very low.

Groundwater Conditions: The groundwater in the vicinity of the subject property is brackish and is encountered at a depth of 15 to 30 feet below the ground surface. Depth to groundwater may fluctuate due to localized geologic conditions, precipitation, irrigation, drainage and construction practices in the region. Based on the regional topography, groundwater flow is assumed to be generally towards the northeast within the subject property area. Flow directions may also vary locally in the vicinity of the subject property.

3.0 USER PROVIDED INFORMATION

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *User* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiry* is not complete. The user was asked to provide information or knowledge of the following:

- Environmental cleanup liens that are filed or recorded against the subject property.
- Activity and land use limitations that are in place on the subject property or that have been filed or recorded in a registry.
- Specialized knowledge or experience of the person seeking to qualify for the LLPs.
- Relationship of the purchase price to the fair market value of the *property* if it were not contaminated.
- Commonly known or *reasonably ascertainable* information about the *property*.
- The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation.
- The reason for preparation of this Phase I ESA.

A user questionnaire was provided to the user to aid in gathering information that may be pertinent to the evaluation of the subject property for environmental conditions. The completed user questionnaire is provided in Appendix I.

3.1 Title Records

GS Lyon reviewed preliminary title reports as part of this assessment and did not find past ownership or easements that would indicate environmentally hazardous uses on the parcels

3.2 Environmental Liens or Activity and Use Limitations

An environmental lien is a charge, security, or encumbrance upon the title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon the property.

According to the User Questionnaire, Ms. Mary Churchill, manager for Hensler Properties, LLC, is not aware of any Environmental Liens or Activity and Use Limitations associated with the subject property that have been filed or recorded under federal, tribal, state or local law (Appendix H).

3.3 Specialized Knowledge

According to the User Questionnaire, Ms. Churchill is not aware of any specialized knowledge or experience associated with the subject property or nearby properties.

GS Lyon does not have any personal knowledge of the subject property.

3.4 Commonly Known or Reasonable Ascertainable Information

No information was provided by the Client regarding any commonly known or reasonably ascertainable information within the local community that is material to RECs in connection with the subject property.

3.5 Valuation Reduction for Environmental Issues

The client indicated that the purchase price of this property reasonably reflects the fair market value of the property with no discounts for environmental issues.

3.6 Owner, Property Manager, and Occupant Information

The current owner of the subject property is the Hensler Properties, LLC.

The subject property is currently undeveloped desert land. No property manager or occupant information is available.

3.7 Previous Reports and Other Provided Documentation

No previous reports or other pertinent documentation was provided to GS Lyon for review during the course of this assessment.

4.0 RECORDS REVIEW

A review of historic aerial photographs (Appendix C), historic topographic maps (Appendix D), governmental regulatory databases (Appendix E), and other regulatory and agency databases (Appendix F) was performed to evaluate potentially adverse environmental conditions resulting from previous ownership and uses of the subject property. The details of the review are presented in Sections 4.1 through 4.5 of this report.

4.1 Regulatory Database Review

4.1.1 Standard Environmental Record Sources

GS Lyon Consultants contracted Environmental Data Resources, Inc. (EDR) 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 ASTM E1527-13. The search of each database was conducted using the approximate minimum search distances from the subject property defined by the ASTM E1527-13 Standard. The purpose of the records review is to obtain and review *reasonably ascertainable* records that will help identify *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the subject property.

EDR's Phase I ESA search package was ordered and performed on August 27, 2020. The search package included: Radius Map with Geocheck, aerial photographs, and historic topographic maps.

The results of EDR's search were used to evaluate if the subject property and/or properties within prescribed search distances are listed as having a past or present record of actual or potential environmental impact. Inclusion of a property in a government database list does not necessarily indicate that the property has an environmental problem.

The following is a brief synopsis of sites identified in the EDR Radius Map with Geocheck report. The government record search report is included in its entirety in Appendix E.

Federal NPL List

The Environmental Protection Agency's (EPA) National Priorities List (NPL) of uncontrolled or abandoned hazardous waste sites was reviewed for risk sites within a 1 mile radius of the subject property. The NPL identifies sites for priority cleanup and long-term care of properties under the Superfund Program that are contaminated with hazardous substances.

The database search did not identify any NPL sites within 1 mile of the subject property.

Federal CERCLIS List

The EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) listings were reviewed to determine if risks sites within ½ mile are listed for investigation. The CERCLIS database identifies hazardous waste sites that are on or proposed to be included in the NPL and sites that require investigation and possible remedial action to mitigate potential negative impacts on human health or the environment.

The CERCLIS database search did not identify any risk sites within 0.5 mile of the subject property.

Federal CERCLIS – No Further Remedial Action Planned

The EPA's CERCLIS – No Further Remedial Action Planned (NFRAP) database was reviewed to determine if risks sites within ½ mile are listed. CERCLIS NFRAP site are risk sites that have been removed from and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at the subject property has been completed and the EPA has determined that no further steps will be taken to list this subject property on the NPL, unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time.

This designation is for sites where no contamination was found, contamination was quickly removed without the need for the subject property to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

The CERCLIS – NFRAP database search did not identify any risk sites within ½mile of the subject property.

Federal RCRA List

The Federal Resource Conservation Recovery Act (RCRA) Notifiers List was reviewed to determine if RCRA treatment, storage or disposal sites (TSD) are located within 1 mile of the subject property. The RCRA Correction Action Sites List (CORRACTS) is maintained for risk sites which are undergoing "a corrective action". A corrective action order is issued when there has been a release of hazardous waste constituents into the environment from a RCRA facility.

The RCRA and RCRA CORRACTS database searches identified one (1) RCRA CORRACTS risk site within ½ mile of the subject property. The Laidlaw Environmental facility (currently operated by Clean Harbors) located at 5295 S. Garvey Road is located approximately 2 miles northwest of the subject site, but a portion of the proposed gen-tie route runs along the southern boundary of the Clean Harbors facility.

The RCRA regulated hazardous waste generator notifiers list was reviewed to determine if RCRA generator facilities are located on or adjoining the subject property. No RCRA generator facilities within ¼ mile of the subject property were identified in the database.

Federal ERNS List

The Federal Emergency Response Notification System (ERNS) List was reviewed to determine if reported release of oil and/or hazardous substances occurred on the subject property.

The ERNS database searches did not identify any reported releases for the subject property.

State and Tribal NPL List

The Environmental Protection Agency's (EPA) National Priorities List (NPL) of uncontrolled or abandoned hazardous waste sites was reviewed for risk sites within a 1 mile radius of the subject property. The NPL identifies sites for priority cleanup and long-term care of properties under the Superfund Program that are contaminated with hazardous substances.

The database search did not identify any NPL sites within 1 mile of the subject property.

State and Tribal equivalent CERCLIS

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

The EnviroStor database search identified one (1) risk site within 1 mile of the subject property.

1. The Laidlaw Environmental facility (currently operated by Clean Harbors) located at 5295 S. Garvey Road is located approximately 2 miles northwest of the subject site, but a portion of the proposed gen-tie route runs along the southern boundary of the Clean Harbors facility.

Because of the distance to these risk sites, the environmental risk to the subject property is very low.

State and Tribal Leaking Underground Storage Tank Sites

The California State Water Resources Control Board (SWRCB) maintains a list of information concerning reported leaking underground storage tanks (LUST). The LUST inventory list was reviewed to determine if any LUSTs are located within ½ mile the subject property.

The SWRCB LUST database did not identify any risk sites within ½ mile of the subject property.

State and Tribal Underground and Aboveground Storage Tank Sites

The California State Water Resource Control Board (SWRCB) underground storage tank (UST) and above ground storage tank (AST) inventory list was reviewed to determine if any UAST's are located on or adjacent to the subject property.

One (1) AST site was identified within ¼ mile of the subject property. Imperial Farming, located at 5253 Garvey Road is listed as having an above ground storage tank. No information was provided concerning the type of material stored or any reported leaks or spills.

Solid Waste Disposal/Landfill Facilities

The Solid Waste Disposal/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data comes from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list database did not identify any risk sites within ½ mile of the subject property.

Unmapped (Orphan) Sites

Not all sites or facilities identified in the database records can be accurately located in relation to the Subject Property due to incomplete information being supplied to the regulatory agencies and are referred to as "orphan sites" by EDR. No unmapped (orphan) listings were reported.

4.1.2 Additional Environmental Record Sources

California Department of Toxic Substances Control (DTSC) Records – Envirostor Database: EnviroStor is an online search and Geographic Information System tool for identifying sites that have known contamination or sites for which there may be reasons to investigate further. Public Access to EnviroStor is accessible via the DTSC Web Page located at: http://www.envirostor.dtsc.ca.gov/public/. The EnviroStor database includes the following site types: Federal Superfund sites (National Priority List); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites.

The information includes site name, site type, status, address, any restricted use (recorded deed restrictions), past use(s) that caused contamination, potential contaminants of concern, potential environmental media affected, site history, planned and completed activities. The EnviroStor database also contains current and historical information relating to Permitted and Corrective Action facilities. The EnviroStor database includes current and historical information on the following permit-related documents: facility permits; permit renewal applications; permit modifications to an existing permit; closure of hazardous waste management units (HWMUs) or entire facilities; facility corrective action (investigation and/or cleanup); and/or post-closure permits or other required post-closure activities.

The EnviroStor database was queried on September 10, 2020. A map showing the results of the query is provided in Appendix F. No reported cases were found on the subject property. No risk sites were located within ½ mile of the subject property.

California State Water Resources Control Board Records – GeoTracker Database: GeoTracker is a geographic information system (GIS) maintained by the California State Water Resources Control Board (SWRCB) that provides online access to environmental data at http://www.geotracker.swrcb.ca.gov\. GeoTracker tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. Site information from the Spills, Leaks, Investigations, and Cleanups (SLIC) Program is also included in GeoTracker.

The GeoTracker database was queried for environmental data pertaining to the Subject property on September 10, 2020. A map showing the results of the query is provided in Appendix F. No reported cases were found on the subject property. No risk sites were located within ½ mile of the subject property.

CUPA Records Search: The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. Cal/EPA and other state agencies set the standards for their programs while local governments implement the standards—these local implementing agencies are called Certified Unified Program Agencies (CUPA).

The DTSC Imperial CUPA office was contacted (Veronica Lopez) by email on September 10, 2020. CUPA records were searched for environmental issues related to the subject property. The DTSC indicated that records are filed per address, and with no known address associated with the subject property, no records were found associated with the subject property.

4.2 Historical Use Records

ASTM E1527-13 requires the environmental professional to identify all obvious uses of the property from the present back to the property's first developed use or 1940, whichever is earliest. This information is collected to identify the likelihood that past uses have led to RECs in connection with the property. This task is accomplished by reviewing standard historical sources to the extent that they are necessary, reasonably ascertainable, and likely to be useful. These standard records include aerial photographs, fire insurance maps, property tax files, land title records, topographic maps, city directories, telephone directories, building department records, and zoning/land use records.

The general type of historical use (i.e., commercial, retail, residential, industrial, undeveloped, office) should be identified at 5-year intervals, unless the specific use of the property appears to be unchanged over a period longer than 5 years. The historical research is complete when the use is defined or when data failure occurs. Data failure occurs when all of the standard historical sources have been reviewed, yet the property use cannot be identified back to its first developed use or to 1940. Data failure is not uncommon in trying to identify the use of the property at 5-year intervals back to first use or 1940, whichever is earlier.

GS Lyon reviewed the following historical records to identify obvious uses of the subject property from the present back to the property's first developed use, or to 1940, whichever is earlier. The results of this research and data failure, if encountered, are presented in the following sections.

4.2.1 Title Records

GS Lyon reviewed preliminary title reports as part of this assessment and did not find past ownership or easements that would indicate environmentally hazardous uses on the parcel.

4.2.2 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps are large scale maps depicting the commercial, industrial, and residential sections of various cities across the United States. Since 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 rural undeveloped nature of the subject property and vicinity for the years the Sanborn Fire Insurance Maps were available for this subject property, no maps are available for the subject property.

4.2.3 Aerial Photographs

Aerial photographs obtained from Environmental Data Resources (EDR) dating back to 1937, the Imperial Irrigation District (IID) archives dating back to 1949, and Google Earth aerial photographs dating back to 1996 were reviewed for historical development of the subject property. Reproductions of the historical aerial photographs reviewed are included in Appendix C.

The 1937 aerial photograph shows the subject site and gen-tie line route as being vacant desert lands. Surrounding properties are also vacant desert lands.

The 1949 and 1953 aerial photographs are similar to the 1937 aerial photograph. The subject site and gen-tie line route are vacant desert land.

The 1976 aerial photograph shows the subject site and gen-tie line route as being vacant desert lands. Surrounding properties are also vacant desert lands except for an orchard to the east of the subject site and along portions of the gen-tie line.

The 1986 aerial photograph shows the subject site as being dominantly vacant desert land. There appears to be an area in the southeast corner of the subject site that has been mined for sand material and in the northwest corner where clay material has been mined. Orchards are present to the east of the subject site and along the east side of the gen-tie line route. The Laidlaw Environmental (Clean Harbors) facility has been developed north of a portion of the gen-tie line.

The 1992 and 1996 aerial photographs are similar to the 1986 aerial photograph. Additional orchards are visible along the east side of the gen-tie line route.

The 2003 and 2008 aerial photographs are similar to the 1996 aerial photograph. Additional surface mining of sand soils in the southern portion of the subject site is visible.

The 2012 and 2016 aerial photographs are similar to the 2008 aerial photograph. Additional surface mining of sand soils in the east-central portion of the subject site is visible.

4.2.4 Street Directories

City directories are used for locating individuals and businesses in a particular urban or suburban area. City directories are generally divided into three sections: a business index, a list of resident names and addresses, the name and type of businesses (if unclear from the name). While city directory coverage is comprehensive for major cities, it may be spotty for rural and small towns.

Polk City Directories: The Polk City Directories for the years 1965 and 1983were reviewed. No records for the subject site were found.

4.2.5 Historic Topographic Maps

Historic topographic maps (1940, 1947, 1957, 1979, 1995 and 2012), showed the subject property as being vacant desert land (Appendix D). The 1995 topographic map shows a pit in the southeast corner of the subject site where sand was mined at the subject property.

4.2.6 Historical Telephone Directories

Telephone Directories: Telephone directories for the Imperial County, which included the City of Westmorland businesses published in 1941, 1955, 1965, 1974, 1994, and 2004 were reviewed. No service stations, chemical manufacturers, petroleum manufacturers, distributors, or automotive repair facilities were noted at or in the immediate vicinity of the subject property.

4.3 Historical Use Summary

4.3.1 Summary of the Historical Use of Property

Based on a review of the historical information, the subject property has been vacant desert land since prior to 1937. Minor surface mining for clay and sand soils has occurred in the southern and northwestern portions of the subject site.

4.3.2 Summary of the Historical Use of Adjacent Properties

Historically, the properties located immediately adjacent to the subject property have been comprised of vacant desert lands to the south and west. Development to the north and east began in the 1970s with agricultural fields and orchards. The Laidlaw Environmental (Clean Harbors) facility was constructed developed north of a portion of the gen-tie line in the early 1980s.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

A site reconnaissance was performed by Mr. Pete LaBrucherie, a consulting engineer to GS Lyon Consultants, on September 5, 2020. The site visit consisted of a walking the perimeter of the subject property and randomly crossing the subject property. The reconnaissance included visual observations of surficial conditions at the subject property and observation of adjoining properties to the extent that they were visible from public areas. Mr. LaBrucherie was unaccompanied during the site reconnaissance.

The site reconnaissance was limited to visual and/or physical observation of the exterior and interior of the subject property and its improvements, the current uses of the property and adjoining properties, and the current condition of the property. The site visit evaluated the subject property and adjoining properties for potential hazardous materials/waste and petroleum product use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; mechanical or electrical equipment likely to contain liquids; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination. The site visit did not evaluate the presence of asbestos-containing materials, radon, lead-based paint, mold, indoor air quality, or structural defects, or other non-scope items.

A site reconnaissance can be limited by weather conditions, bodies of water, adjacent buildings, or other obstacles. The weather was warm and sunny and no access limitations were placed on the site visit.

5.2 General Site Setting

The subject property currently consists of approximately 320 acres of vacant desert land and the gen-tie line route. The subject property is rectangular in plan view, elongate in the north-south direction. There is a commercial borrow area in the northwest corner of the site where clay soils have been removed for export from the site. There are borrow pits in the southern and east-central portions of the subject site where sand soils have been removed for export offsite. Several dirt trails cross the site.

Several used oil filters were noted in the northwest corner and used tires were found scattered throughout the subject site. Several areas of illegal dumping of household debris were noted throughout the subject site.

A gen-tie power line is proposed to extend approximately 4 miles north and west of the subject site. The gen-tie line route is planned along the margins of the agricultural fields and orchards to the north, then west along Garvey Road to an existing power line through vacant desert land.

Photographs of the subject property taken on September 5, 2020 during our site reconnaissance are included in Appendix A.

5.3 Adjacent Properties

The subject property is located at the transition between vacant desert land to the west and south and agricultural lands to the north and east. Adjacent properties consist of vacant desert land to the south and west. A citrus orchard is located to the east and farm fields are locate to the north.

The gen-tie line passes along the southern boundary of the Clean Harbors Hazardous Waste Landfill. The hazardous material is located within lined and monitored waste cells approximately ½ mile north of the southern boundary of the waste facility.

5.4 Exterior and Interior Observations

The following conditions were specifically assessed for their potential to indicate RECs and may include conditions inside or outside structures on the subject property.

5.4.1 Hazardous Substances and Petroleum Products

GS Lyon did not observe operations that use, treat, store, dispose of, or generate hazardous materials or petroleum products on the subject property.

5.4.2 Storage Tanks

Underground Storage Tanks (USTs) – No obvious visual evidence indicating the current presence of USTs (i.e. vent pipes, fill ports, etc.) was noted.

Aboveground Storage Tanks (ASTs) – No obvious visual evidence indicating the historical presence of ASTs (i.e. secondary containments, concrete saddles, etc.) was observed.

5.4.3 Odors

No obvious strong, pungent, or noxious odors were noted during the site reconnaissance.

5.4.4 Pools of Liquid

Pools of liquid were not observed during the site reconnaissance.

5.4.5 Drums and Containers

GS Lyon did not observe drums or storage containers on the subject property.

5.4.6 Unidentified Substance Containers

GS Lyon did not observe open or damaged containers containing unidentified substances at the subject property.

5.4.7 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 subject property or immediate vicinity.

5.5 Interior Observations

The subject property is currently vacant with no structures; therefore, no interior observations were made.

5.6 Exterior Observations

5.6.1 Pits, Ponds, and Lagoons

No pits, ponds, or lagoons were noted on the subject property.

5.6.2 Stained Soils or Pavement

No evidence of significantly stained soil or pavement was noted on the subject property.

5.6.3 Stressed Vegetation

No evidence of stressed vegetation attributed to potential contamination was noted on the subject property.

5.6.4 Solid Waste

There were debris piles of household waste and construction debris scattered around the subject site.

5.6.5 Wastewater

No waste water is generated at the subject site.

5.6.6 Wells

No evidence of wells (dry wells, drinking water, observation wells, groundwater monitoring wells, irrigation wells, injection wells or abandoned wells) was noted on the subject property.

5.6.7 Septic Systems

No septic systems are present on the subject property.

5.7 Non-Scope Issues

ASTM guidelines identify non-scope issues, which are beyond the scope of a Phase I ESA as defined by ASTM. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment. Some of these non-scope issues include; asbestos-containing building materials, radon, lead-based paint, and wetlands which are discussed below.

5.7.1 Asbestos-Containing Building Materials

The potential for asbestos containing materials (ACM) existing at the subject property is very low due to the lack of subject property structures.

5.7.2 Lead-Based Paint

The potential or lead based paint residues existing at the subject property is very low due to the lack of subject property development.

5.7.3 Radon

The subject property is located in Zone 3 as shown on the EPA Map of Radon Zones indicating a predicted average indoor radon screening level of less than 2 pCi/L; therefore, no further action is required. Radon gas is not believed to be a potential hazard at the subject property.

5.7.4 Wetlands

No wetlands are located within one (1) mile of the subject property.

5.7.5 Agricultural Use

Based on our review of environmental records, historical documents, and subject property conditions, the property has not been in agricultural use; therefore the likelihood of residues of currently available pesticides and currently banned pesticides such as DDT/DDE existing on the subject site is very low.

6.0 INTERVIEWS

GS Lyon interviewed various individuals familiar with the subject property, as identified to us, and/or government officials in order to evaluate historical uses and identify potential RECs existing on the subject property. The individuals interviewed were asked to provide responses in good faith and to the best of their knowledge. The following sections identify the individuals interviewed and summarize the information each provided; however, additional information provided by these individuals may be presented in other sections of this report.

6.1 Interview with Owner

GS Lyon was not able to contact the current property owner; therefore, no interview was conducted.

6.2 Interview with the Site Manager

The subject property is vacant, undeveloped land; therefore, there is no site manager.

6.3 Interview with Occupants

The subject property is vacant, undeveloped land; therefore, there are no occupants.

6.4 Interview with Local Government Officials

The DTSC Imperial CUPA office was contacted (Veronica Lopez) by email on September 10, 2020. CUPA records were searched for environmental issues related to the subject property. The DTSC indicated that records are filed per address, and with no known address associated with the subject property, no records were found associated with the subject property.

Interviews with past owners, operators and occupants were not reasonably ascertainable and thus constitute a data gap.

7.0 EVALUATION

7.1 Summary of Findings

The approximately 320-acre subject property and gen-tie line route located on the south side of Andre Road west of Garvey Road west of Westmorland, California has been vacant desert land since prior to 1937. Minor surface mining for clay and sand soils has occurred in the southern and northwestern portions of the subject site according to the historical information obtained and reviewed during this site assessment.

7.2 Conclusions

GS Lyon has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-13 of the approximately 320-acre property and gen-tie line route located on the south side of Andre Road west of Garvey Road west of Westmorland, California. Any exceptions to, or deviations from, this practice are described in Section 1.4 of this Phase I ESA report. This assessment has revealed the following recognized environmental conditions (RECs) in connection with the subject property:

7.2.1 Recognized Environmental Conditions

A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term REC includes hazardous substances and petroleum products even under conditions that might be in compliance with laws. The term is not intended to include "de minimis" conditions as defined in Section 7.2.3 of this report.

This assessment has revealed the following RECs for the study subject property:

- Several used oil filters were noted in the northwest corner and used tires were found scattered throughout the subject site. ***The used oil filters and tires should be cleaned up and properly disposed.***
- Several areas of illegal dumping of household debris were noted throughout the subject site. ***The debris should be cleaned up and properly disposed.***

7.2.2 Historical Recognized Environmental Conditions

A *historical recognized environmental condition (HREC)* refers to a past *release* of any *hazardous substances* or *petroleum products* that has occurred in connection with the *property* and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the *property* to any required controls (for example, *property* use restrictions, *activity and use limitations*, *institutional controls*, or *engineering controls*).

This Phase I ESA has revealed no evidence of *historical recognized environmental conditions* in connection with the subject property.

7.2.3 Environmental Concerns and De Minimis Conditions

A *de minimis condition* is a condition that generally does not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis conditions* are not *recognized environmental conditions* nor *controlled recognized environmental conditions*.

This Phase I ESA has revealed no *de minimis* conditions or environmental concerns in connection with the subject property.

7.3 Recommendations

Based on the scope of work performed for this assessment, it is our professional opinion that no RECs have been identified in connection with the subject property that would warrant further environmental study (Phase II) at this time.

8.0 REFERENCES

40 CFR 312, Standards and Practices for All Appropriate Inquiries; Final Rule, November 2005 (AAI Rule).

American Society for Testing and Materials. 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Designation E 1527-13. West Conshohocken, Pennsylvania. 35 pp.

Department of Toxic Substances Control. 2020. EnviroStor Database Website, http://www.envirostor.dtsc.ca.gov/public/ .

Environmental Data Resources, Inc., *The EDR Radius Map with Geocheck*. Inquiry number 6171647, dated August 28, 2020

Environmental Data Resources, Inc., *EDR Historical Topographic Map Report*. Inquiry number 6171647, dated August 28, 2020

Environmental Data Resources, Inc., *The EDR Aerial Photo Decade Package*. Inquiry number 6171647, dated August 28, 2020

State Water Resources Control Board. 2020. GeoTracker Database Website, http://geotracker.swrcb.ca.gov/

United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, accessed via the Internet, September 2020

United States Environmental Protection Agency, EPA Map of Radon Zones (Document EPA-402-R-93-071), accessed via the Internet, September 2020

United States Geological Survey Topographic Map 1997, 7.5 minute series

APPENDIX A

Photo 1: Looking south from the northeast corner of the subject site. Note pile of used tires to the east of the subject site.

Photo 2: Looking west from the northeast corner of the subject site.

Photo 3: Looking south toward drainage swale from the northwest corner of the subject site.

Photo 4: Looking at debris scattered within a drainage swale at the northwest corner of the subject site.

Photo 5: Looking at the debris from photo 4 (used automotive oil filters).

Photo 6: Looking northeast from the west boundary of the subject site.

Photo 7: Looking east from the west boundary of the subject site.

Photo 8: Looking south from the west boundary of the subject site.

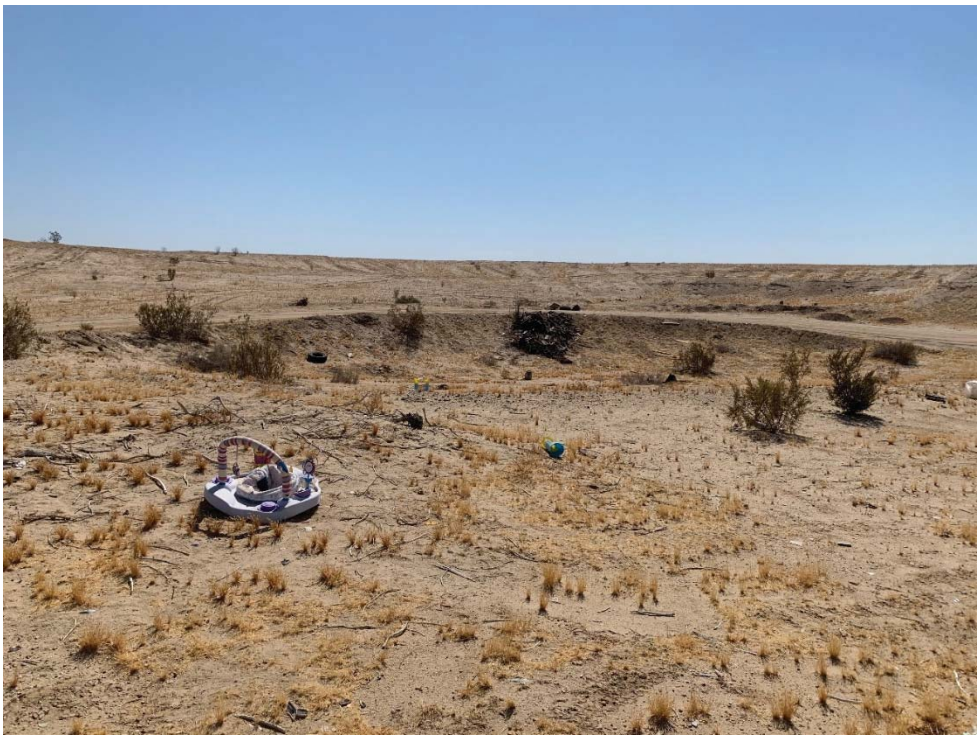


Photo 9: Looking at debris within basin near the southwest corner of the subject site.

Photo 10: Looking northeast across the subject site from the southwest corner.

Photo 11: Looking east from the southwest corner of the subject site.

Photo 12: Looking at debris near the southern boundary of the subject site.

Photo 13: Looking at concrete debris near the southern boundary of the subject site.

Photo 14: Looking north from the middle of the east boundary of the subject site.

Photo 15: Looking southwest from the middle of the east boundary of the subject site.

Photo 16: Looking at debris near the southeast boundary of the subject site.

Photo 17: Looking at debris near the southeast boundary of the subject site.

Photo 18: Looking northeast across the site from near the southern boundary of the site.

Photo 19: Looking used tire in area near southern boundary of the subject site.

Photo 20: Looking used debris in area near southern boundary of the subject site.

Photo 21: Looking north along the proposed Gen-Tie line route from the northwest corner of the subject site.

Photo 22: Looking south along the proposed Gen-Tie line route from the first proposed corner pole location.

Photo 23: Looking south along the existing Power Pole Line from the ending location of the proposed Gen-tie line.

Photo 24: Looking east along the proposed Gen-Tie line route from the ending location at existing power lines.

Photo 25: Looking east along the proposed Gen-tie route adjacent to the Clean Harbors hazardous waste facility.

Photo 26: Looking west along the proposed Gen-tie route adjacent to the Clean Harbors hazardous waste facility.

Photo 27: Looking east along the proposed Gen-tie route adjacent to the Clean Harbors hazardous waste facility.

Photo 28: Looking east along the proposed Gen-tie route adjacent to the citrus farm.

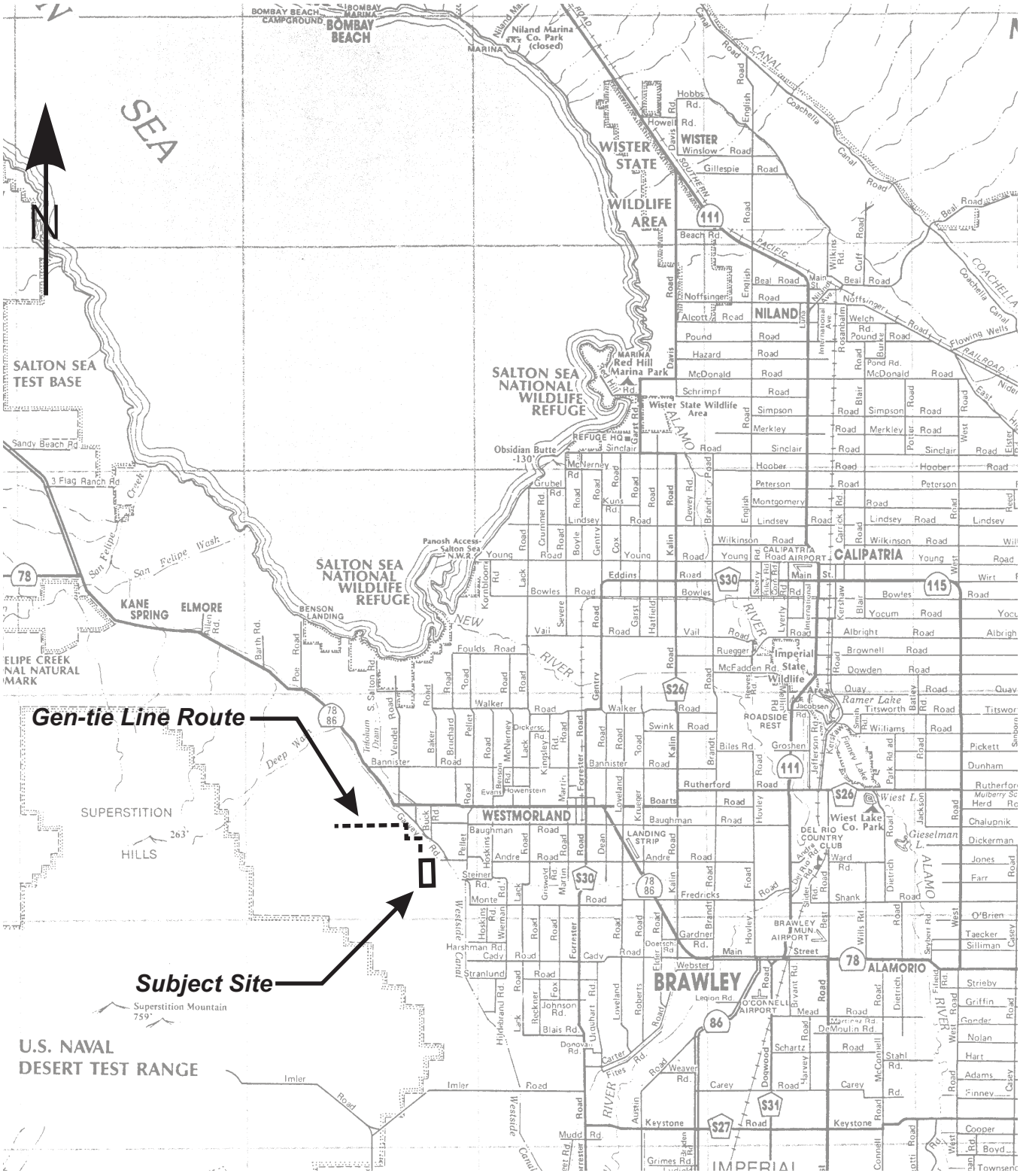
Photo 29: Looking south along the proposed Gen-tie route adjacent to the citrus farm.

Photo 30: Looking east along the proposed Gen-tie route adjacent to the date farm.

Photo 31: Looking at the debris along the proposed Gen-tie line route near the southwest corner of the existing date farm.

Photo 32: Looking at the debris from photo 31.

APPENDIX B

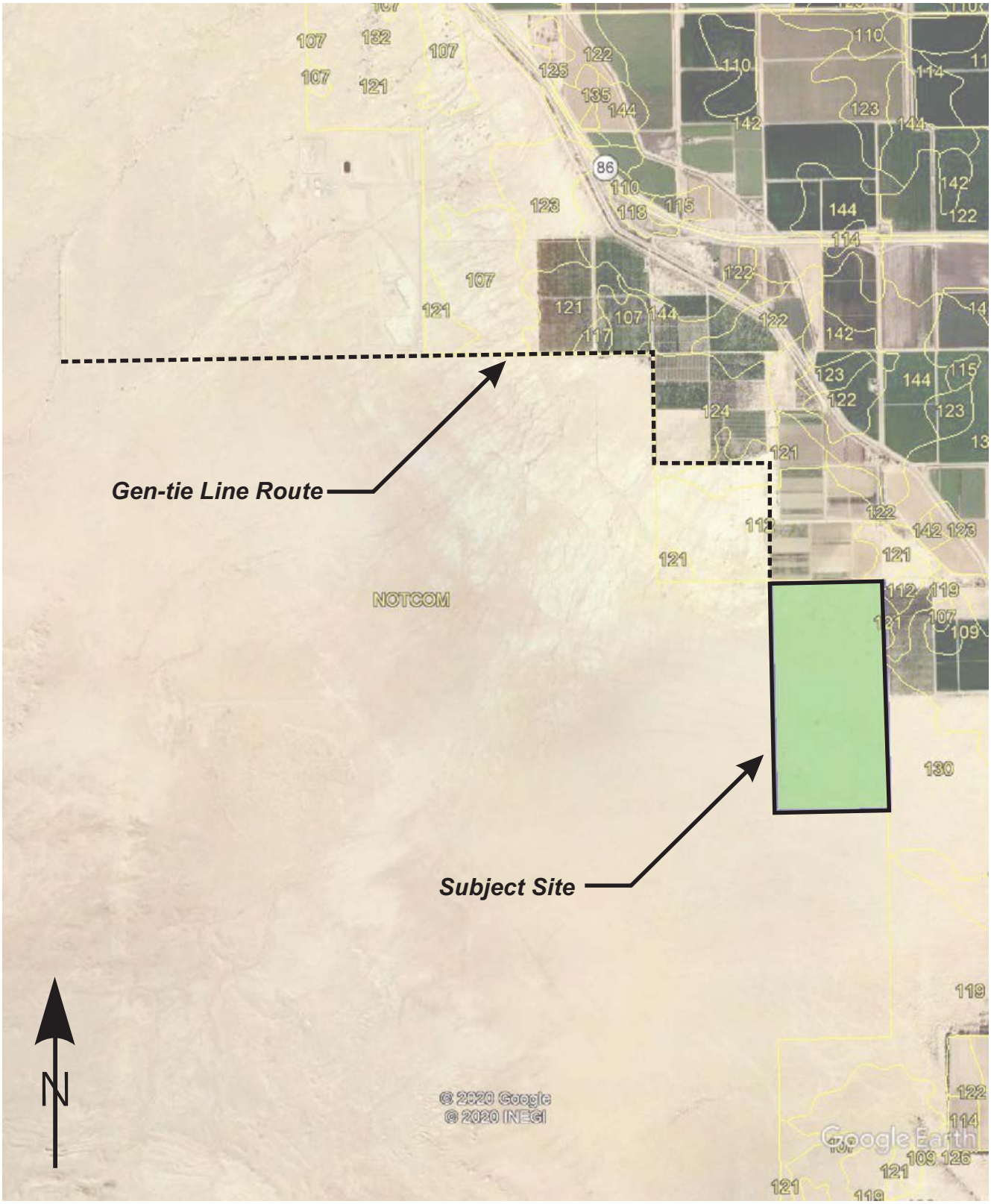


GS Lyon

Project No.: GS2017

Vicinity Map

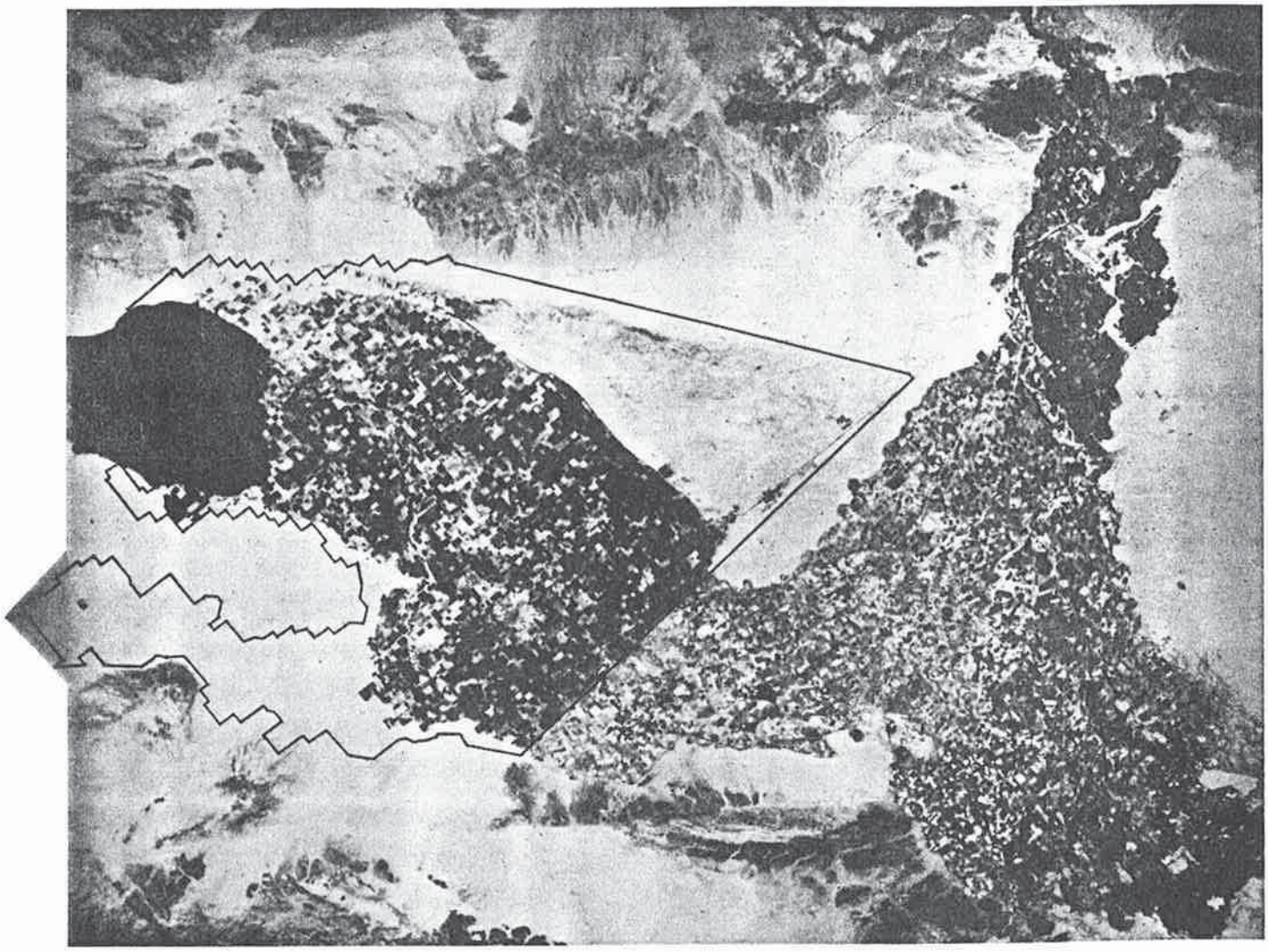
Plate 1



GS Lyon Project No.: GS2017	Soil Survey Map	Plate 3

Soil Survey of

IMPERIAL COUNTY CALIFORNIA IMPERIAL VALLEY AREA



United States Department of Agriculture Soil Conservation Service
in cooperation with
University of California Agricultural Experiment Station
and
Imperial Irrigation District

TABLE 11.--ENGINEERING INDEX PROPERTIES

[The symbol > means more than. Absence of an entry indicates that data were not estimated]

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
100----------	0-13	Loamy fine sand	SM	A-2	0	100	100	75-85	10-30	---	NP
Antho	13-60	Sandy loam, fine sandy loam.	SM	A-2, A-4	0	90-100	75-95	50-60	15-40	---	NP
101*:											
Antho----------	0-8	Loamy fine sand	SM	A-2	0	100	100	75-85	10-30	---	NP
	8-60	Sandy loam, fine sandy loam.	SM	A-2, A-4	0	90-100	75-95	50-60	15-40	---	NP
Superstition------	0-6	Fine sand-------	SM	A-2	0	100	95-100	70-85	15-25	---	NP
	6-60	Loamy fine sand, fine sand, sand.	SM	A-2	0	100	95-100	70-85	15-25	---	NP
102*. Badland											
103----------	0-10	Gravelly sand---	SP, SP-SM	A-1, A-2	0-5	60-90	50-85	30-55	0-10	---	NP
Carsitas	10-60	Gravelly sand, gravelly coarse sand, sand.	SP, SP-SM	A-1	0-5	60-90	50-85	25-50	0-10	---	NP
104* Fluvaquents											
105----------	0-13	Clay loam-------	CL	A-6	0	100	100	90-100	70-95	35-45	15-30
Glenbar	13-60	Clay loam, silty clay loam.	CL	A-6	0	100	100	90-100	70-95	35-45	15-30
106----------	0-13	Clay loam-------	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
Glenbar	13-60	Clay loam, silty clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
107*----------	0-13	Loam----------	ML, CL-ML, CL	A-4	0	100	100	100	70-80	20-30	NP-10
Glenbar	13-60	Clay loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	75-95	35-45	15-30
108----------	0-14	Loam----------	ML	A-4	0	100	100	85-100	55-95	25-35	NP-10
Holtville	14-22	Clay, silty clay	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	22-60	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	65-85	25-35	NP-10
109----------	0-17	Silty clay------	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
Holtville	17-24	Clay, silty clay	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	24-35	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	65-85	25-35	NP-10
	35-60	Loamy very fine sand, loamy fine sand.	SM, ML	A-2, A-4	0	100	100	75-100	20-55	---	NP
110----------	0-17	Silty clay------	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-35
Holtville	17-24	Clay, silty clay	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-35
	24-35	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	55-85	25-35	NP-10
	35-60	Loamy very fine sand, loamy fine sand.	SM, ML	A-2, A-4	0	100	100	75-100	20-55	---	NP

See footnote at end of table.

TABLE 11.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
111*:											
Holtville	0-10	Silty clay loam	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	10-22	Clay, silty clay	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	22-60	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	65-85	25-35	NP-10
Imperial	0-12	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
112	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
113	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay, clay, silty clay loam.	CH	A-7	0	100	100	100	85-95	50-70	25-45
114	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
115*:											
Imperial	0-12	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
Glenbar	0-13	Silty clay loam	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
	13-60	Clay loam, silty clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
116*:											
Imperial	0-13	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	13-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
Glenbar	0-13	Silty clay loam	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
	13-60	Clay loam, silty clay loam.	CL	A-6	0	100	100	90-100	70-95	35-45	15-30
117, 118	0-12	Loam	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
Indio	12-72	Stratified loamy very fine sand to silt loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
119*:											
Indio	0-12	Loam	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
	12-72	Stratified loamy very fine sand to silt loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
Vint	0-10	Loamy fine sand	SM	A-2	0	95-100	95-100	70-80	25-35	---	NP
	10-60	Loamy sand, loamy fine sand.	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
120*	0-12	Loam	ML, CL-ML	A-4	0	100	95-100	75-85	55-65	20-30	NP-10
Laveen	12-60	Loam, very fine sandy loam.	ML, CL-ML	A-4	0	95-100	85-95	70-80	55-65	15-25	NP-10

See footnote at end of table.

TABLE 11.--ENGINEERING INDEX PROPERTIES--Continued

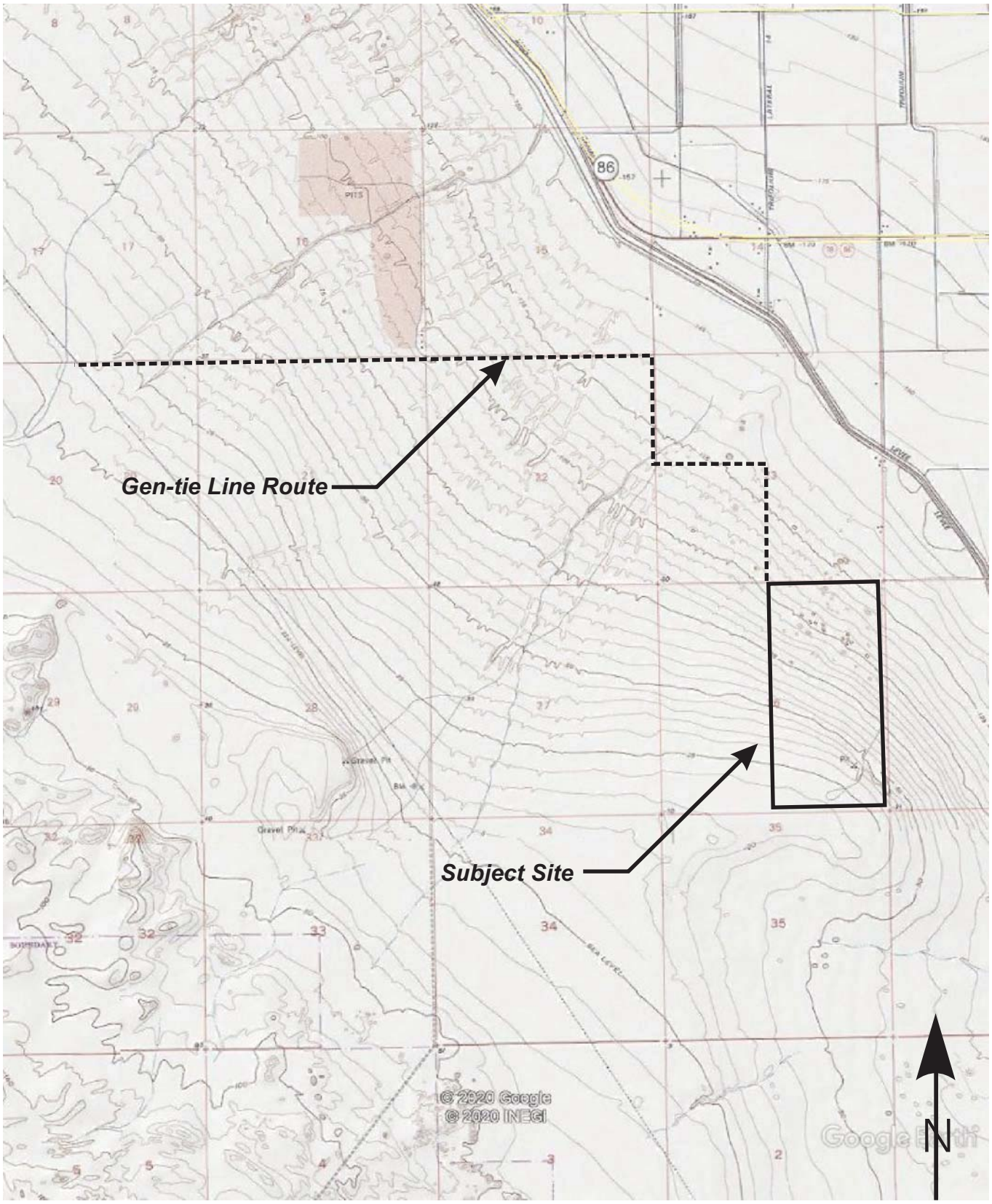
Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
121---------- Meloland	0-12	Fine sand-------	SM, SP-SM	A-2, A-3	0	95-100	90-100	75-100	5-30	---	NP
	12-26	Stratified loamy fine sand to silt loam.	ML	A-4	0	100	100	90-100	50-65	25-35	NP-10
	26-71	Clay, silty clay, silty clay loam.	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-40
122---------- Meloland	0-12	Very fine sandy loam.	ML	A-4	0	95-100	95-100	95-100	55-85	25-35	NP-10
	12-26	Stratified loamy fine sand to silt loam.	ML	A-4	0	100	100	90-100	50-70	25-35	NP-10
	26-71	Clay, silty clay, silty clay loam.	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-40
123*: Meloland----------	0-12	Loam----------	ML	A-4	0	95-100	95-100	95-100	55-85	25-35	NP-10
	12-26	Stratified loamy fine sand to silt loam.	ML	A-4	0	100	100	90-100	50-70	25-35	NP-10
	26-38	Clay, silty clay, silty clay loam.	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-40
	38-60	Stratified silt loam to loamy fine sand.	SM, ML	A-4	0	100	100	75-100	35-55	25-35	NP-10
Holtville---------	0-12	Loam----------	ML	A-4	0	100	100	85-100	55-95	25-35	NP-10
	12-24	Clay, silty clay	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-35
	24-36	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	55-85	25-35	NP-10
	36-60	Loamy very fine sand, loamy fine sand.	SM, ML	A-2, A-4	0	100	100	75-100	20-55	---	NP
124, 125---------- Niland	0-23	Gravelly sand---	SM, SP-SM	A-2, A-3	0	90-100	70-95	50-65	5-25	---	NP
	23-60	Silty clay, clay, clay loam.	CL, CH	A-7	0	100	100	85-100	80-95	40-65	20-40
126---------- Niland	0-23	Fine sand-------	SM, SP-SM	A-2, A-3	0	90-100	90-100	50-65	5-25	---	NP
	23-60	Silty clay------	CL, CH	A-7	0	100	100	85-100	80-95	40-65	20-40
127---------- Niland	0-23	Loamy fine sand	SM	A-2	0	90-100	90-100	50-65	15-30	---	NP
	23-60	Silty clay------	CL, CH	A-7	0	100	100	85-100	80-95	40-65	20-40
128*: Niland----------	0-23	Gravelly sand---	SM, SP-SM	A-2, A-3	0	90-100	70-95	50-65	5-25	---	NP
	23-60	Silty clay, clay, clay loam.	CL, CH	A-7	0	100	100	85-100	80-100	40-65	20-40
Imperial----------	0-12	Silty clay------	CH	A-7	0	100	100	100	85-95	50-70	25-45
	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
129*: Pits											
130, 131---------- Rositas	0-27	Sand----------	SP-SM	A-3, A-1, A-2	0	100	80-100	40-70	5-15	---	NP
	27-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP

See footnote at end of table.

TABLE 11.--ENGINEERING INDEX PROPERTIES--Continued

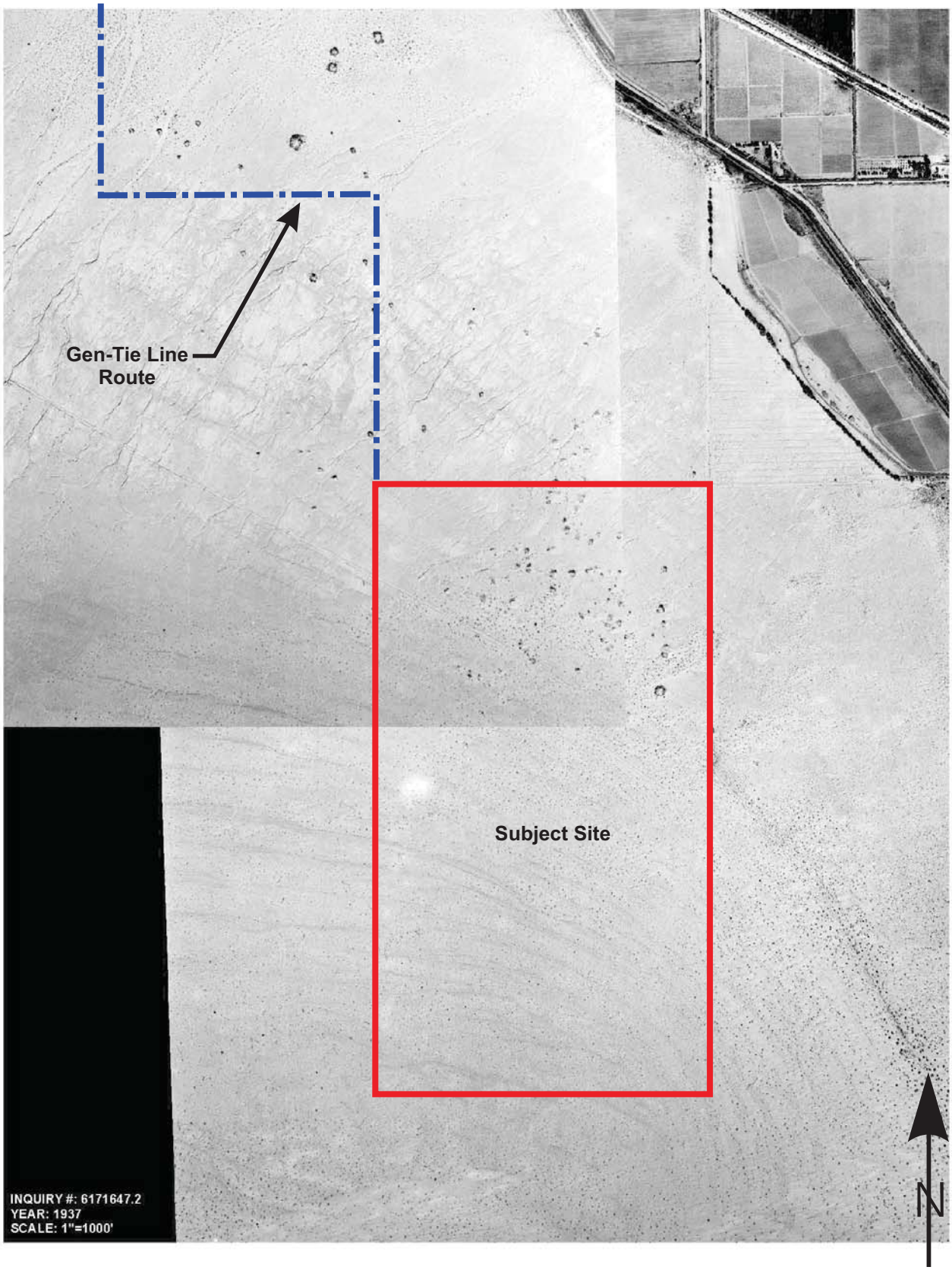
Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
132, 133, 134, 135-Rositas	0-9	Fine sand-------	SM	A-3, A-2	0	100	80-100	50-80	10-25	---	NP
	9-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP
136----------	0-4	Loamy fine sand	SM	A-1, A-2	0	100	80-100	40-85	10-35	---	NP
Rositas	4-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP
137----------	0-12	Silt loam-------	ML	A-4	0	100	100	90-100	70-90	20-30	NP-5
Rositas	12-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP
138*:											
Rositas----------	0-4	Loamy fine sand	SM	A-1, A-2	0	100	80-100	40-85	10-35	---	NP
	4-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP
Superstition------	0-6	Loamy fine sand	SM	A-2	0	100	95-100	70-85	15-25	---	NP
	6-60	Loamy fine sand, fine sand, sand.	SM	A-2	0	100	95-100	70-85	15-25	---	NP
139----------	0-6	Loamy fine sand	SM	A-2	0	100	95-100	70-85	15-25	---	NP
Superstition	6-60	Loamy fine sand, fine sand, sand.	SM	A-2	0	100	95-100	70-85	15-25	---	NP
140*:											
Torriorthents											
Rock outcrop											
141*:											
Torriorthents											
Orthids											
142----------	0-10	Loamy very fine sand.	SM, ML	A-4	0	100	100	85-95	40-65	15-25	NP-5
Vint	10-60	Loamy fine sand	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
143----------	0-12	Fine sandy loam	ML, CL-ML, SM, SM-SC	A-4	0	100	100	75-85	45-55	15-25	NP-5
Vint	12-60	Loamy sand, loamy fine sand.	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
144*:											
Vint----------	0-10	Very fine sandy loam.	SM, ML	A-4	0	100	100	85-95	40-65	15-25	NP-5
	10-40	Loamy fine sand	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
	40-60	Silty clay------	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
Indio----------	0-12	Very fine sandy loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
	12-40	Stratified loamy very fine sand to silt loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
	40-72	Silty clay------	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35

* See description of the map unit for composition and behavior characteristics of the map unit.



GS Lyon Project No.: GS2017	Topographic Map	Plate 4

APPENDIX C

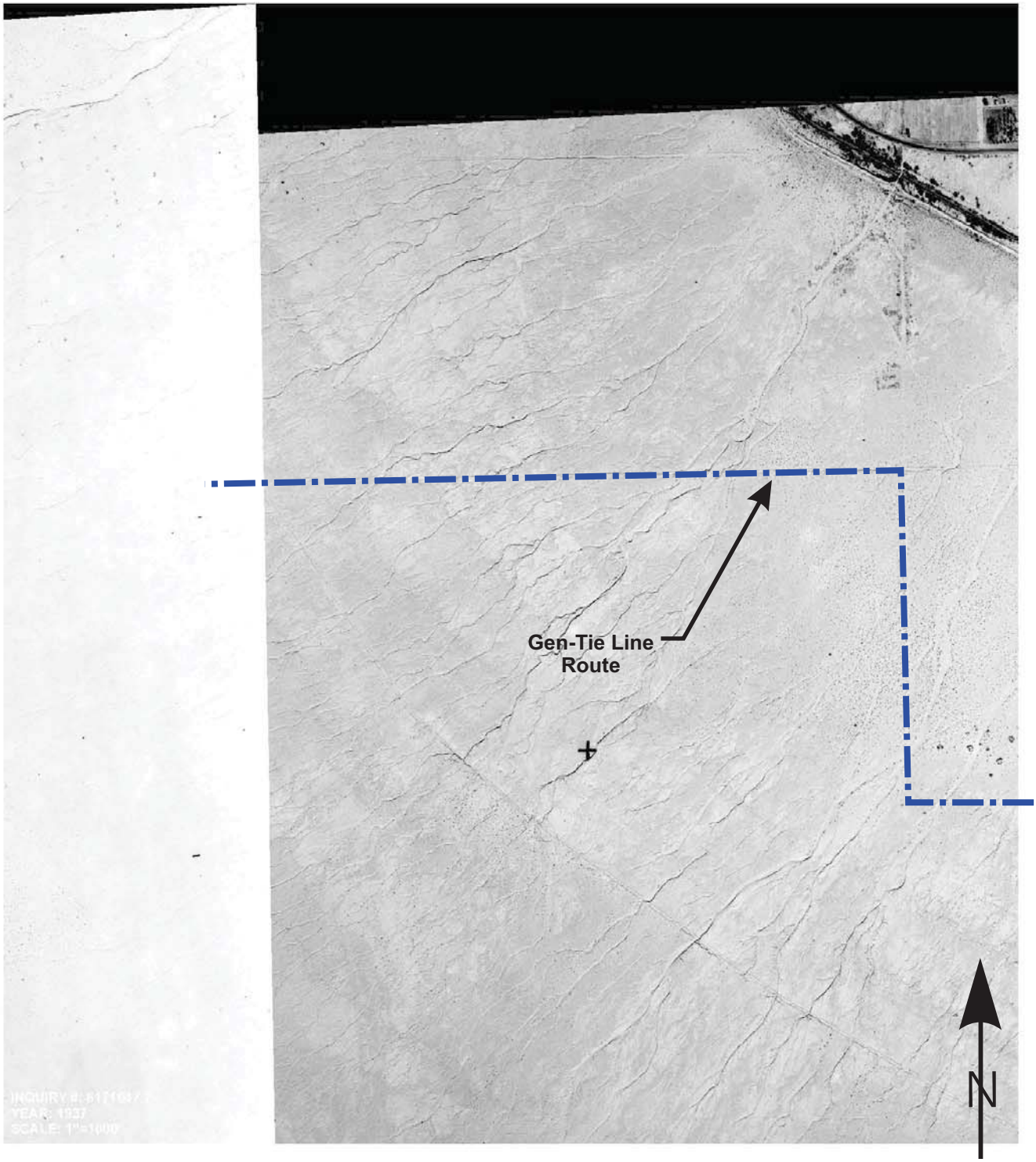


GS Lyon

Project No.: GS2017

1937 Aerial Photograph

Plate
5a

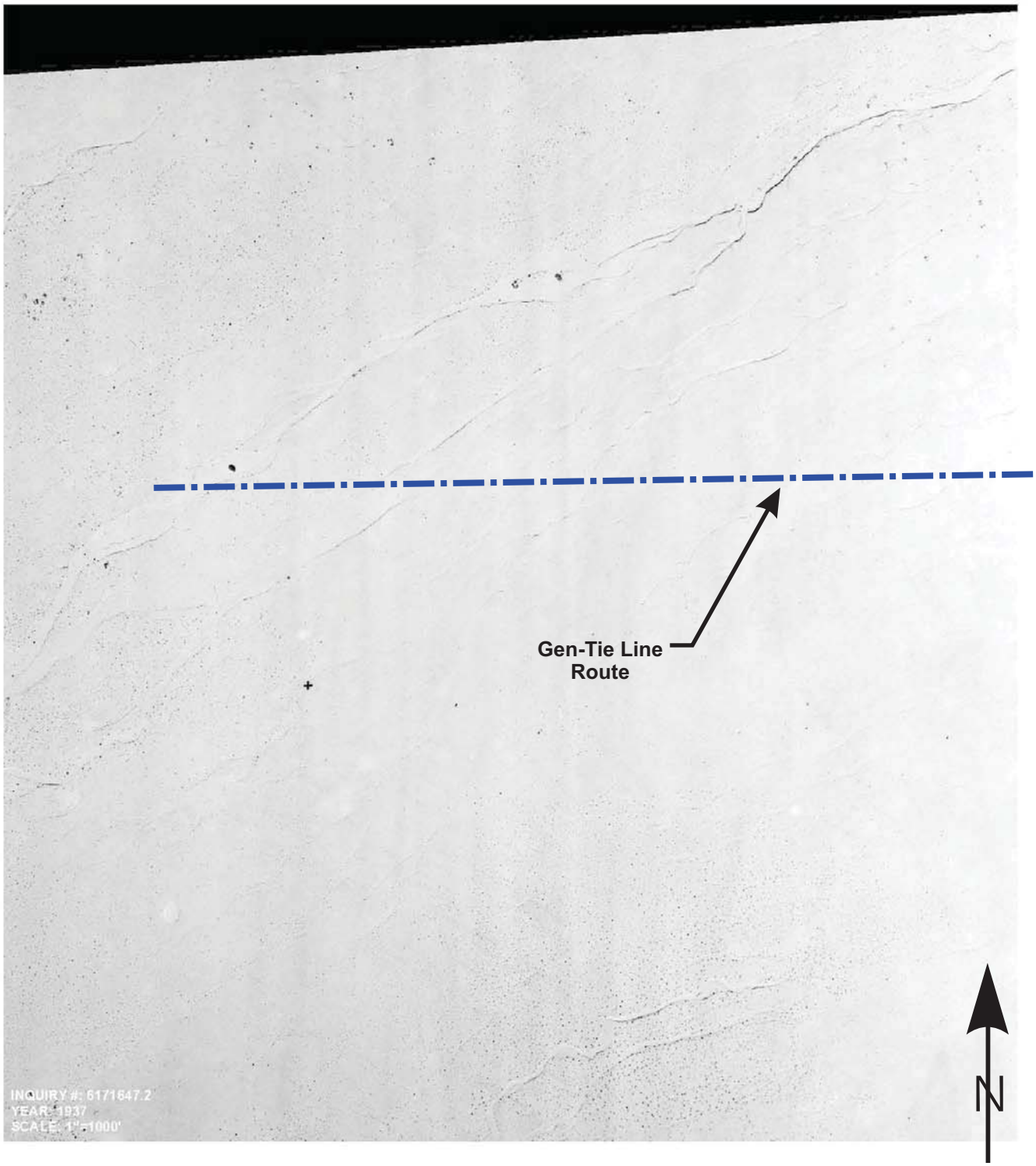


GS Lyon

Project No.: GS2017

1937 Aerial Photograph

Plate
5b

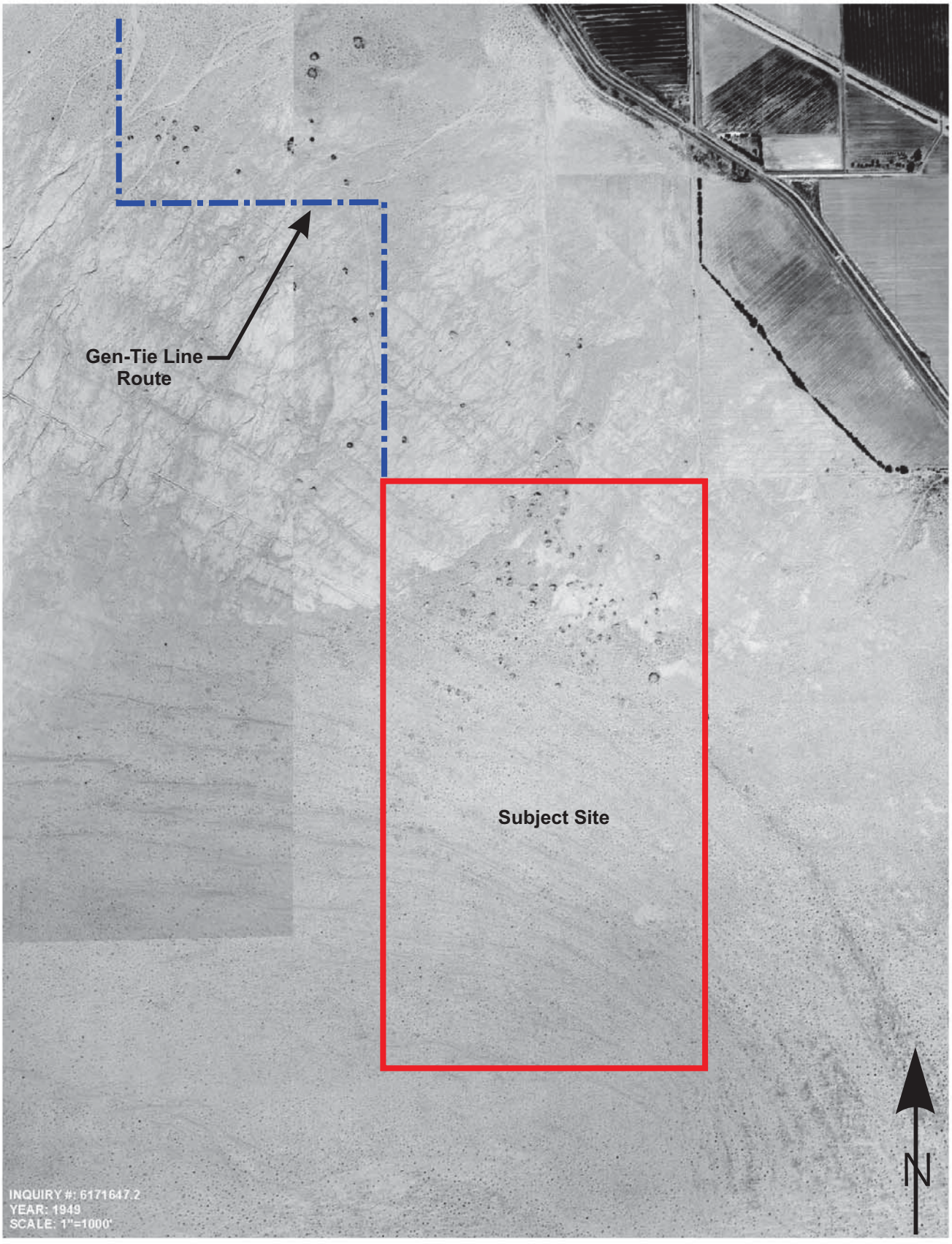


GS Lyon

Project No.: GS2017

1937 Aerial Photograph

Plate
5c

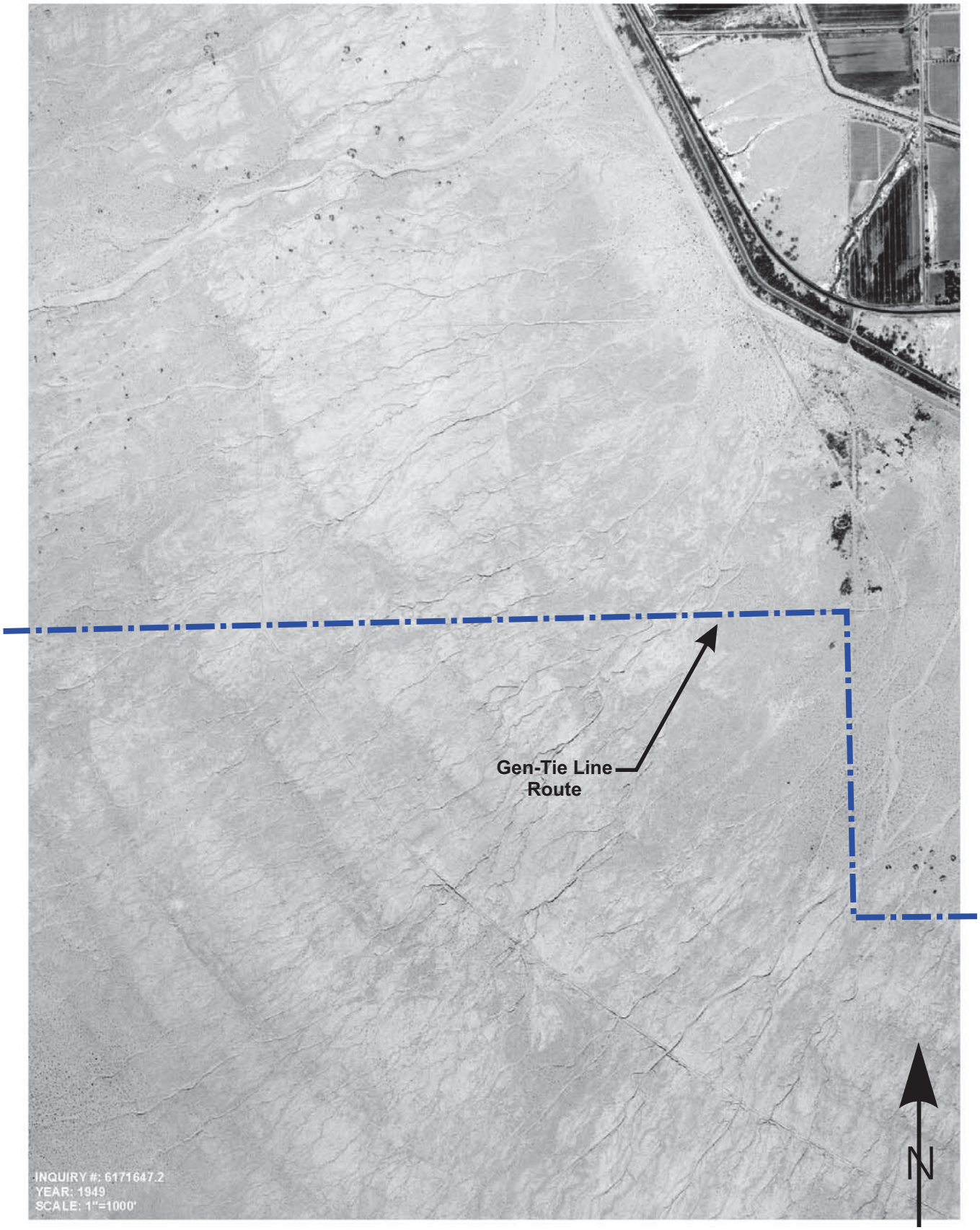


GS Lyon

Project No.: GS2017

1949 Aerial Photograph

Plate
6a

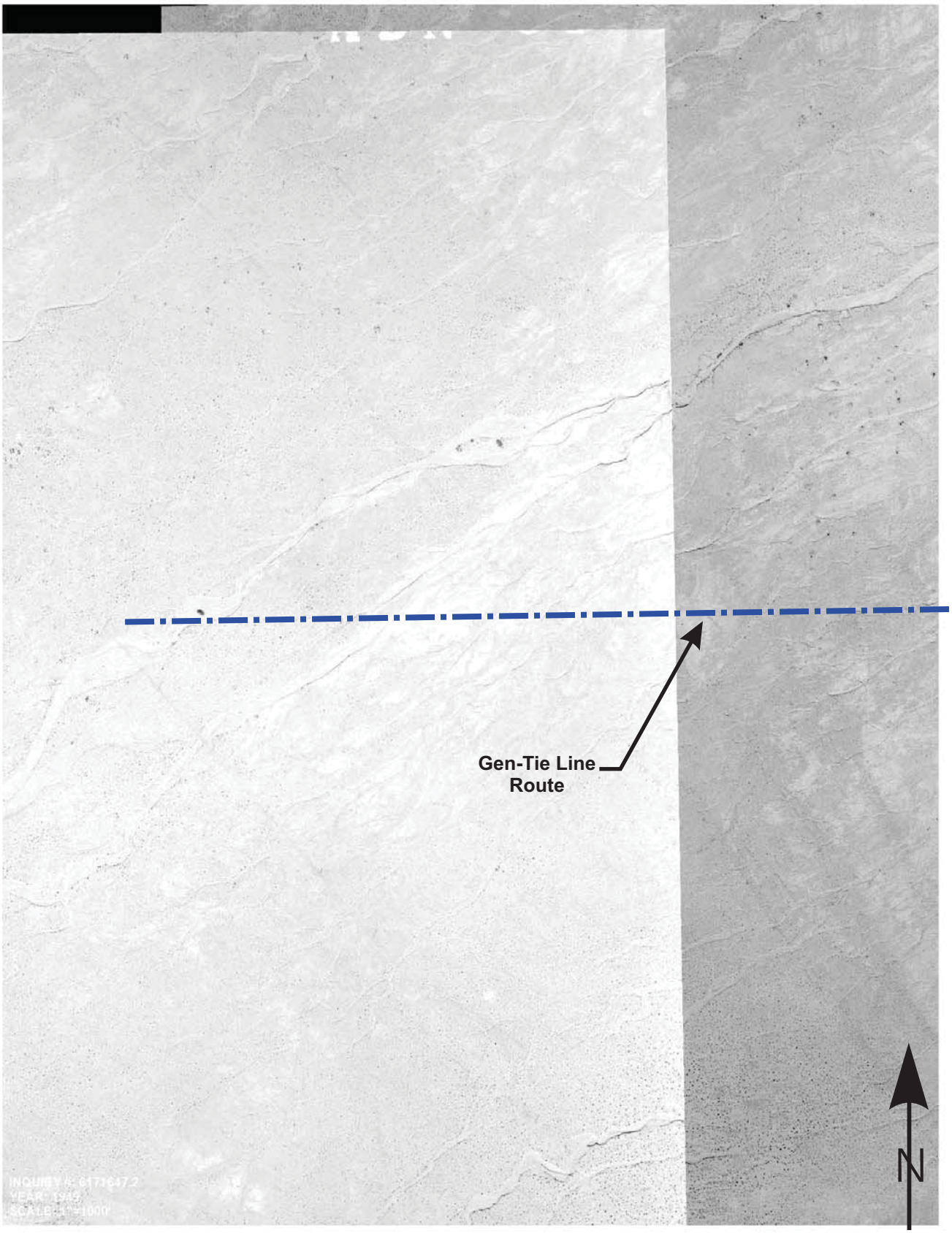


GS Lyon

Project No.: GS2017

1949 Aerial Photograph

Plate
6b

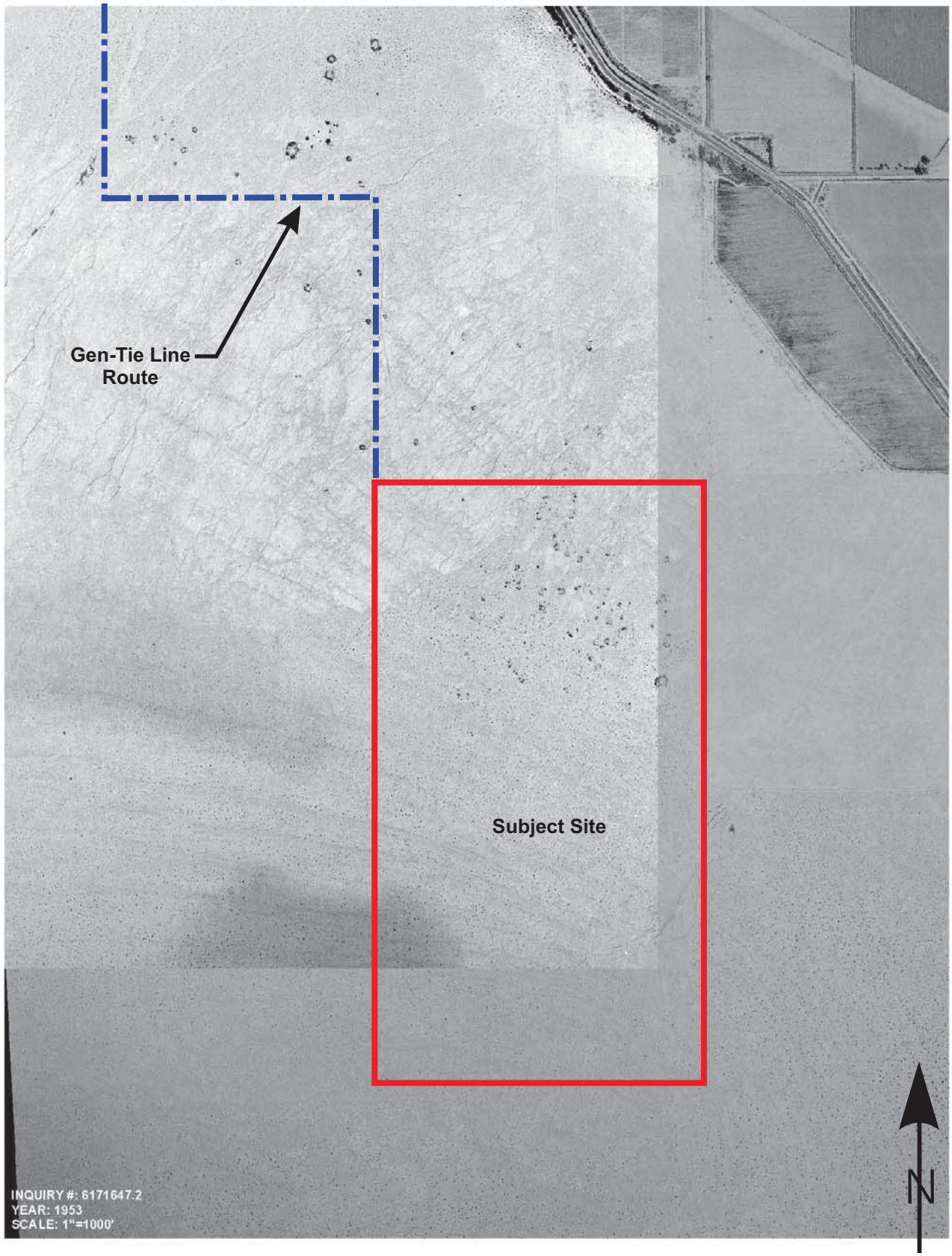


GS Lyon

Project No.: GS2017

1949 Aerial Photograph

Plate
6c

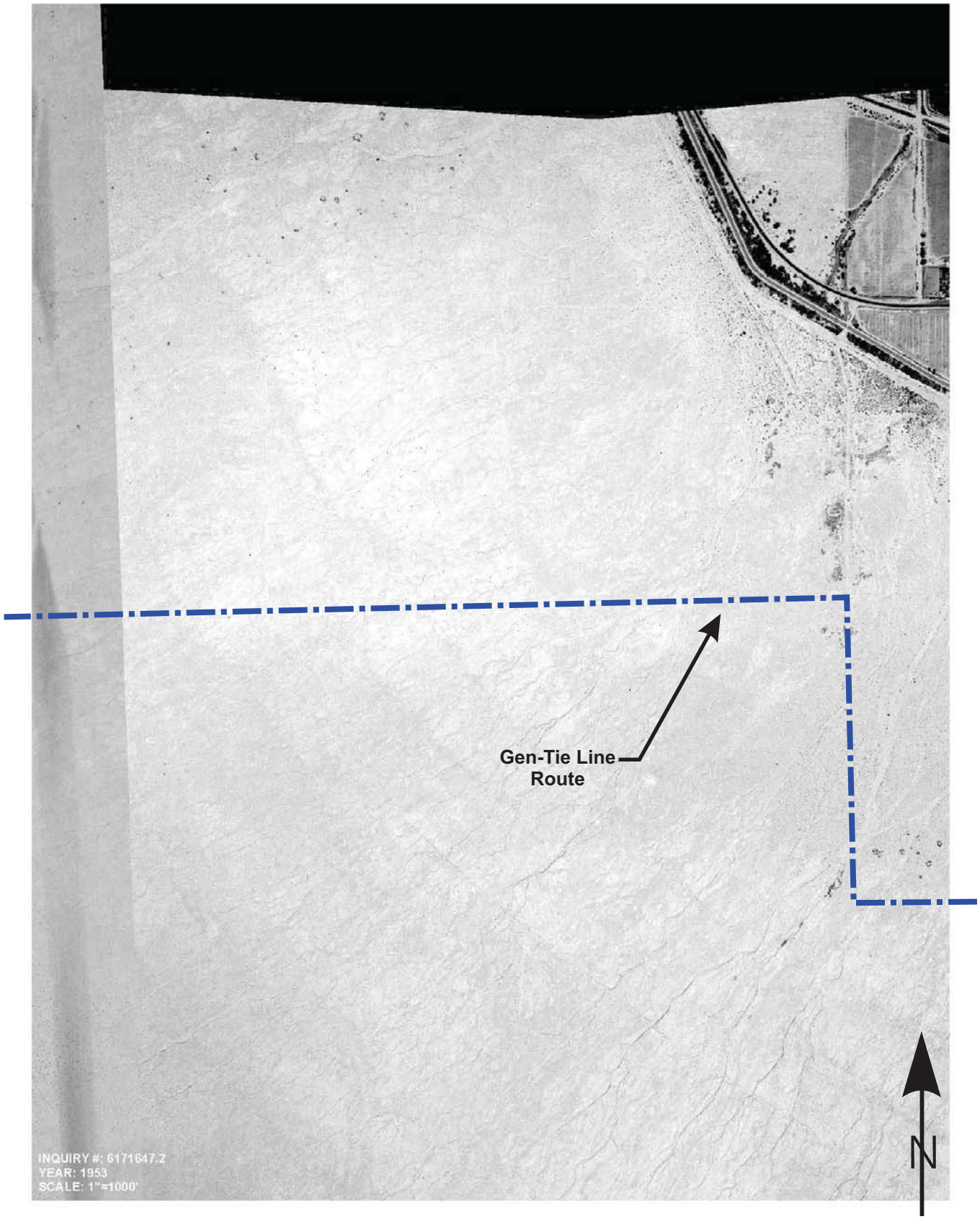


GS Lyon

Project No.: GS2017

1953 Aerial Photograph

Plate
7a

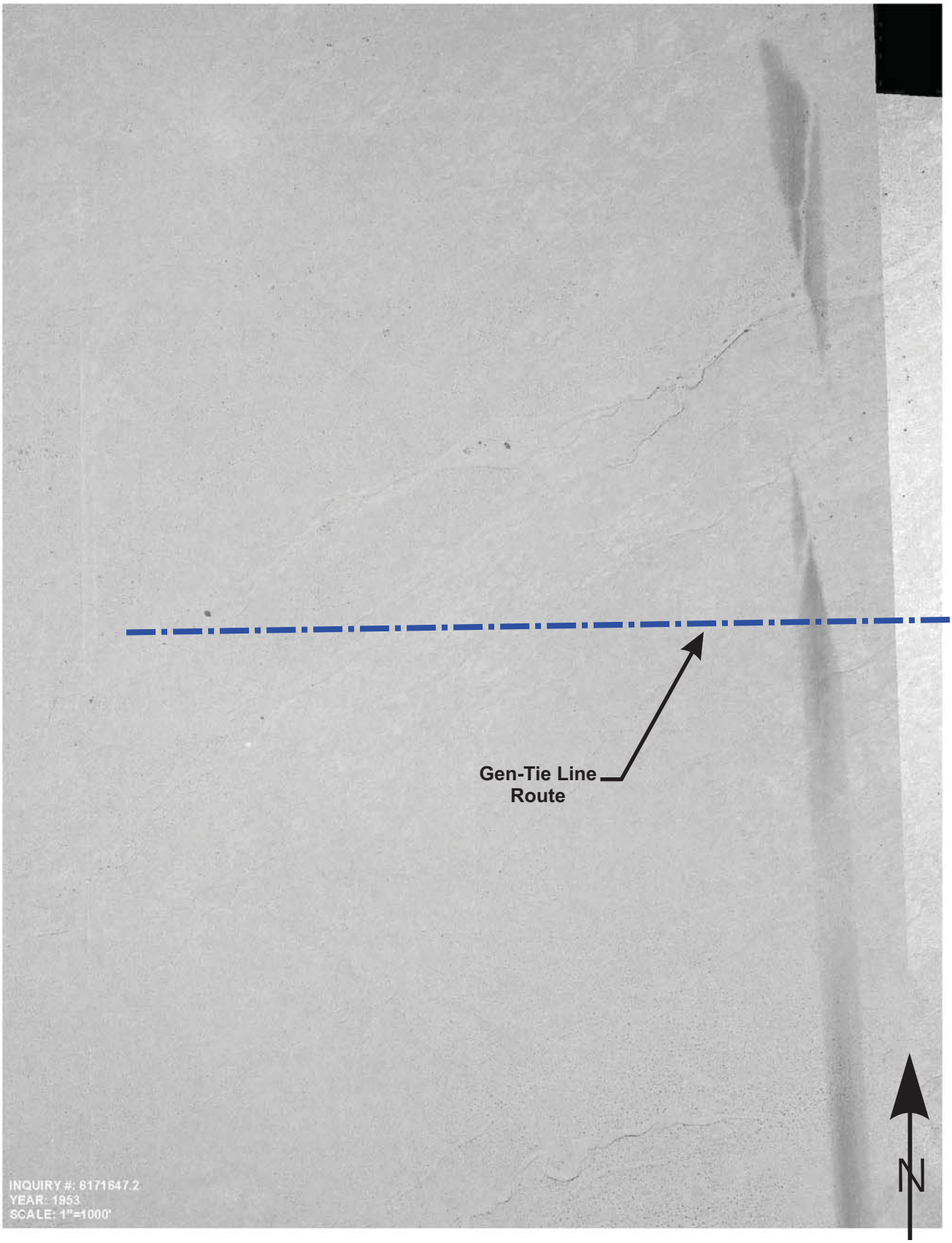


GS Lyon

Project No.: GS2017

1953 Aerial Photograph

Plate
7b

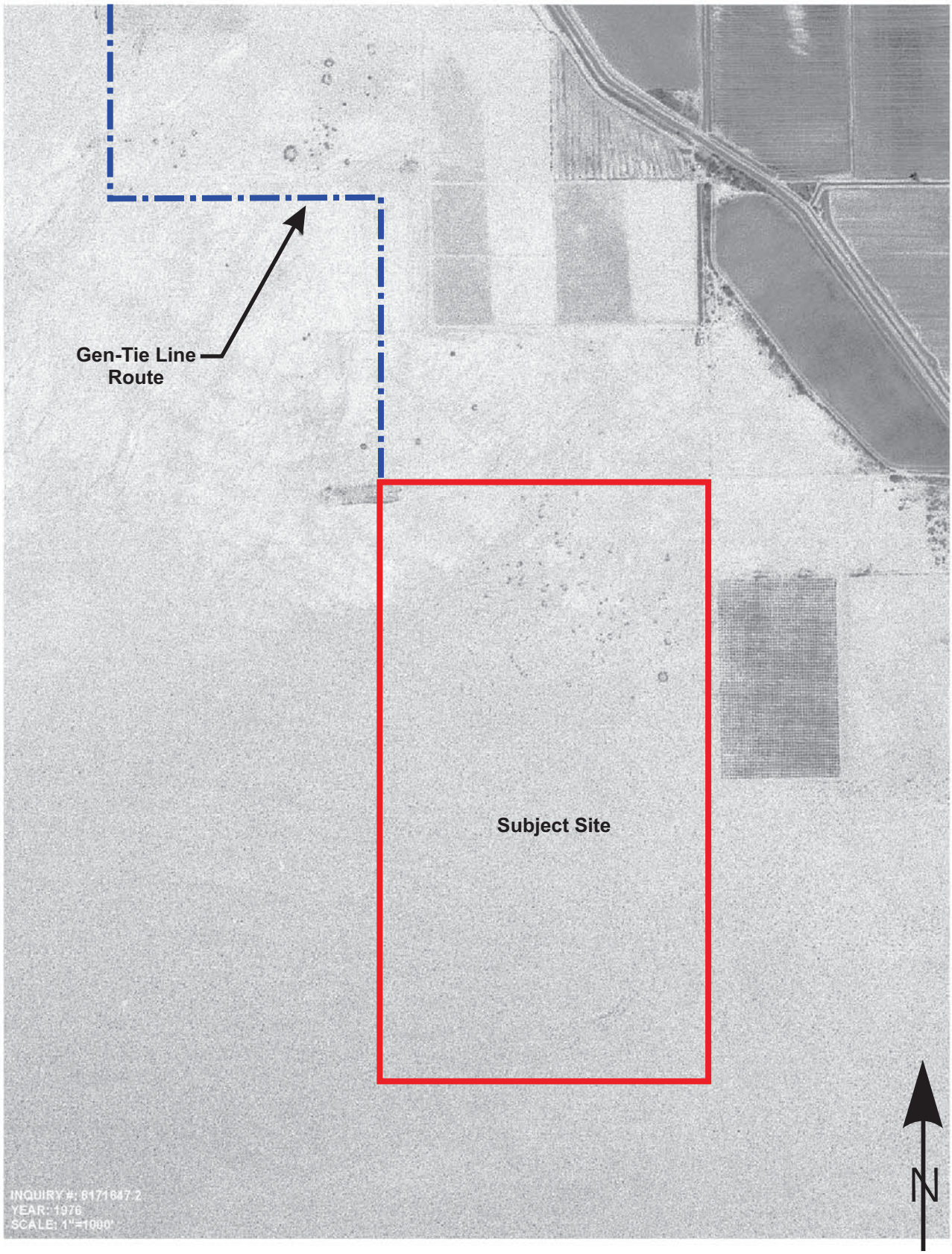


GS Lyon

Project No.: GS2017

1953 Aerial Photograph

Plate
7c

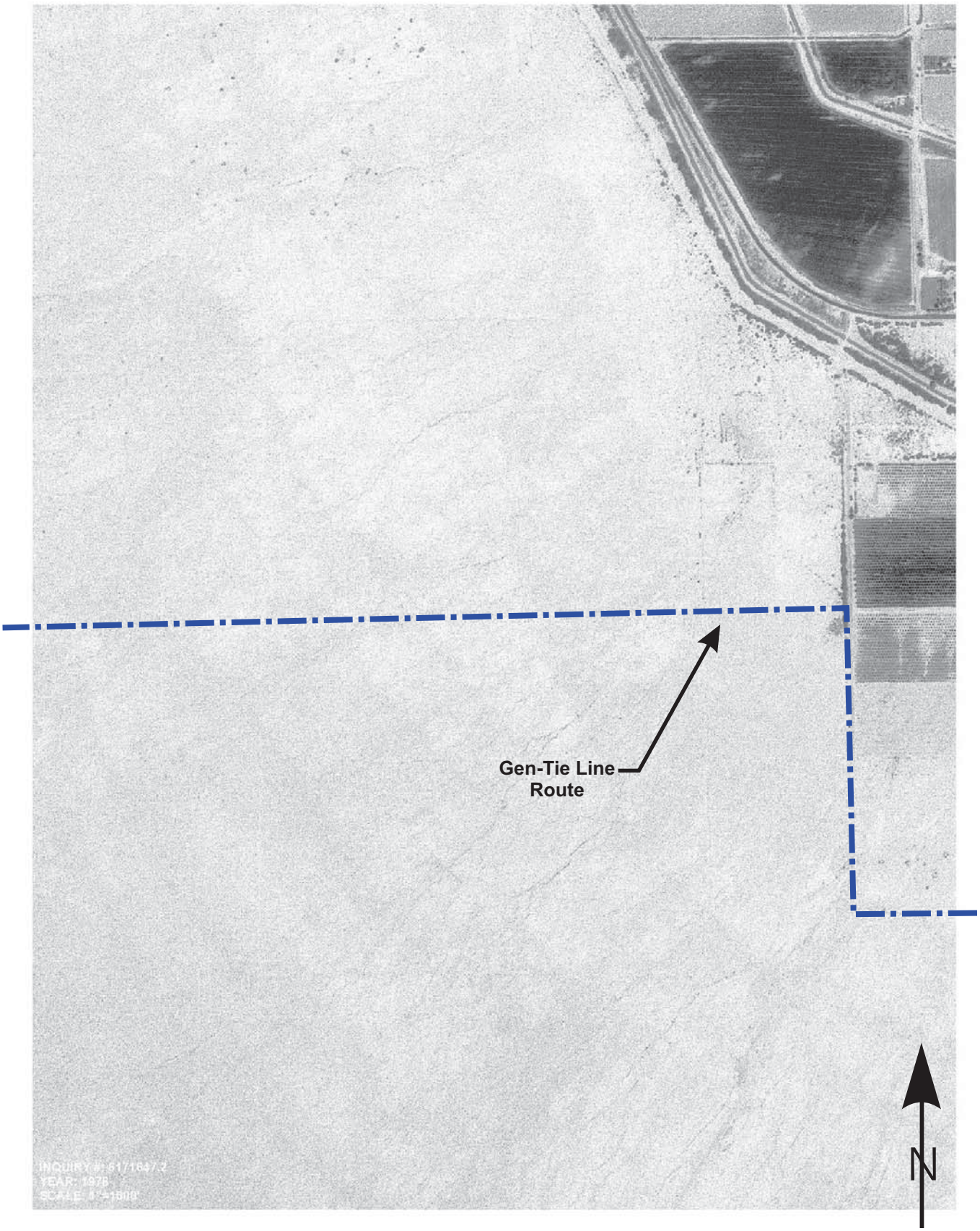


GS Lyon

Project No.: GS2017

1976 Aerial Photograph

Plate
8a

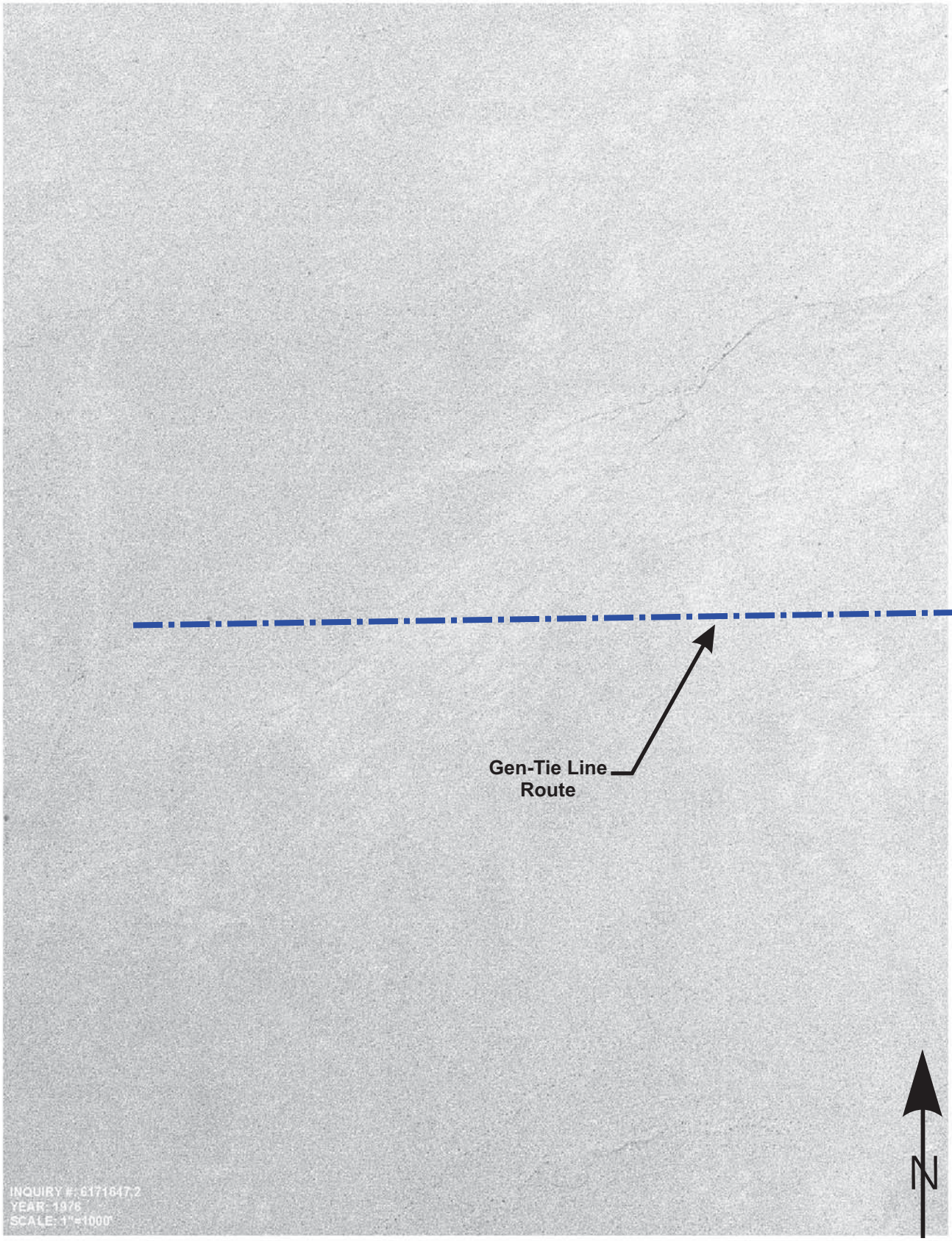


GS Lyon

Project No.: GS2017

1976 Aerial Photograph

Plate
8b

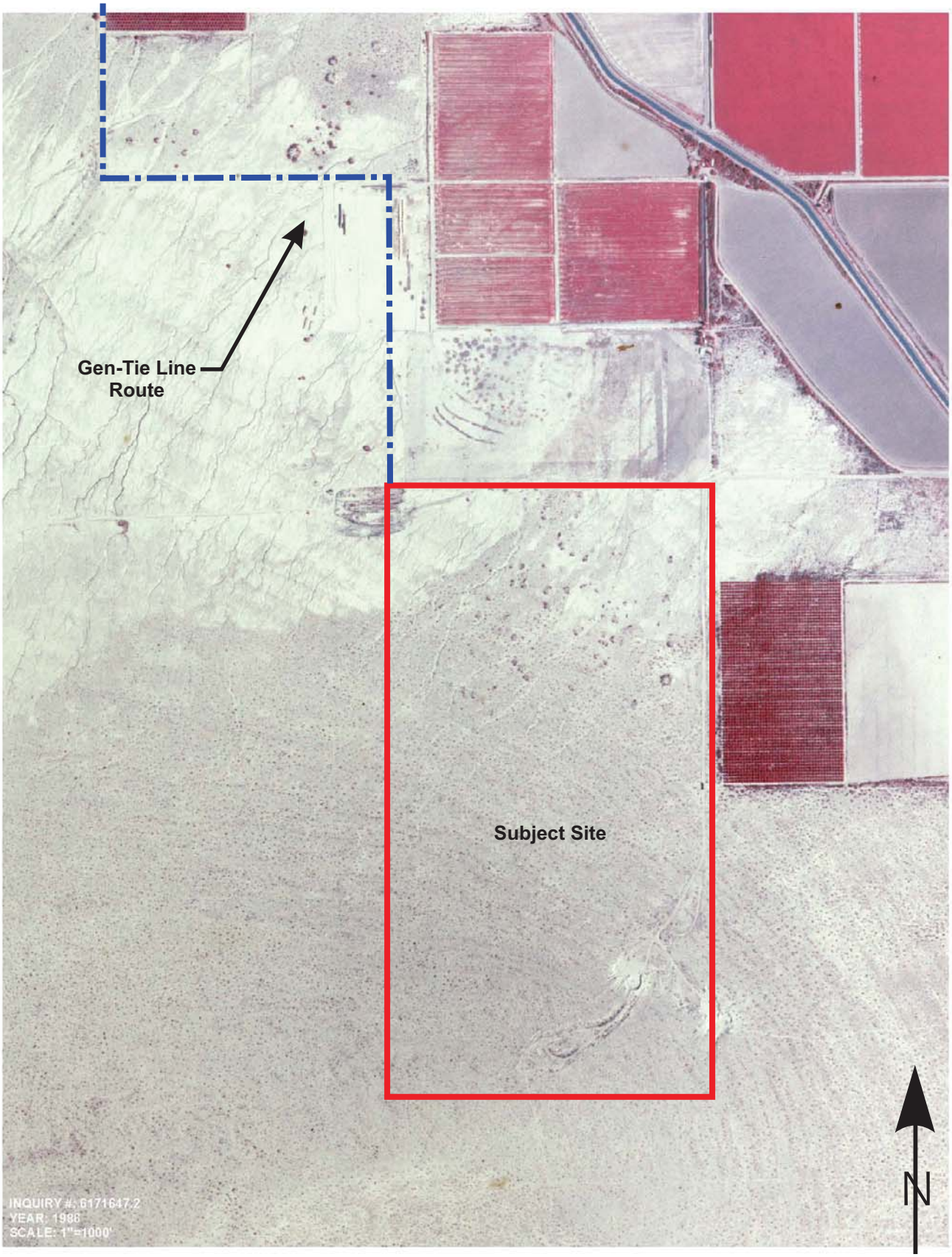


GS Lyon

Project No.: GS2017

1976 Aerial Photograph

Plate
8c

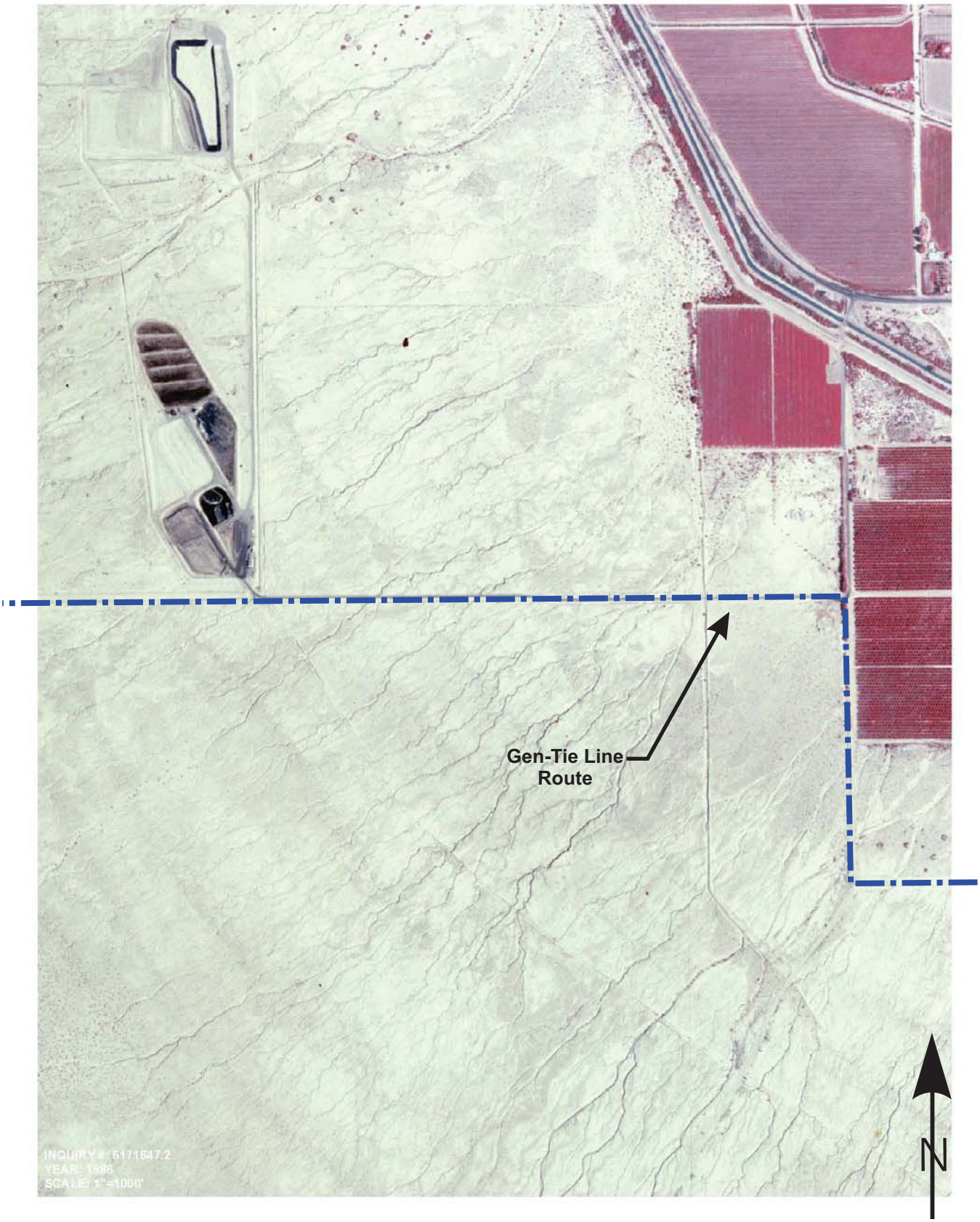


GS Lyon

Project No.: GS2017

1986 Aerial Photograph

Plate
9a

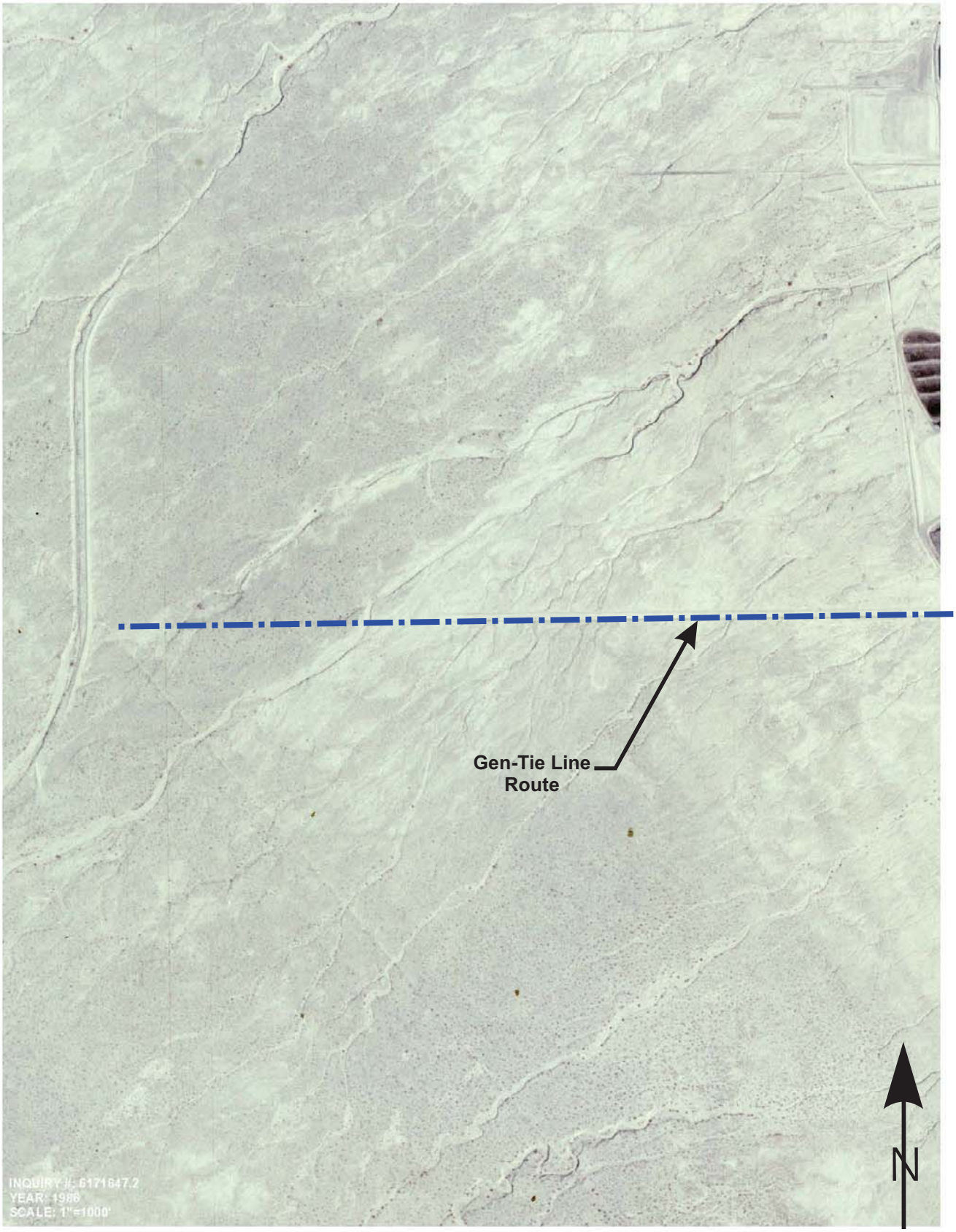


GS Lyon

Project No.: GS2017

1986 Aerial Photograph

Plate
9b

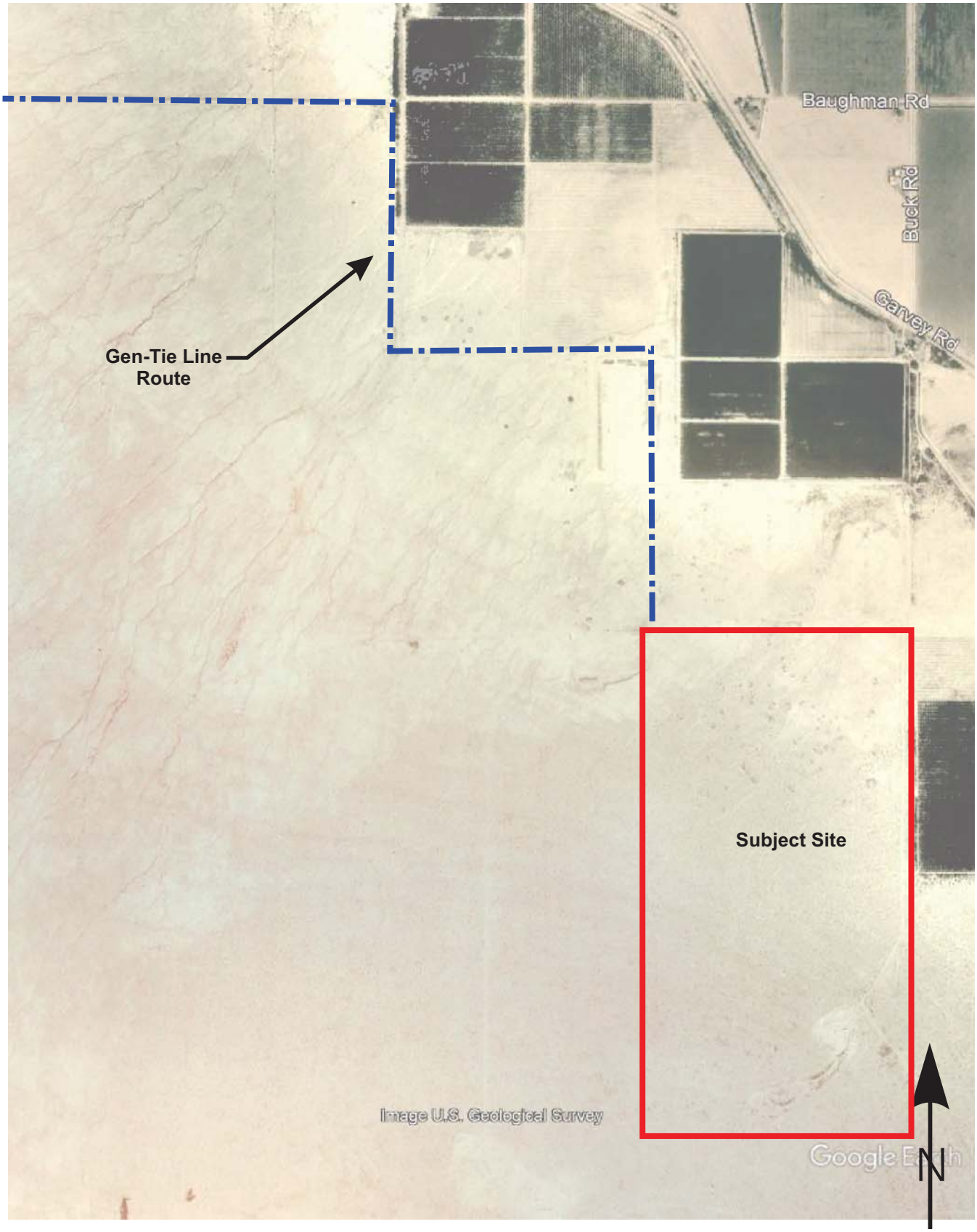


GS Lyon

Project No.: GS2017

1986 Aerial Photograph

Plate
9c



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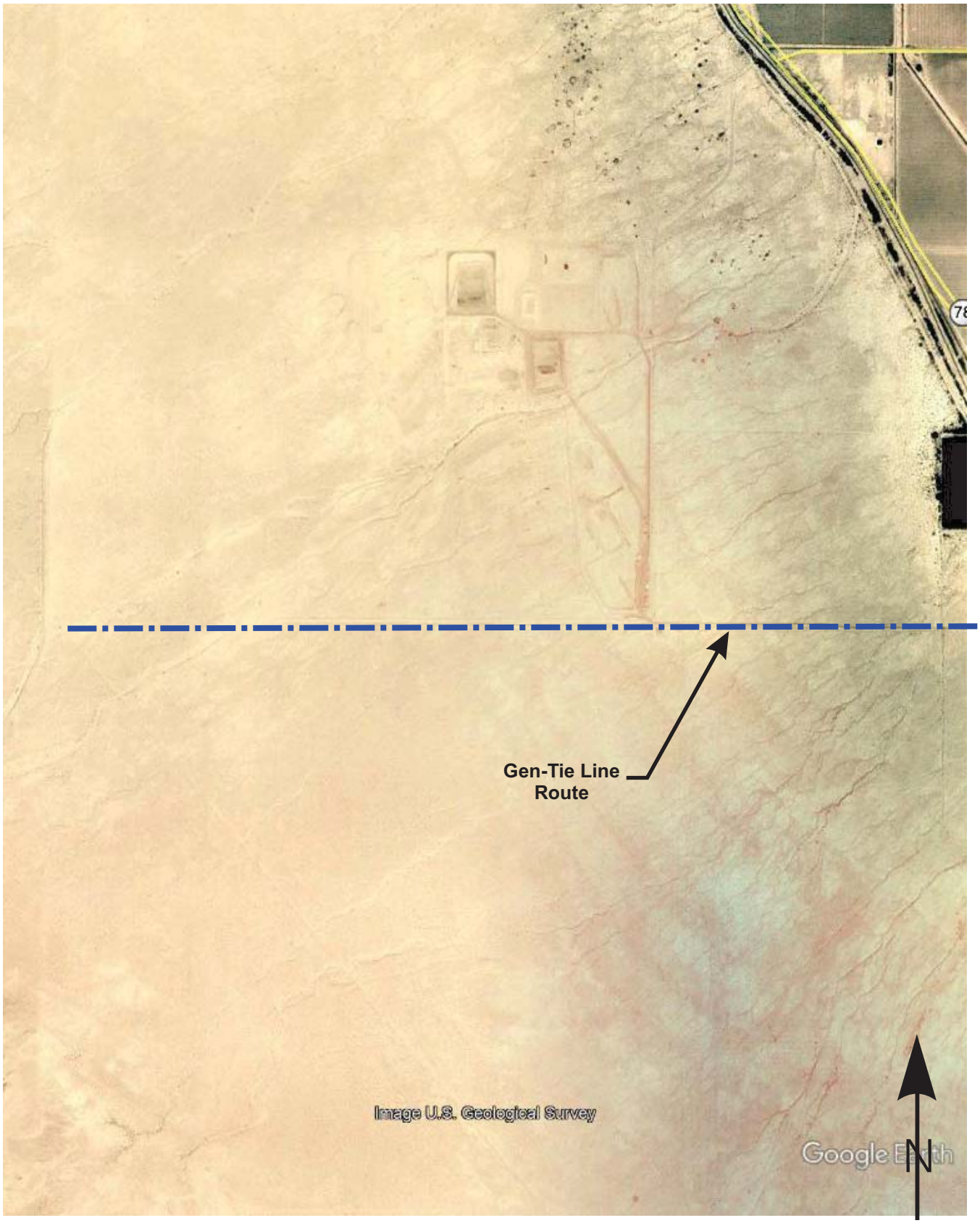
Project No.: GS2017

1992 Aerial Photograph

Plate
10a

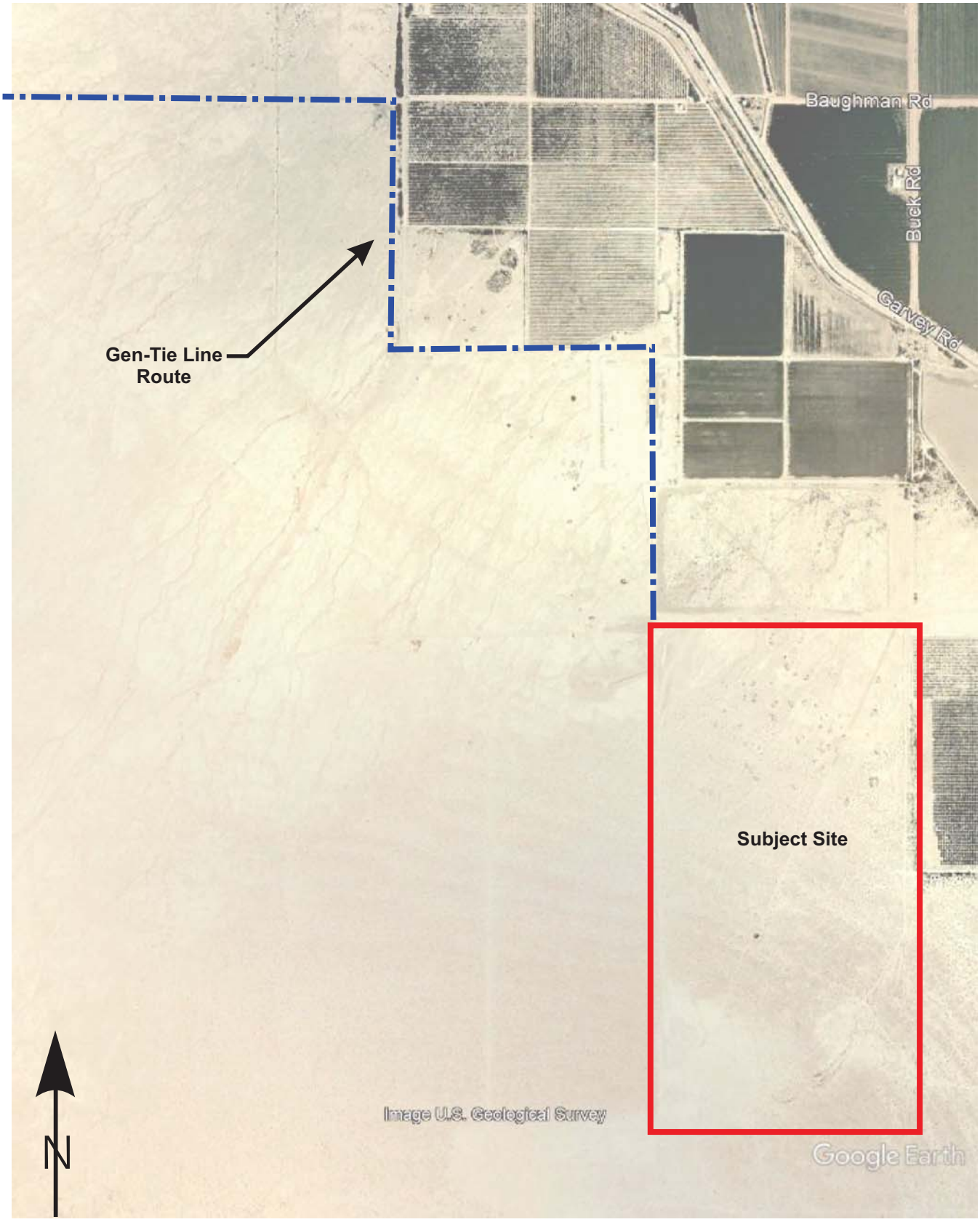


GSLyon

Project No.: GS2017

1992 Aerial Photograph

Plate
10b

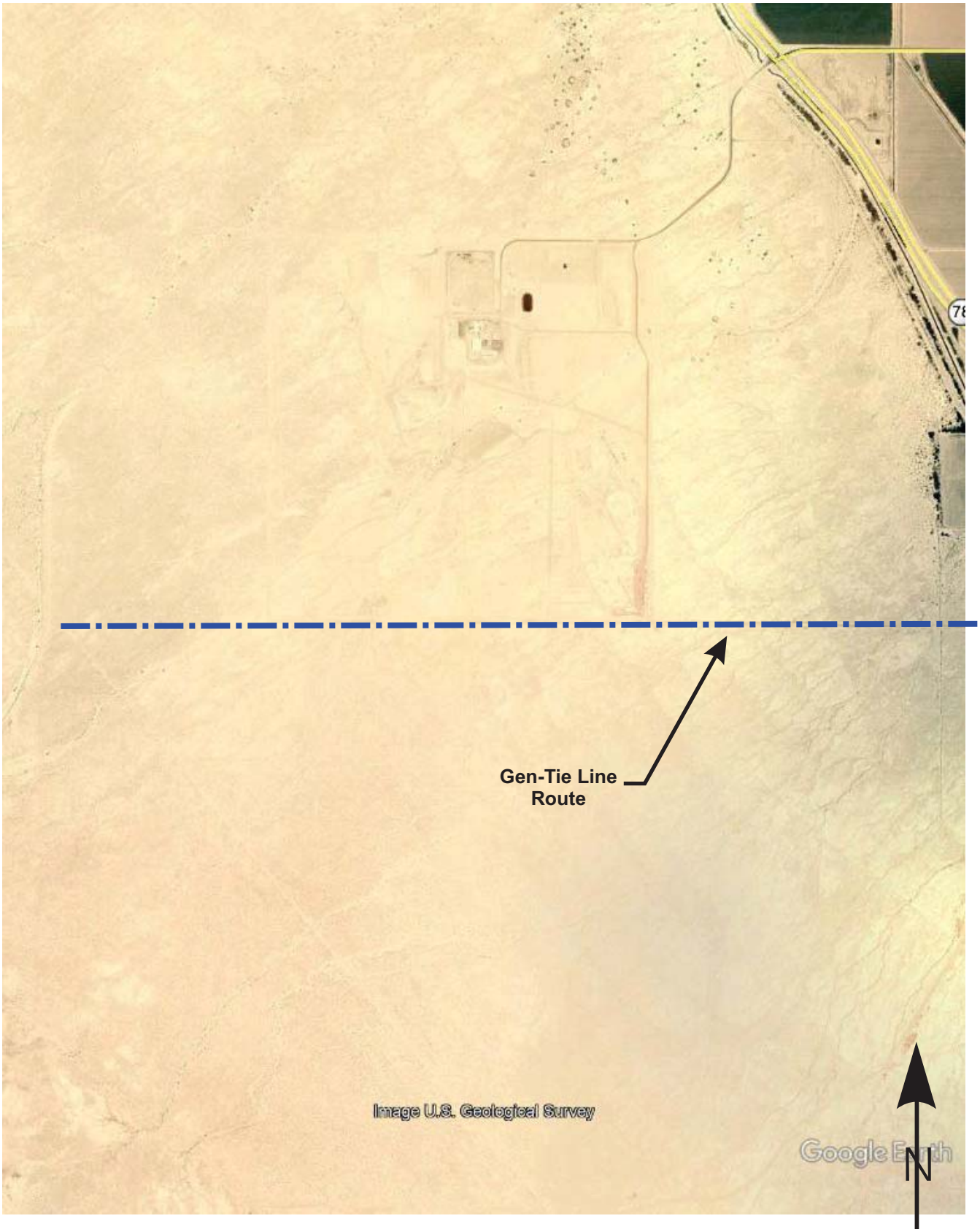


GS Lyon

Project No.: GS2017

1996 Aerial Photograph

Plate
11a

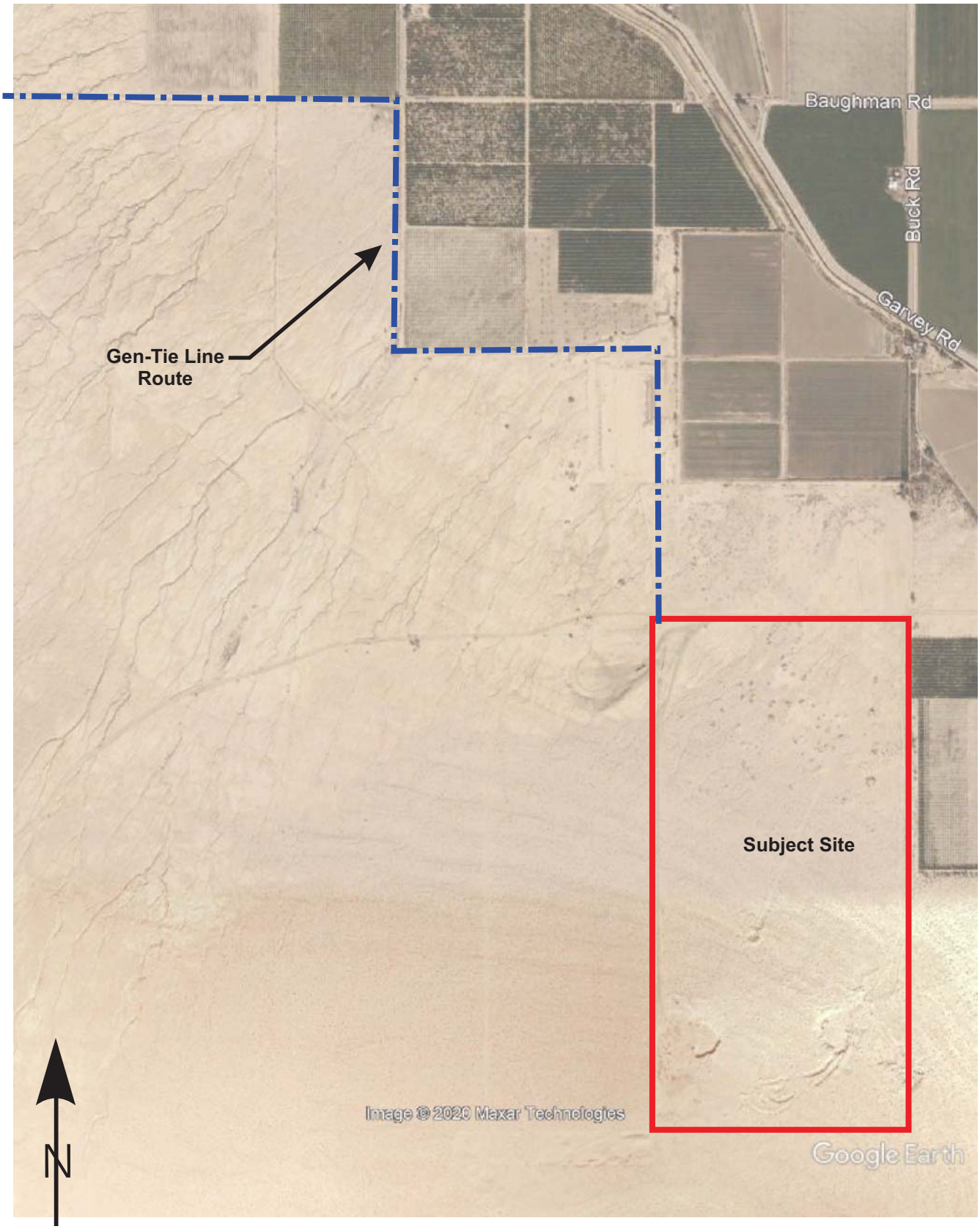


GS Lyon

Project No.: GS2017

1996 Aerial Photograph

Plate
11b

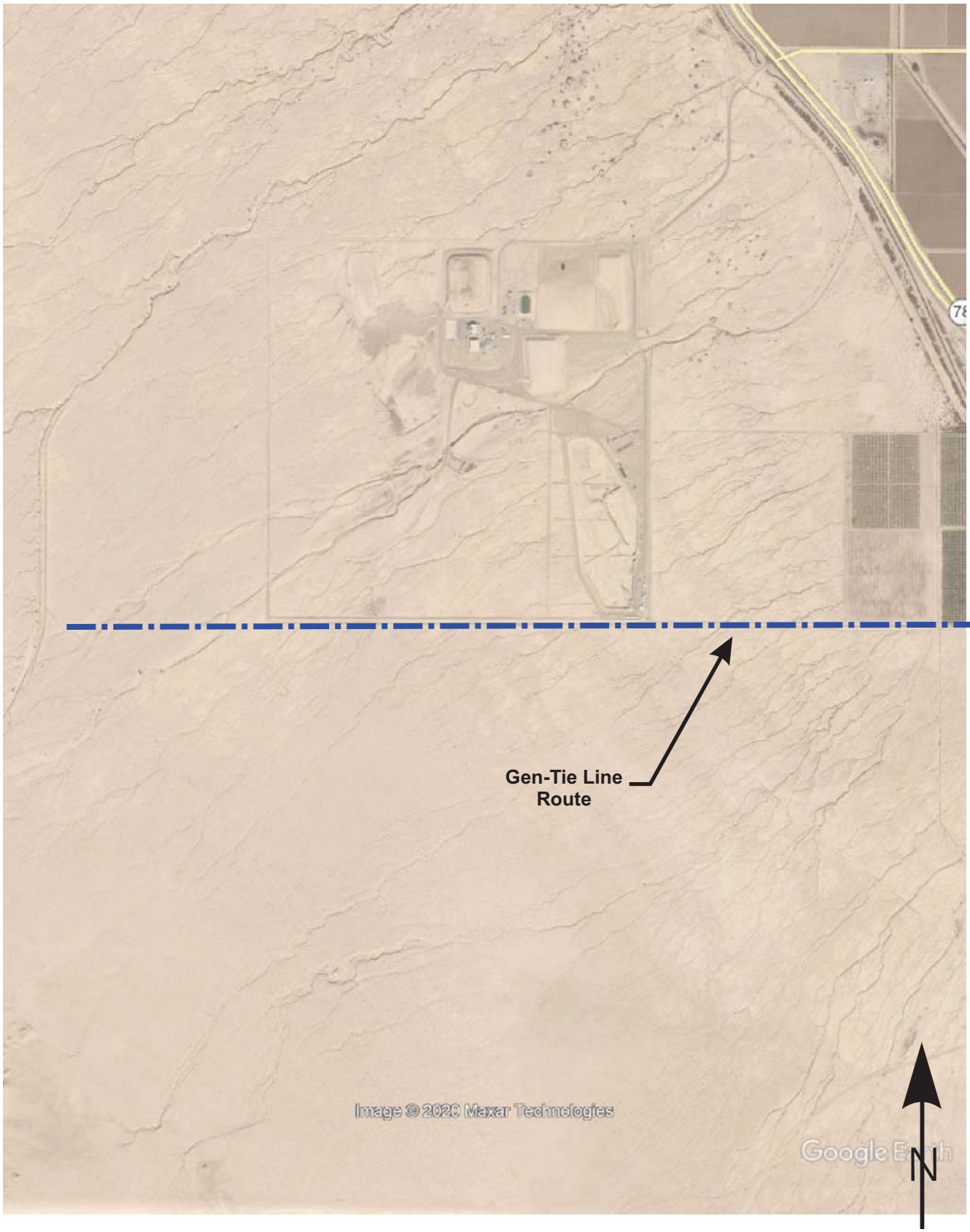


GS Lyon

Project No.: GS2017

2003 Aerial Photograph

Plate
12a

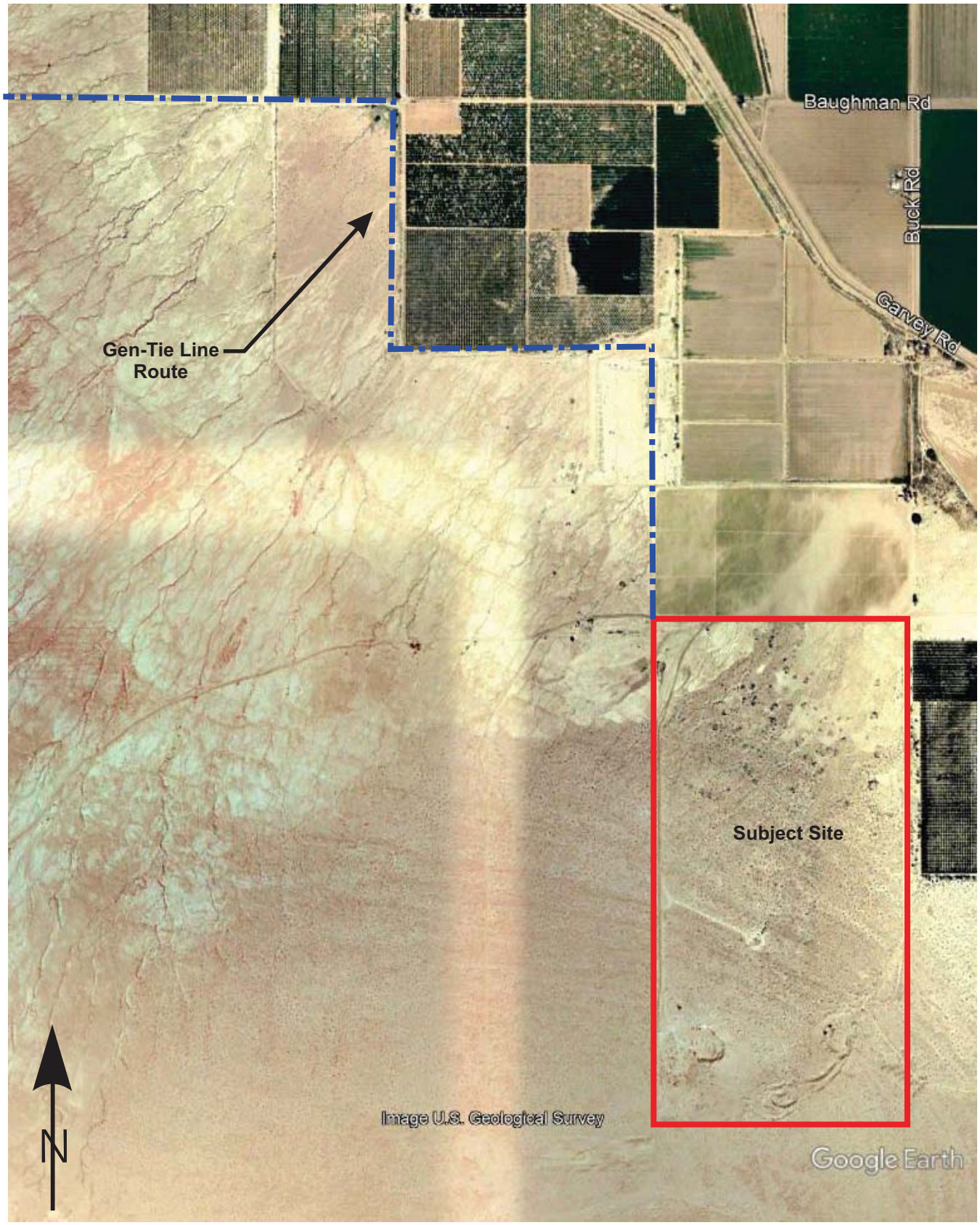


GSLyon

Project No.: GS2017

2003 Aerial Photograph

Plate
12b

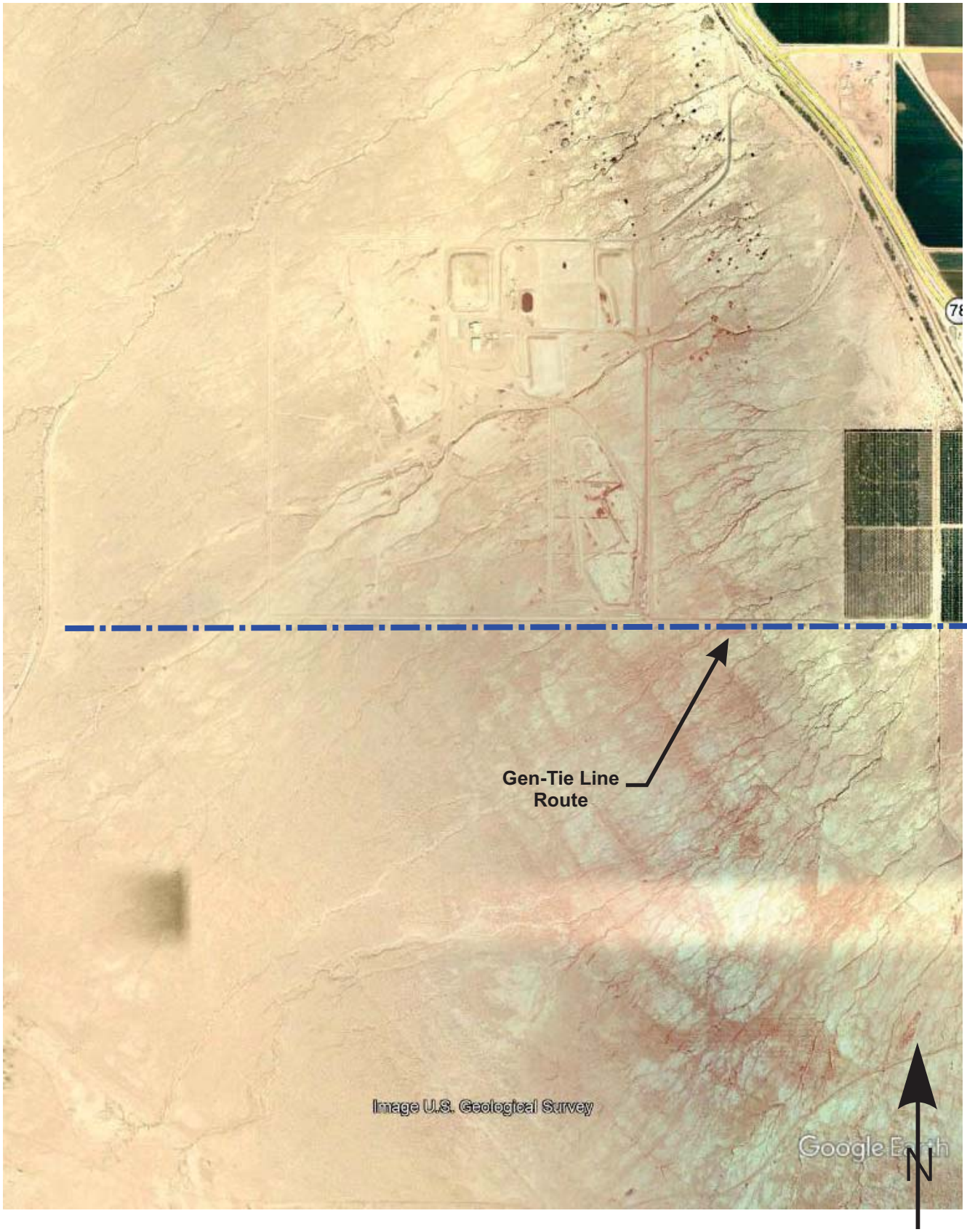


GSLyon

Project No.: GS2017

2008 Aerial Photograph

Plate
13a

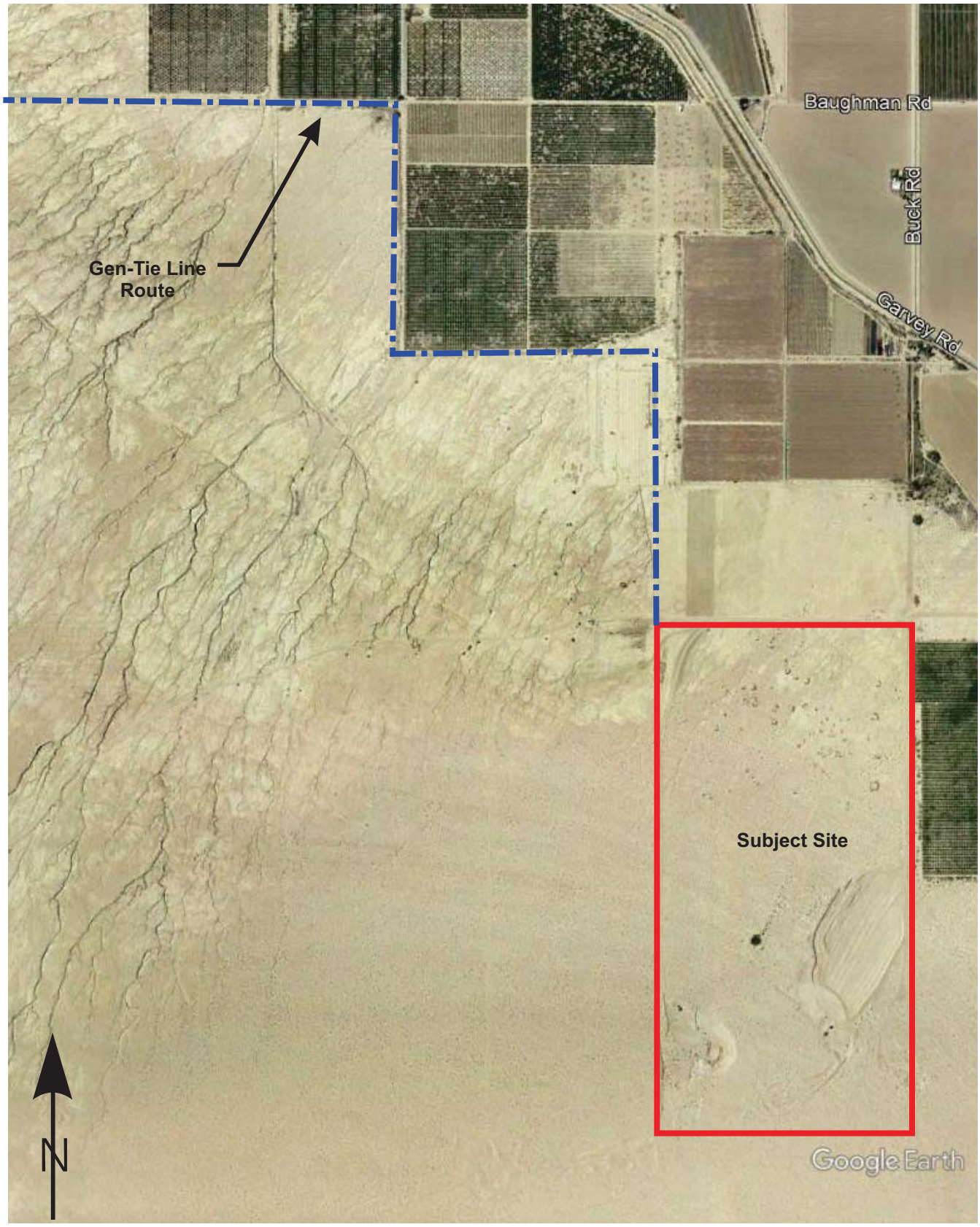


GSLyon

Project No.: GS2017

2008 Aerial Photograph

Plate
13b



GS Lyon

Project No.: GS2017

2012 Aerial Photograph

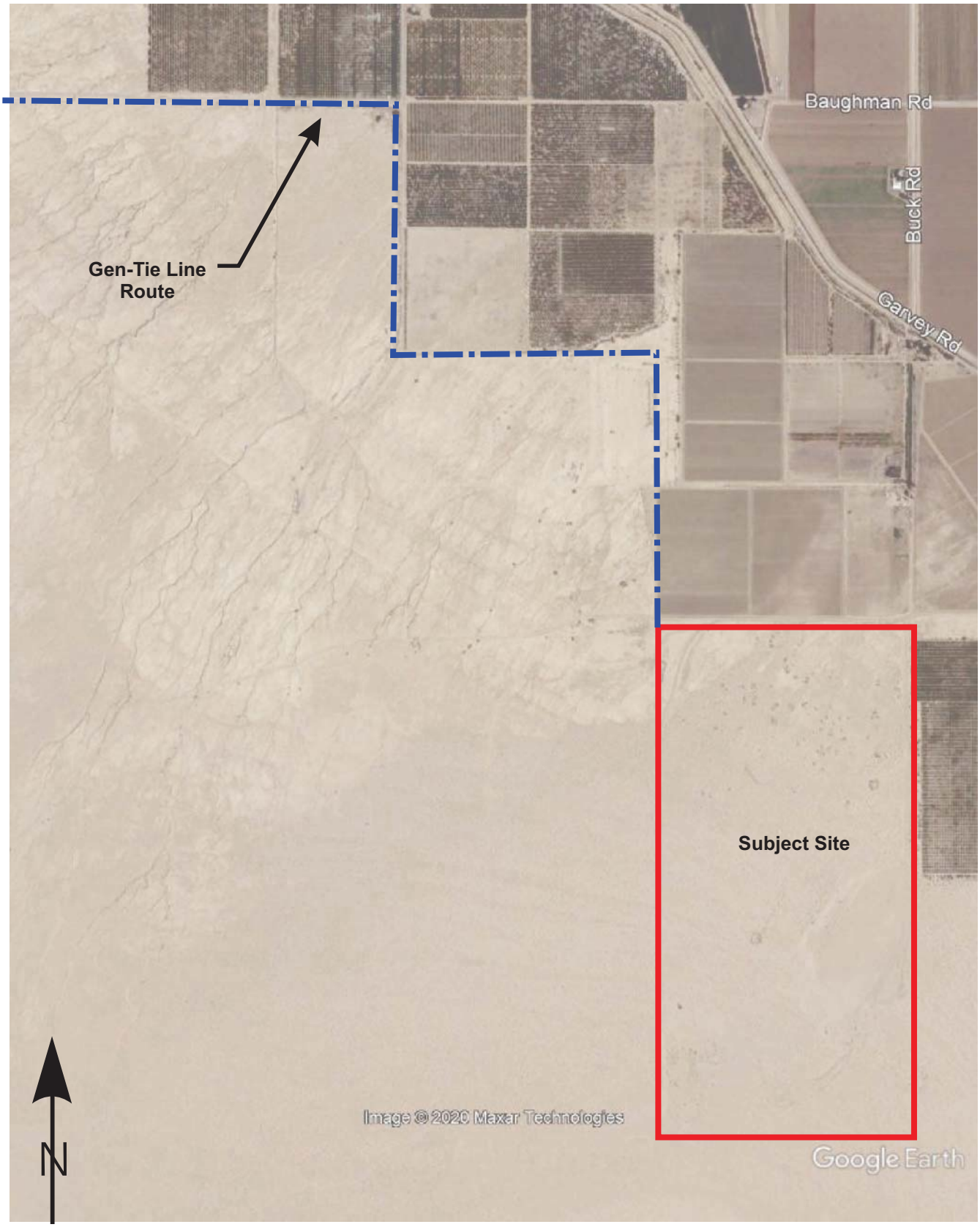
Plate 14a

GSLyon

Project No.: GS2017

2012 Aerial Photograph

Plate
14b

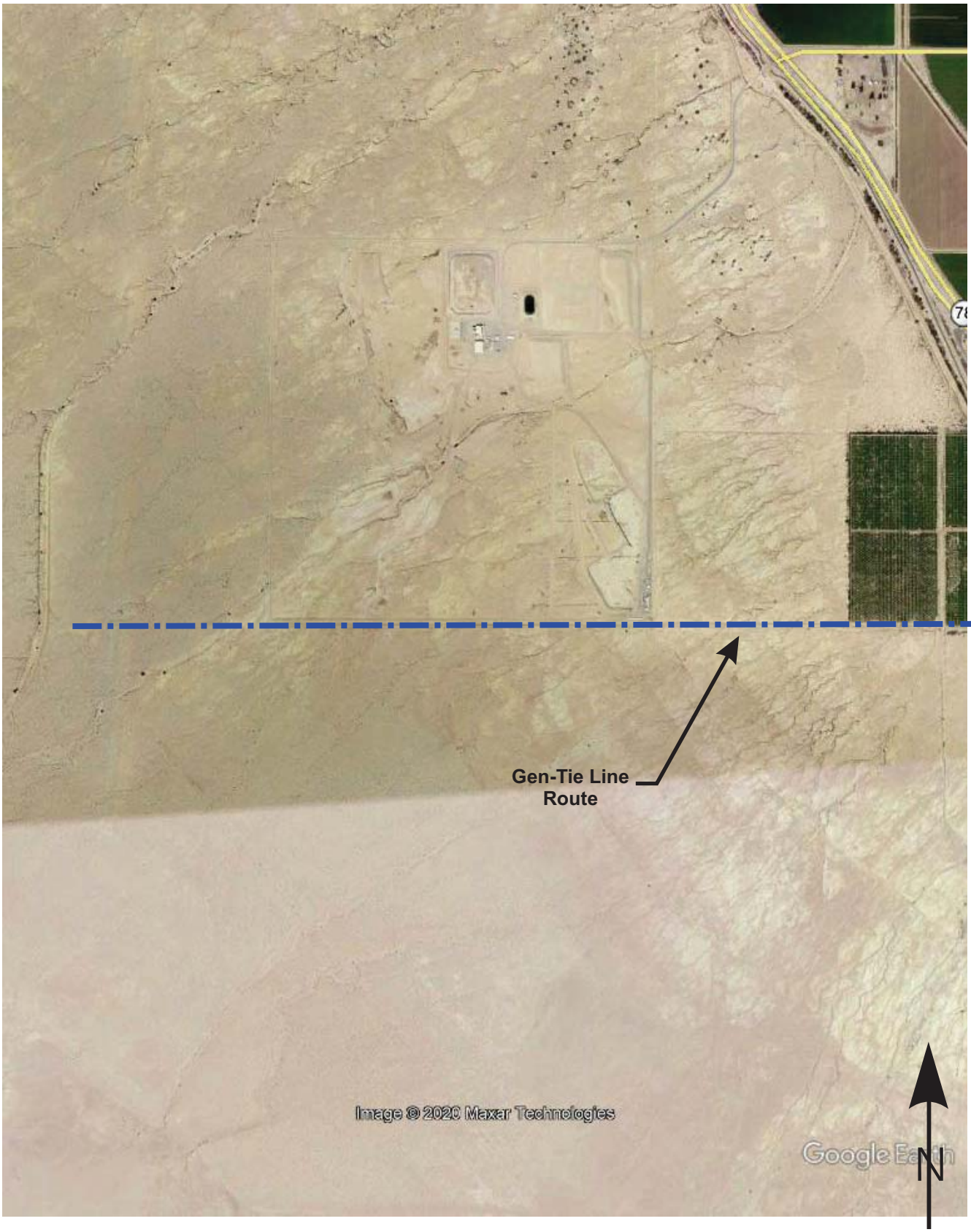


GS Lyon

Project No.: GS2017

2016 Aerial Photograph

Plate
15a



GSLyon

Project No.: GS2017

2016 Aerial Photograph

Plate
15b

APPENDIX D

Cedar Solar 3

Andre Road and Garvey Road, Imperial County

Brawley, CA 92227

Inquiry Number: 6171647.1

August 28, 2020

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

08/28/20

Site Name:

Cedar Solar 3
Andre Road and Garvey Road,
Brawley, CA 92227
EDR Inquiry # 6171647.1

Client Name:

GS Lyon Consultants
780 N. Fourth Street
El Centro, CA 92243
Contact: Peter E. Labrucherie

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by GS Lyon Consultants were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: GS2017

Coordinates:

Latitude:	33.02325 33° 1' 24" North
Longitude:	-115.710113 -115° 42' 36" West
UTM Zone:	Zone 11 North
UTM X Meters:	620468.42
UTM Y Meters:	3654603.54
Elevation:	-110.20' below sea level

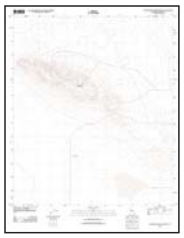
Maps Provided:

2012	1947, 1948
1995	1945
1979	1944, 1945
1976	1943
1957	1940, 1943
1956	
1956, 1957	
1947	

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Superstition Mountain

7.5-minute, 24000

Brawley NW

7.5-minute, 24000

Kane Spring

7.5-minute, 24000

Westmorland West

7.5-minute, 24000

1995 Source Sheets

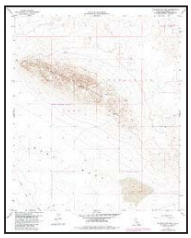
Westmorland West

7.5-minute, 24000
Aerial Photo Revised 1992

Kane Spring

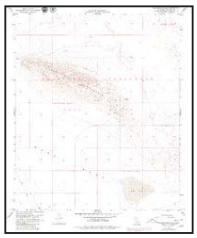
7.5-minute, 24000
Aerial Photo Revised 1992

1979 Source Sheets



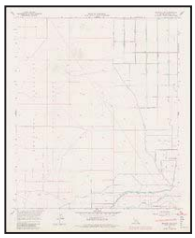
Superstition Mtn

7.5-minute, 24000
Aerial Photo Revised 1976



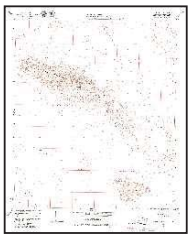
Superstition Mtn.

7.5-minute, 24000
Aerial Photo Revised 1976



Brawley NW

7.5-minute, 24000
Aerial Photo Revised 1976



SUPERSTITION MOUNTAIN

7.5-minute, 24000

1976 Source Sheets

Calipatria

15-minute, 50000

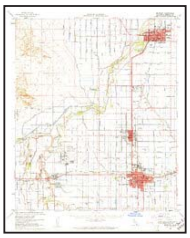
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1957 Source Sheets

Plaster City

15-minute, 62500
Aerial Photo Revised 1953



Brawley

15-minute, 62500
Aerial Photo Revised 1953

1956 Source Sheets

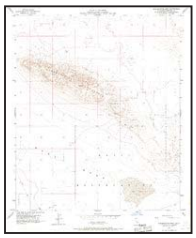
Calipatria SW

7.5-minute, 24000
Aerial Photo Revised 1953

Kane Spring

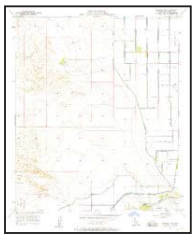
7.5-minute, 24000
Aerial Photo Revised 1953

1956, 1957 Source Sheets



Superstition Mtn.

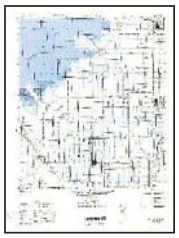
7.5-minute, 24000
Aerial Photo Revised 1953



Brawley NW

7.5-minute, 24000
Aerial Photo Revised 1953

1947 Source Sheets



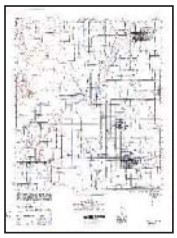
CALIPATRIA

15-minute, 50000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947, 1948 Source Sheets



BRAWLEY

15-minute, 50000

PLASTER CITY

15-minute, 50000

KANE SPRING

15-minute, 50000

1945 Source Sheets

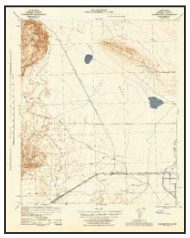
Calipatria

15-minute, 62500
Aerial Photo Revised 1940

1944, 1945 Source Sheets

Kane Spring

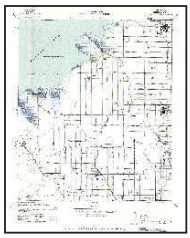
15-minute, 62500
Aerial Photo Revised 1940



Plaster City

15-minute, 62500
Aerial Photo Revised 1943

1943 Source Sheets



CALIPATRIA

15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1940, 1943 Source Sheets

Brawley

15-minute, 62500
Aerial Photo Revised 1940

Kane Spring

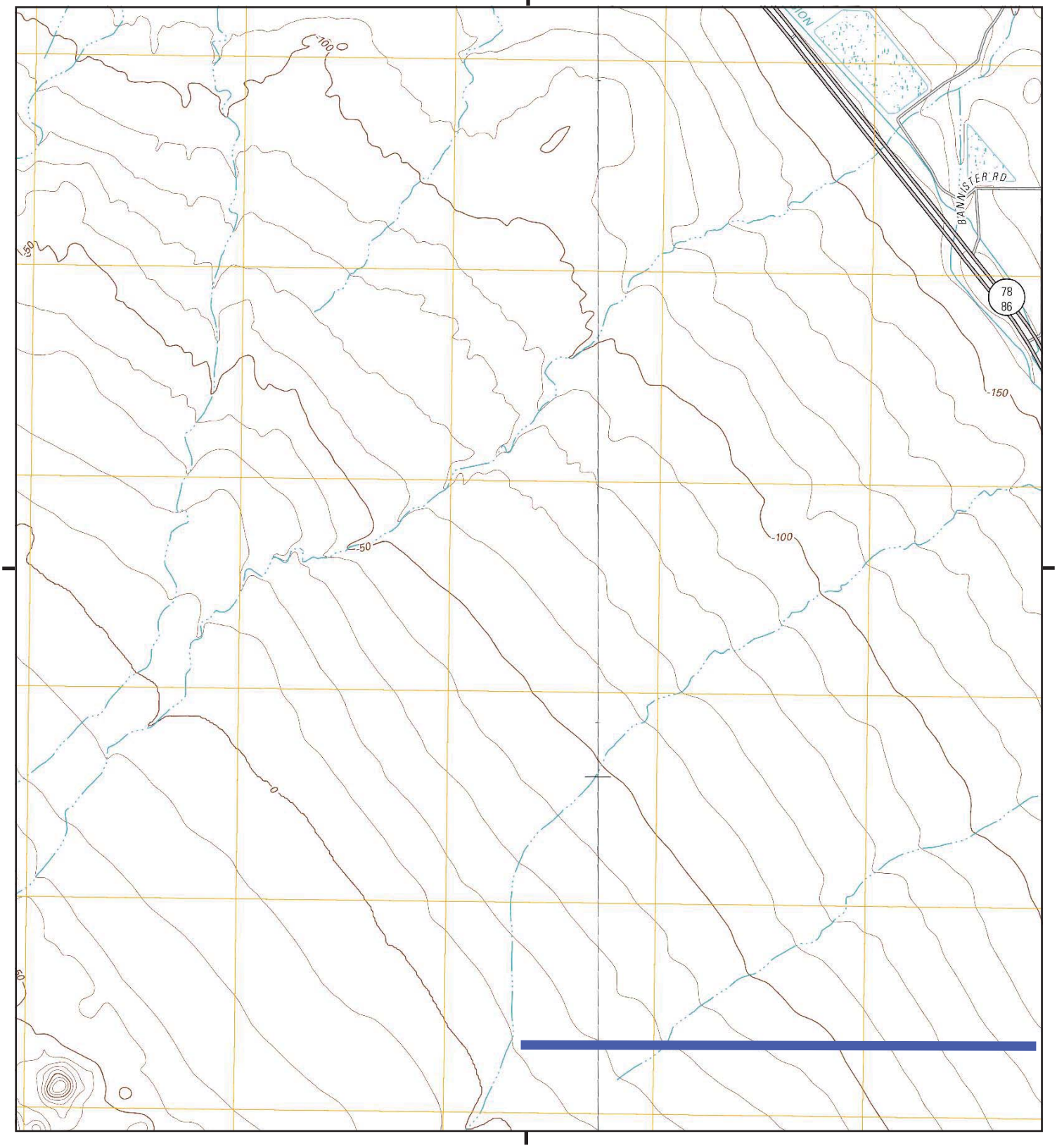
15-minute, 62500
Aerial Photo Revised 1940

Plaster City

15-minute, 62500
Aerial Photo Revised 1940

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

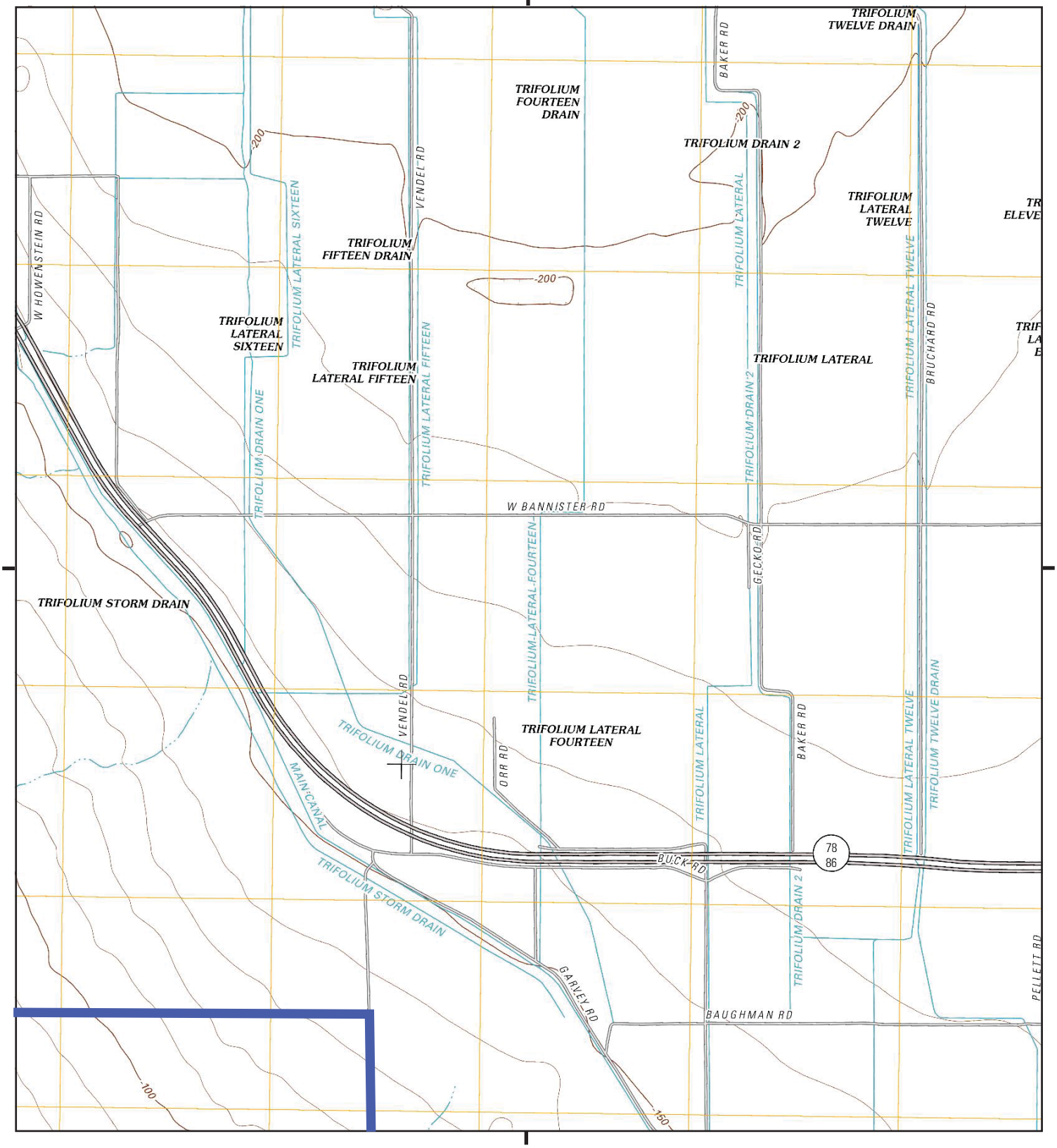
TP, Kane Spring, 2012, 7.5-minute
E, Westmorland West, 2012, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

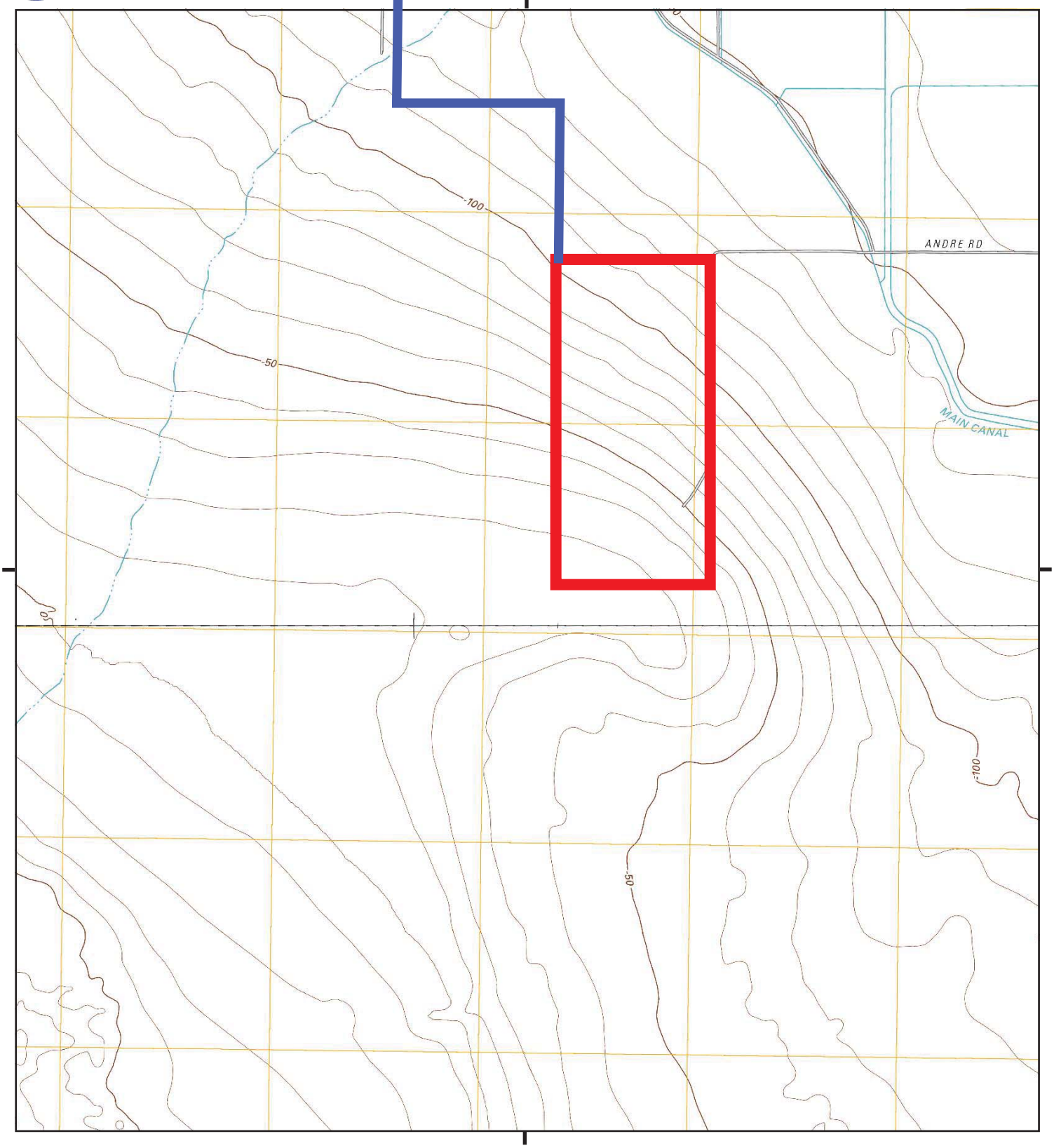
TP, Westmorland West, 2012, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

2012



This report includes information from the following map sheet(s).

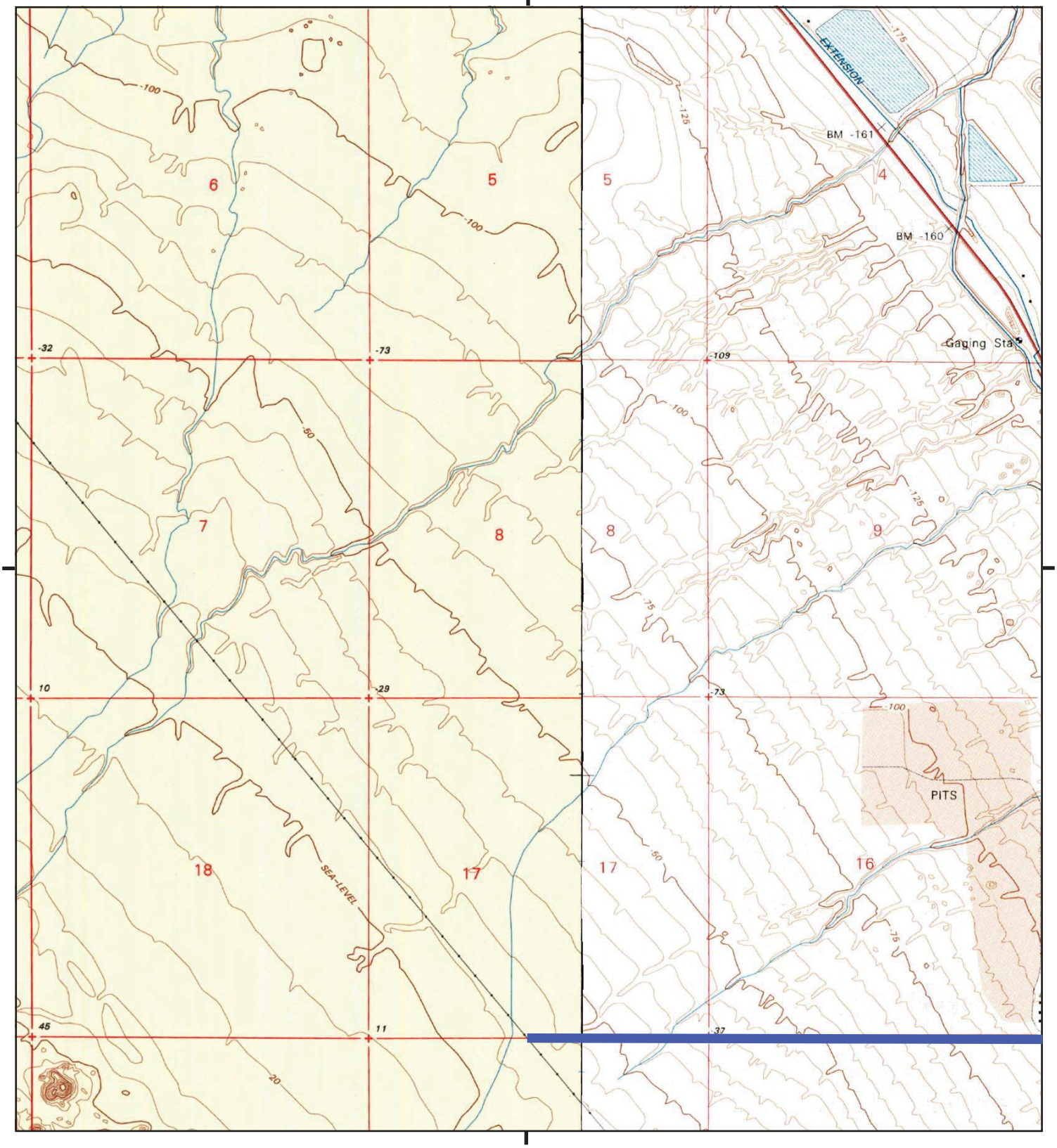
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Westmorland West, 2012, 7.5-minute
S, Brawley NW, 2012, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



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0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

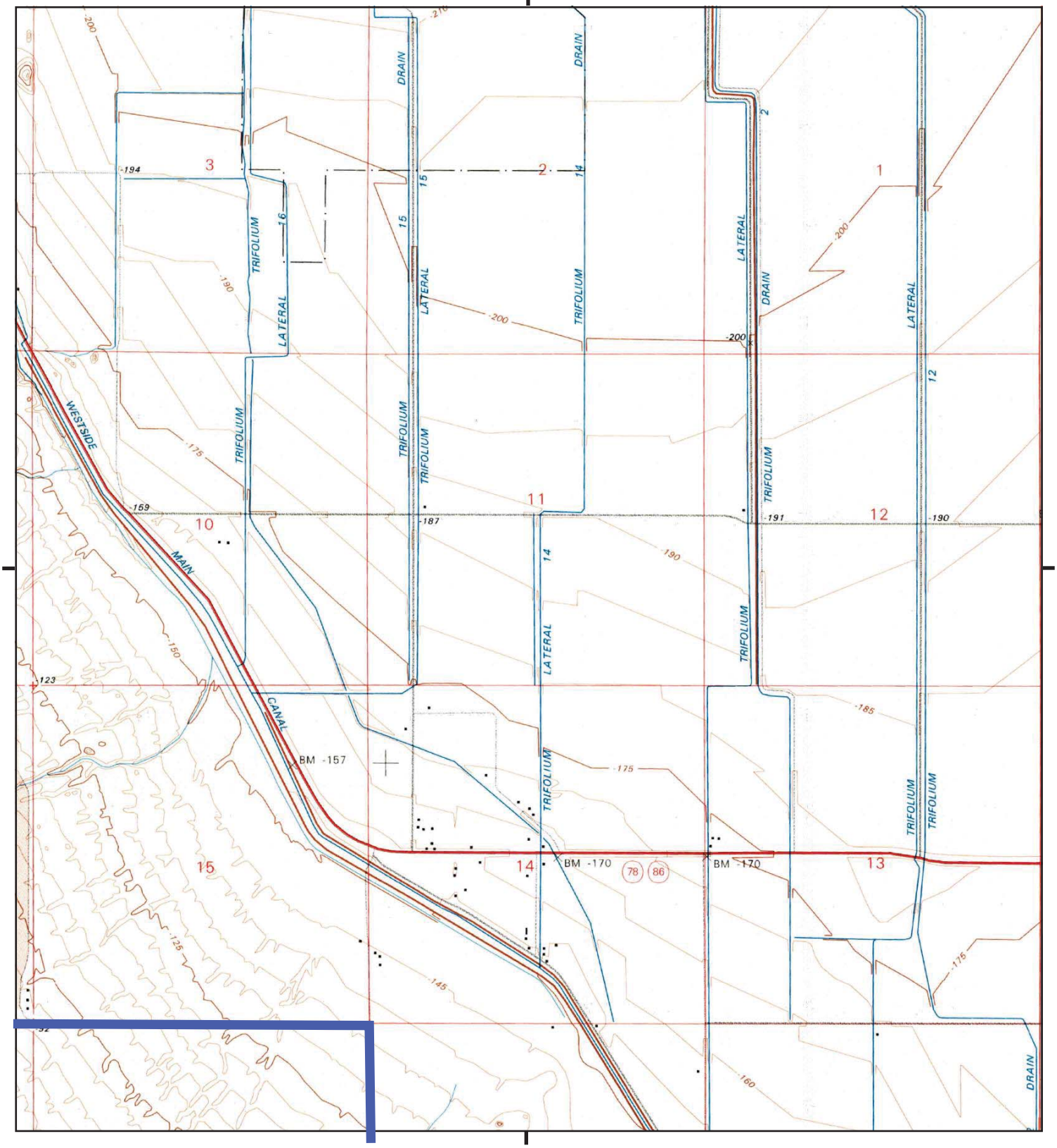
TP, Kane Spring, 1995, 7.5-minute
E, Westmorland West, 1995, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1995



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

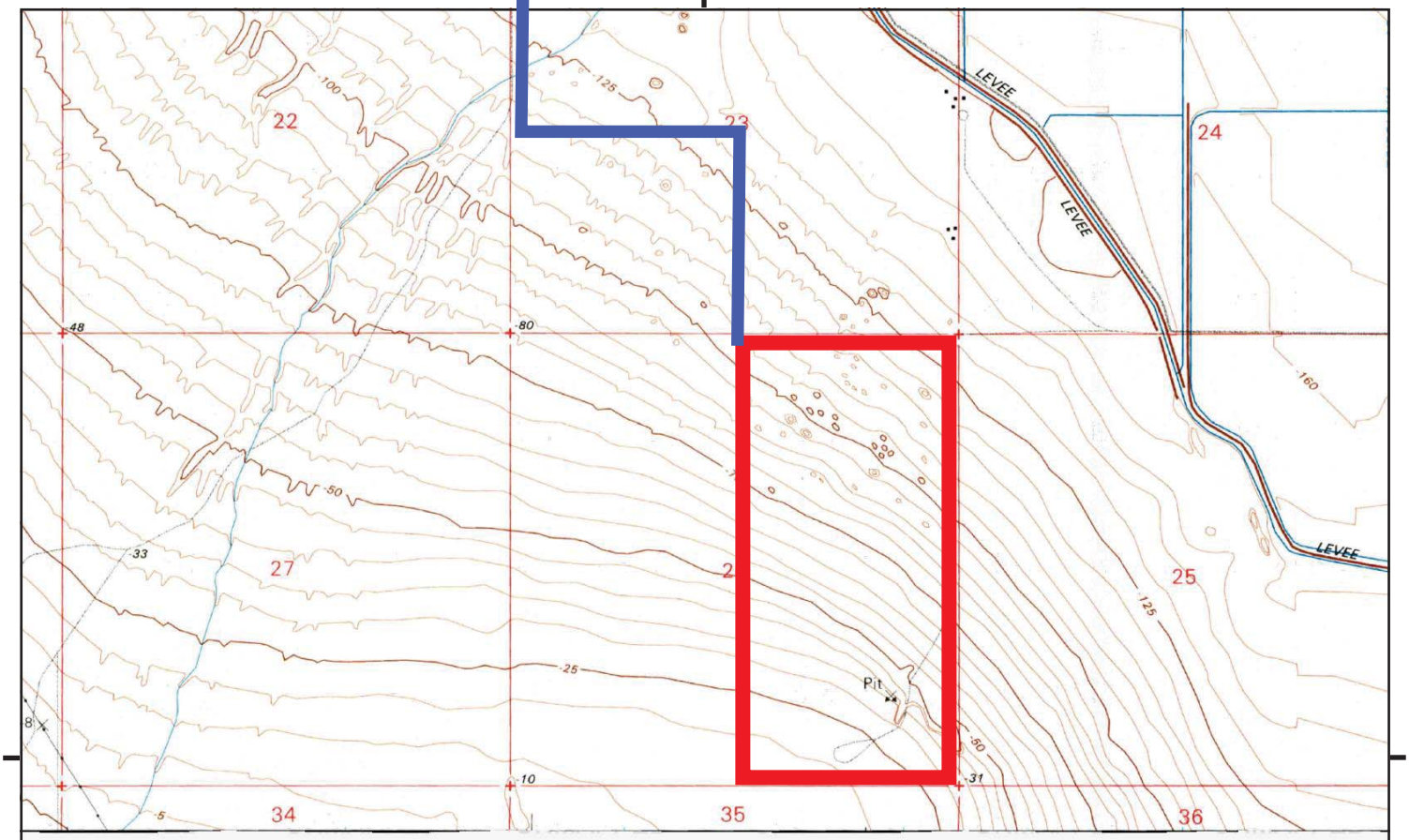
TP, Westmorland West, 1995, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1995



This report includes information from the following map sheet(s).

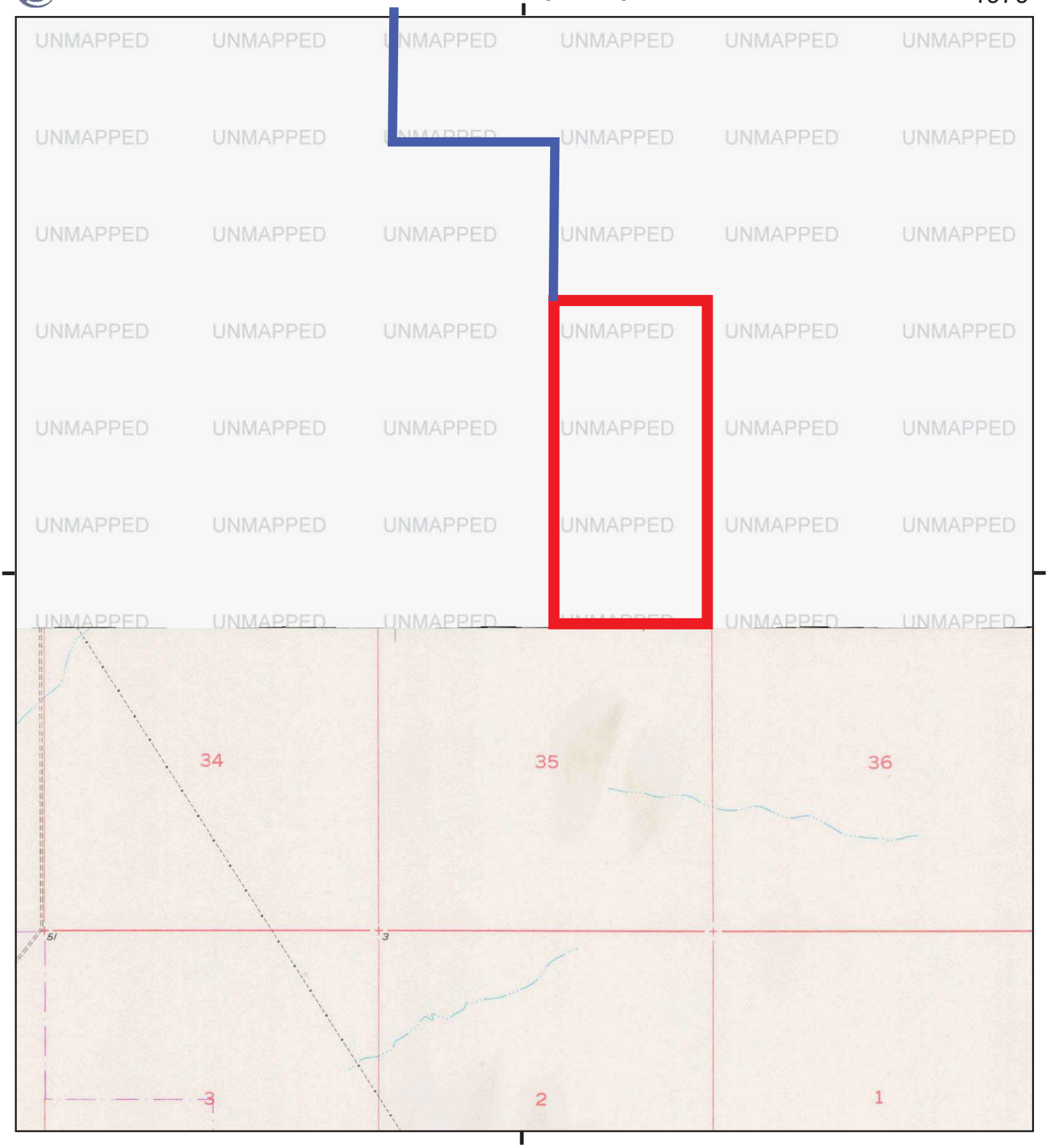
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Westmorland West, 1995, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

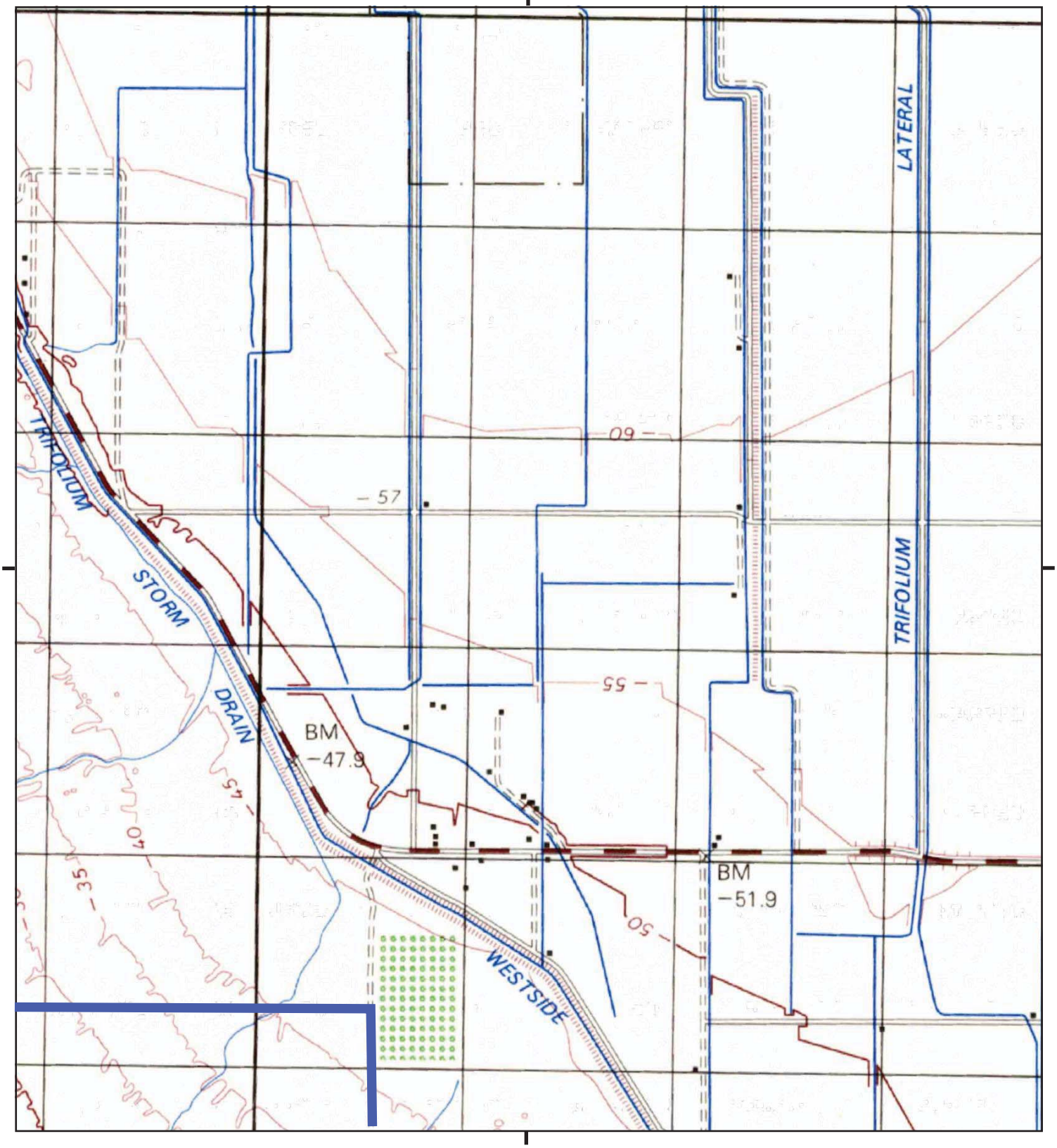
S, Brawley NW, 1979, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1976



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

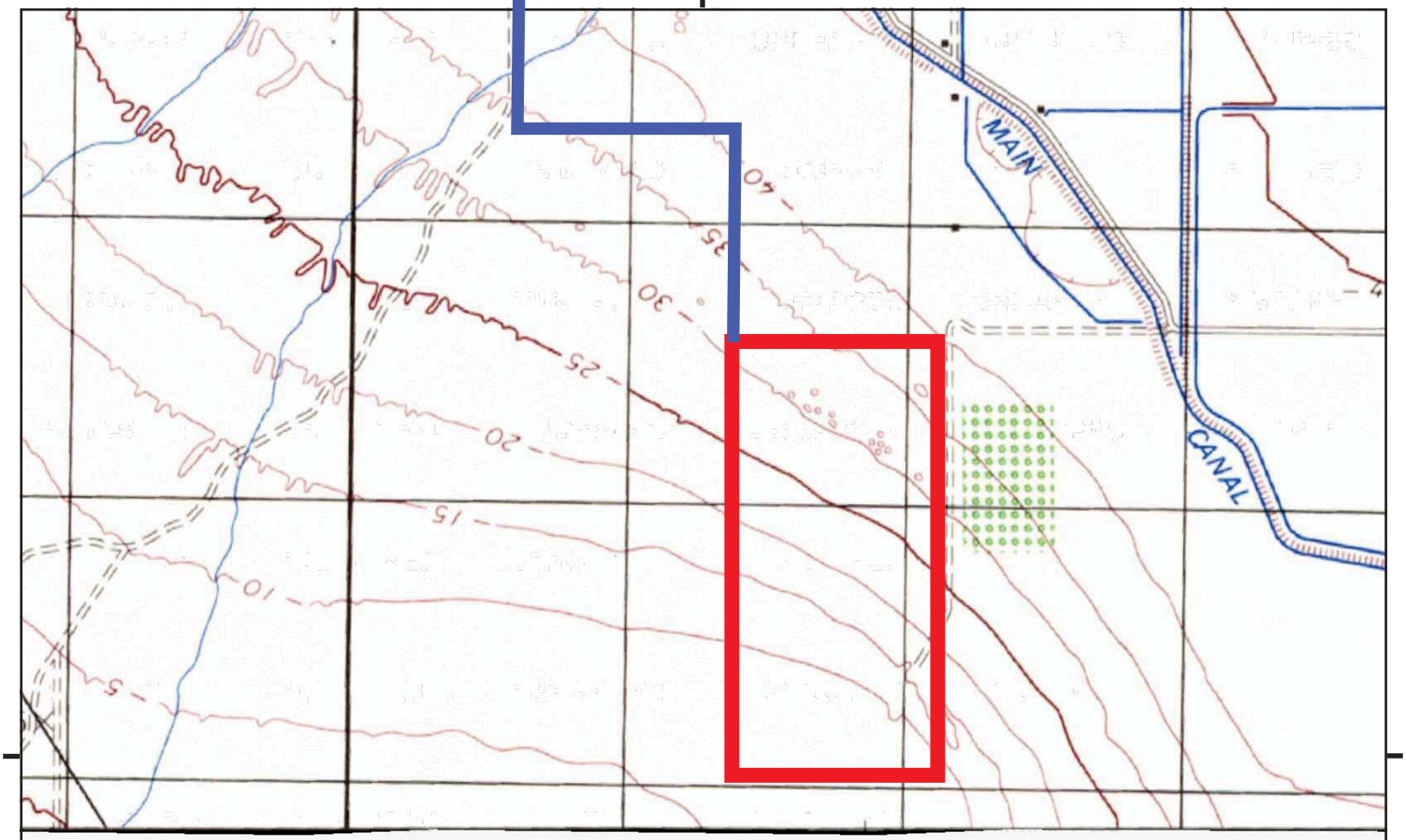
TP, Calipatria, 1976, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1976



This report includes information from the following map sheet(s).

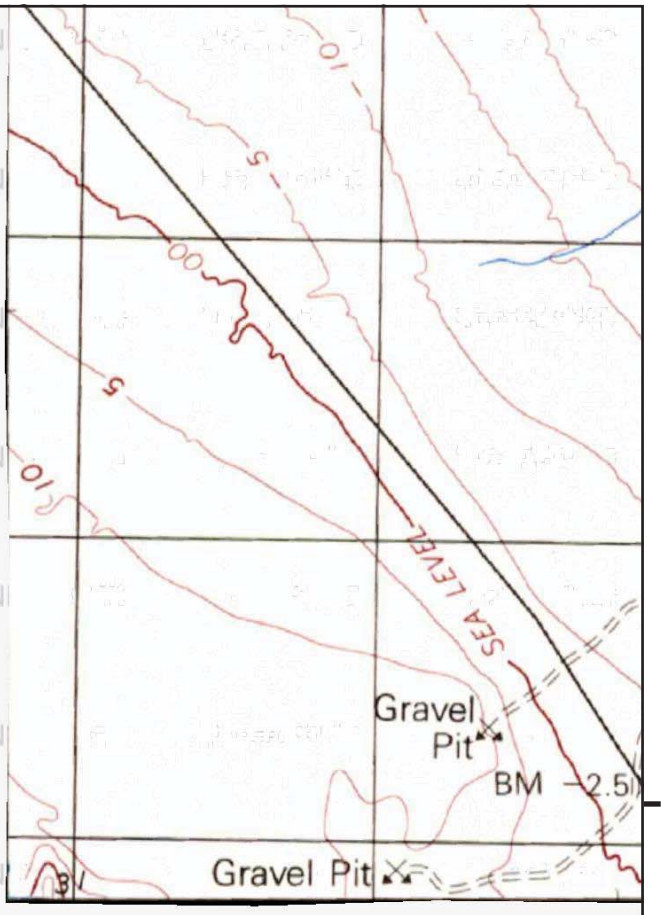
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Calipatria, 1976, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



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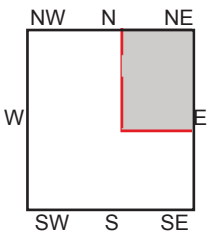
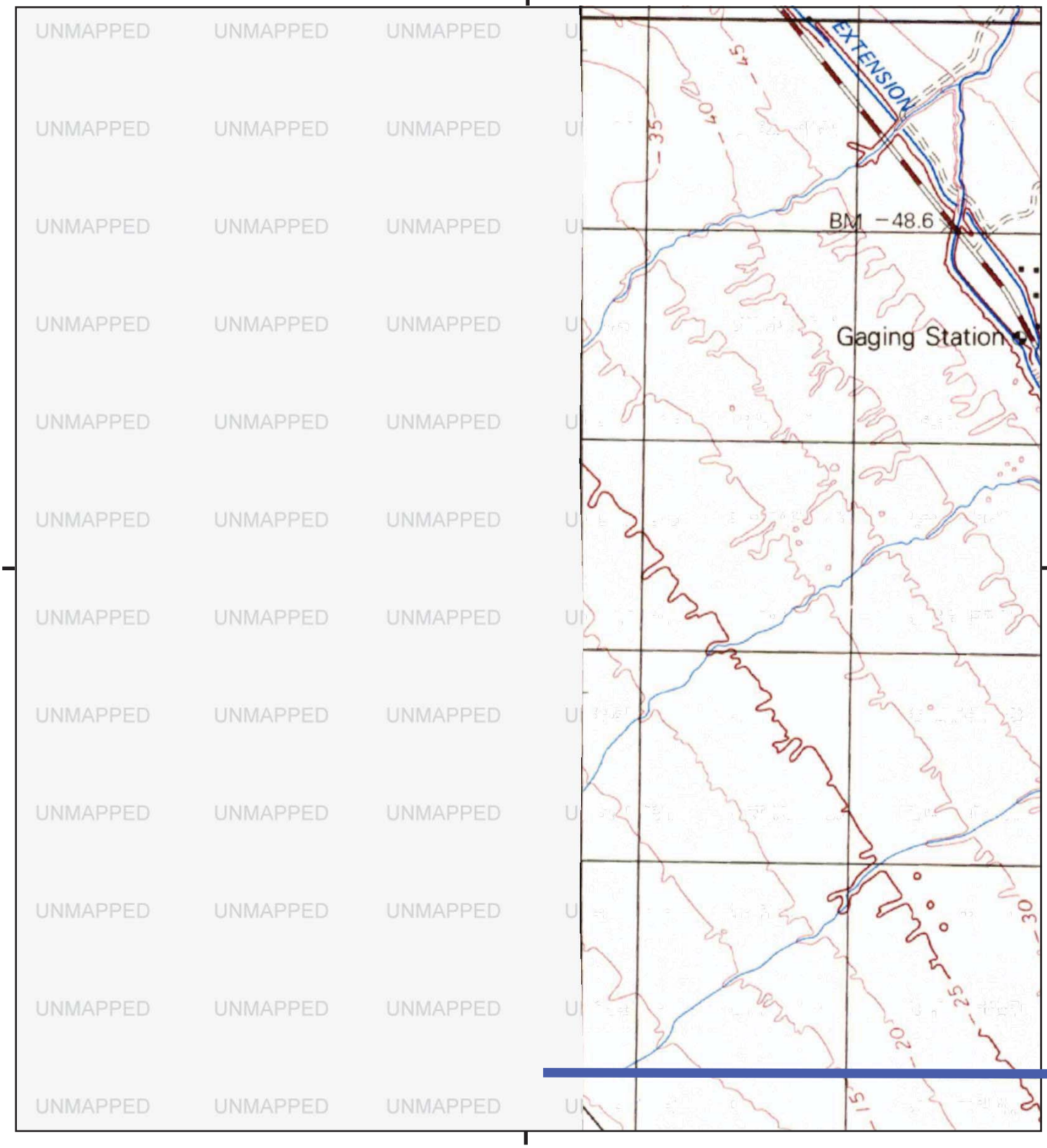
0 Miles 0.25 0.5 1 1.5



NE, Calipatria, 1976, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

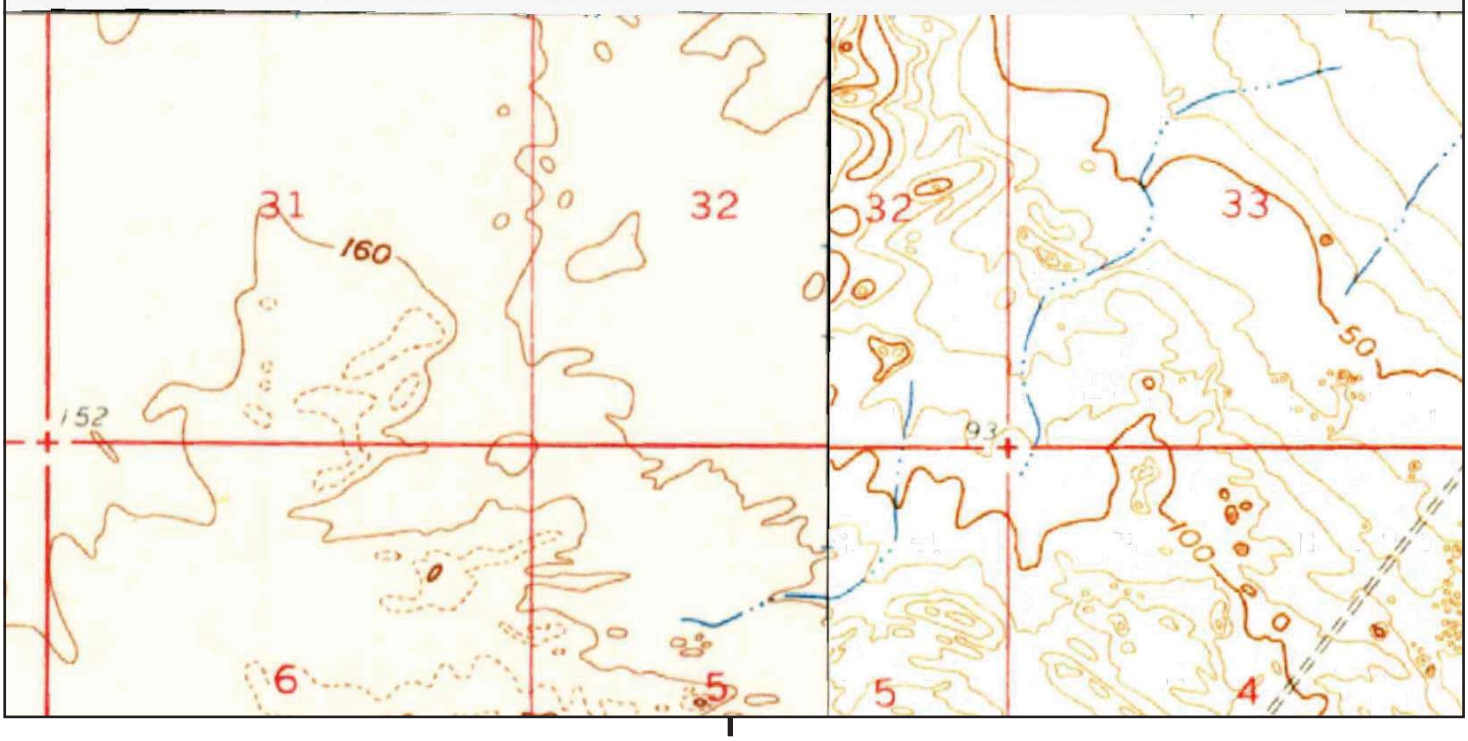
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

NE, Calipatria, 1976, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

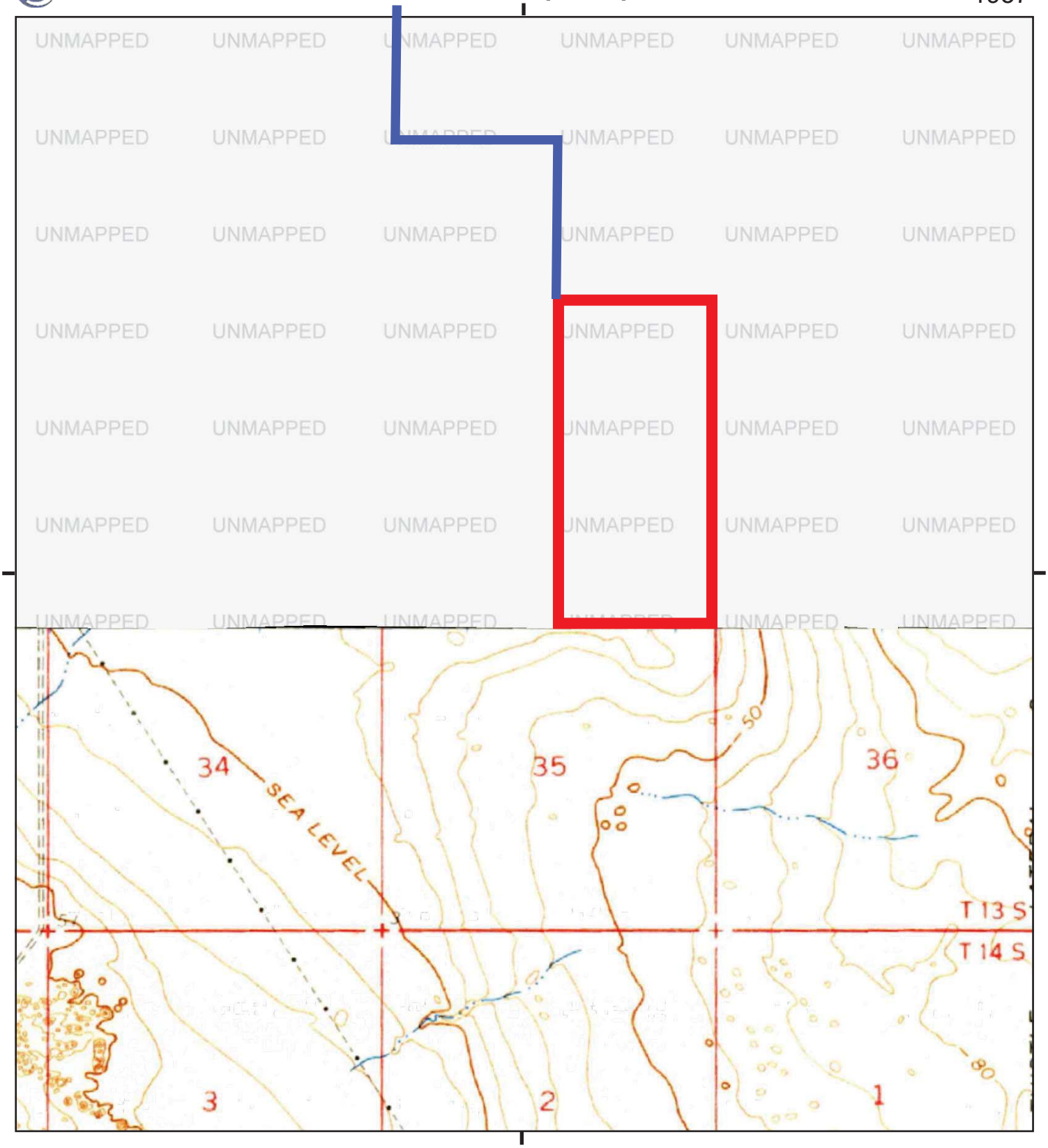
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

SE, Brawley, 1957, 15-minute
SW, Plaster City, 1957, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

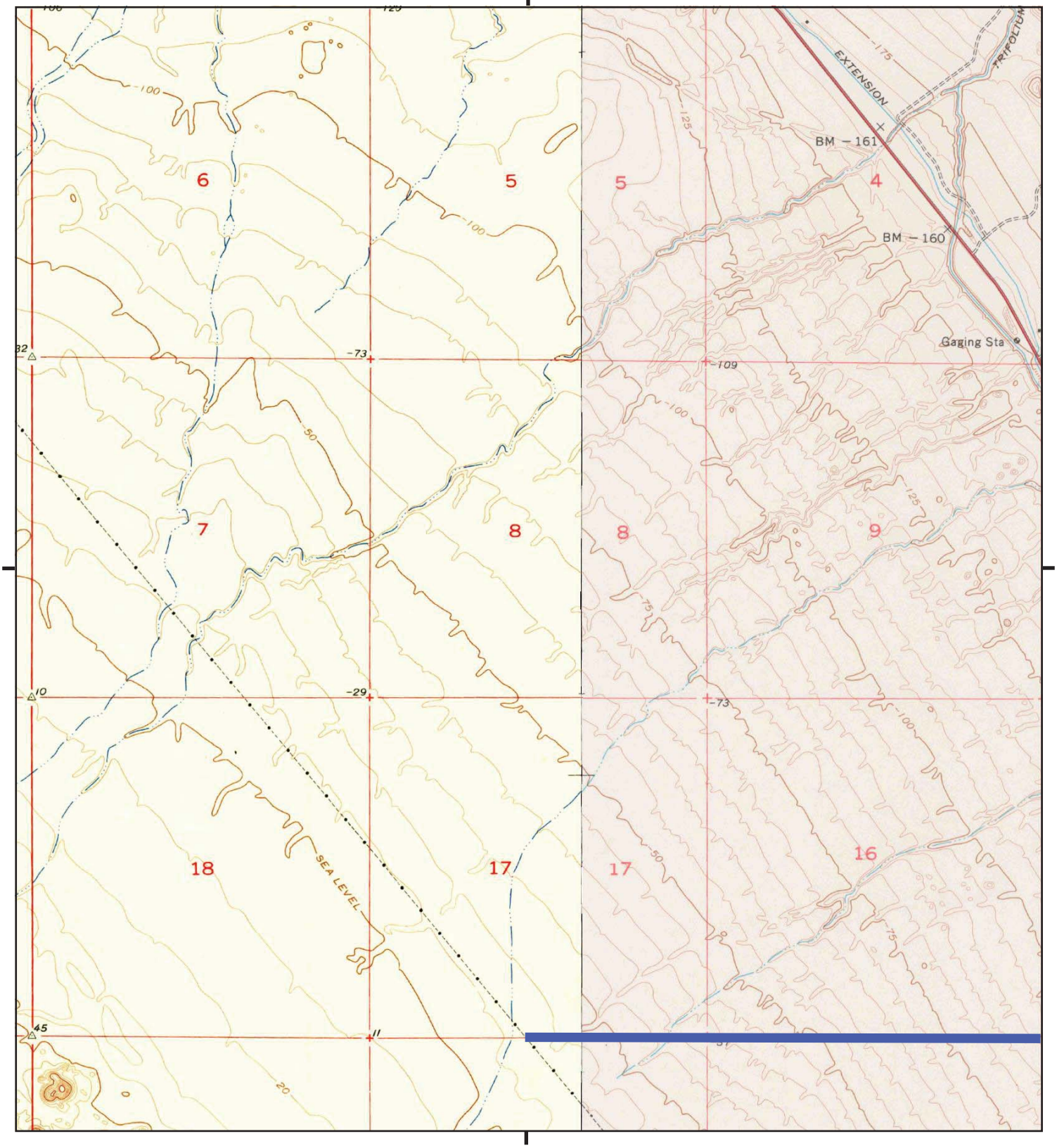
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

SE, Brawley, 1957, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

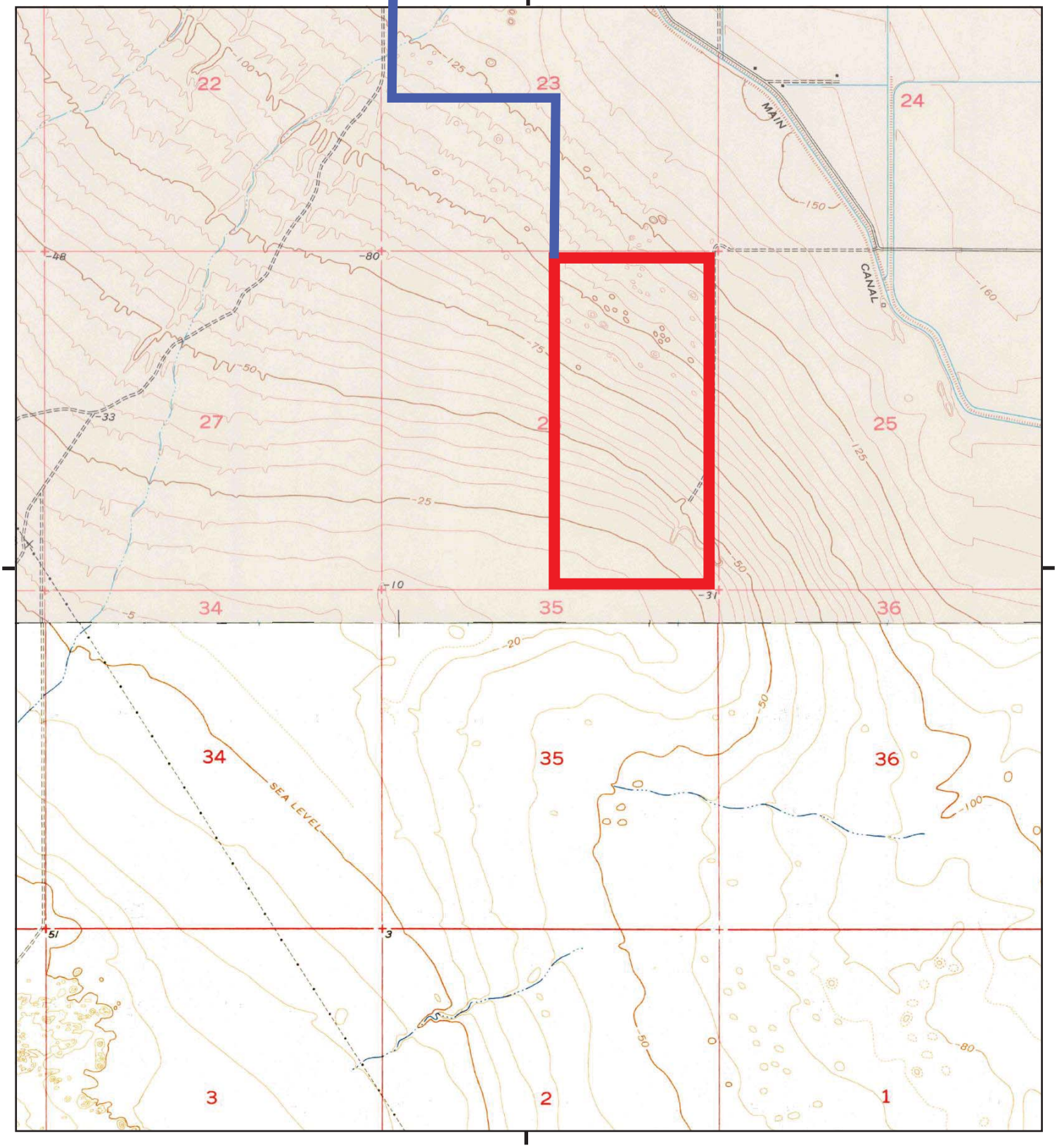
TP, Kane Spring, 1956, 7.5-minute
E, Calipatria SW, 1956, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1956, 1957



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

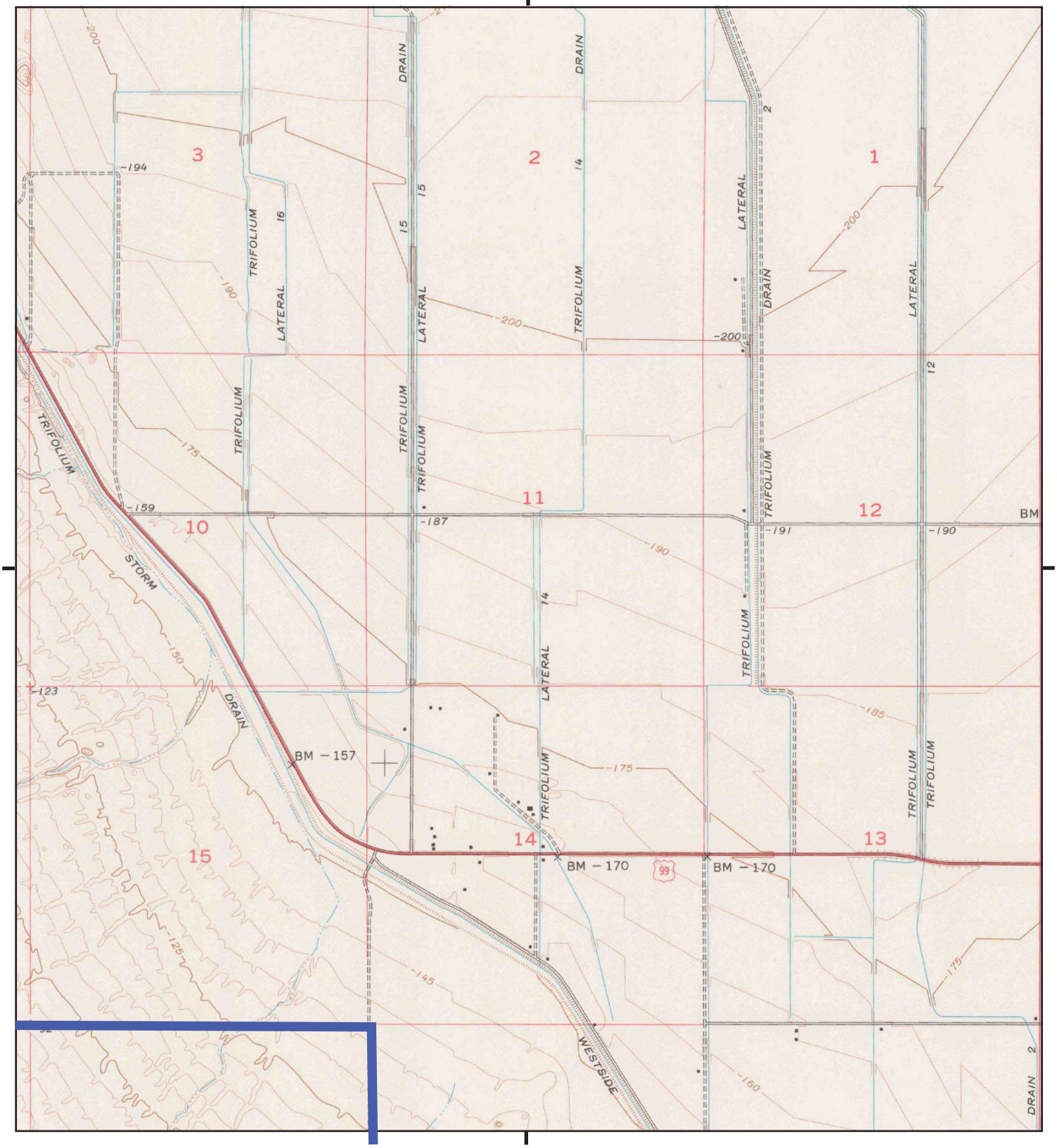
TP, Calipatria SW, 1956, 7.5-minute
S, Brawley NW, 1957, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1956



This report includes information from the following map sheet(s).

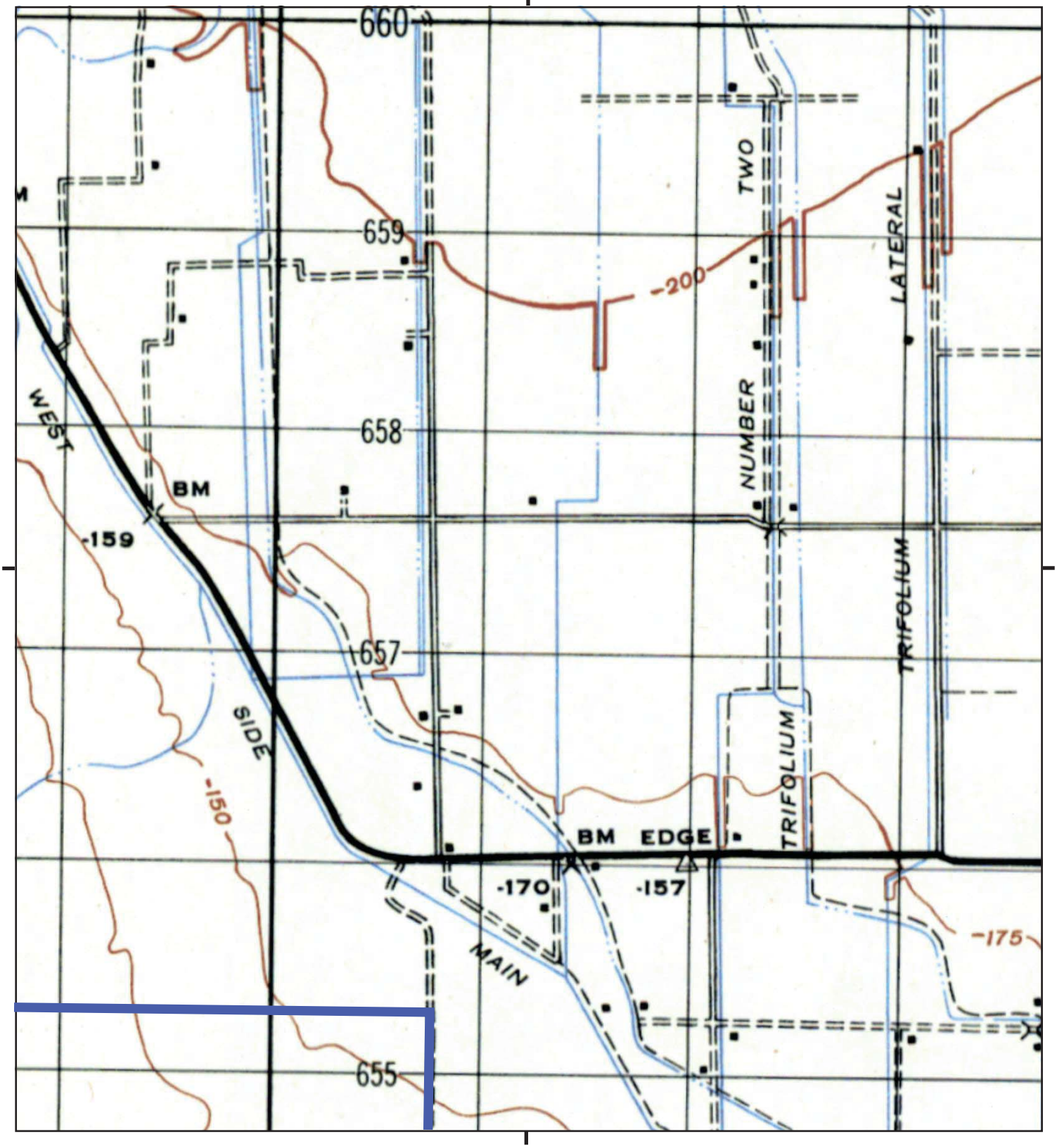
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Calipatria SW, 1956, 7.5-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

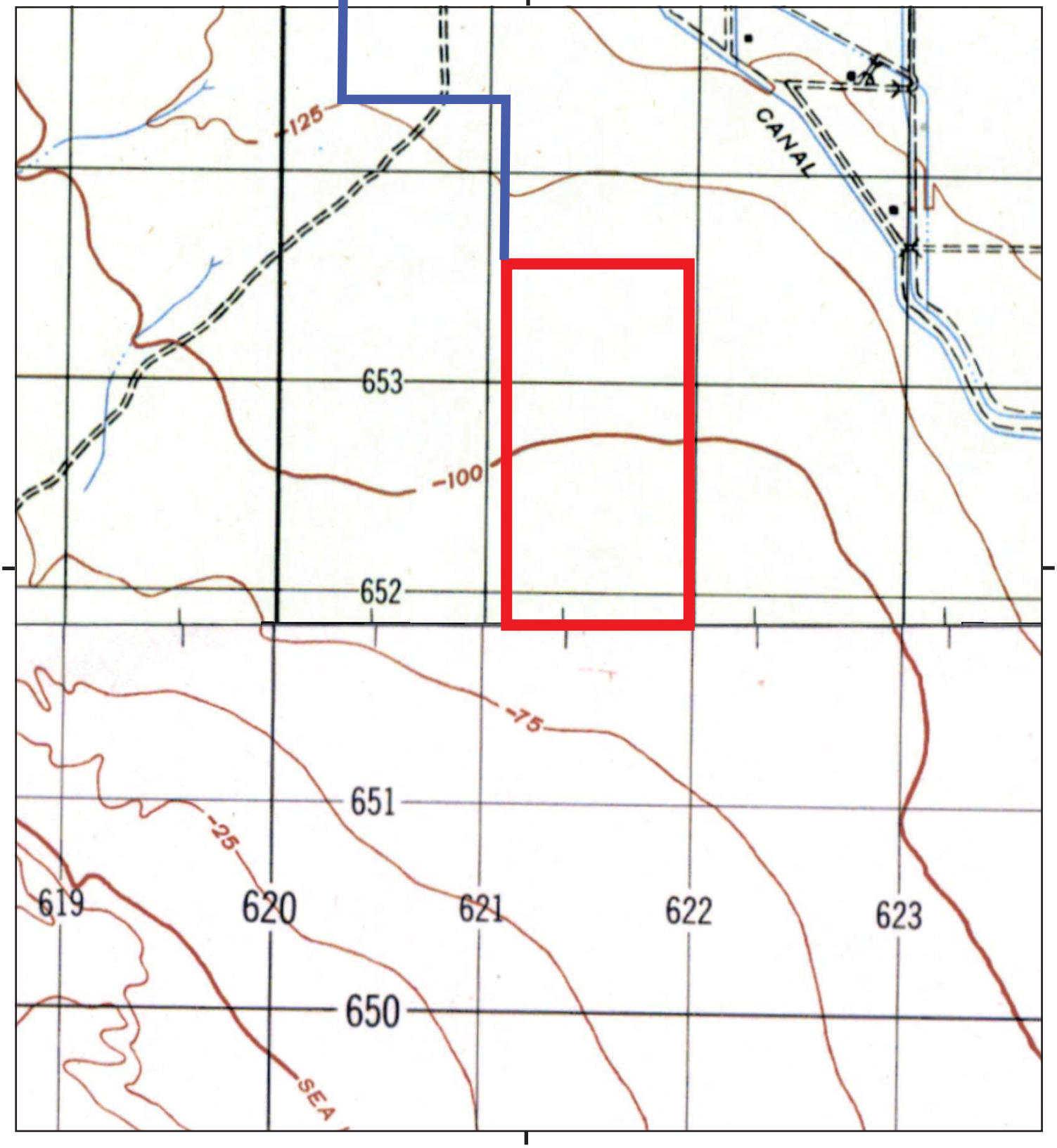
TP, CALIPATRIA, 1947, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1947, 1948



This report includes information from the following map sheet(s).

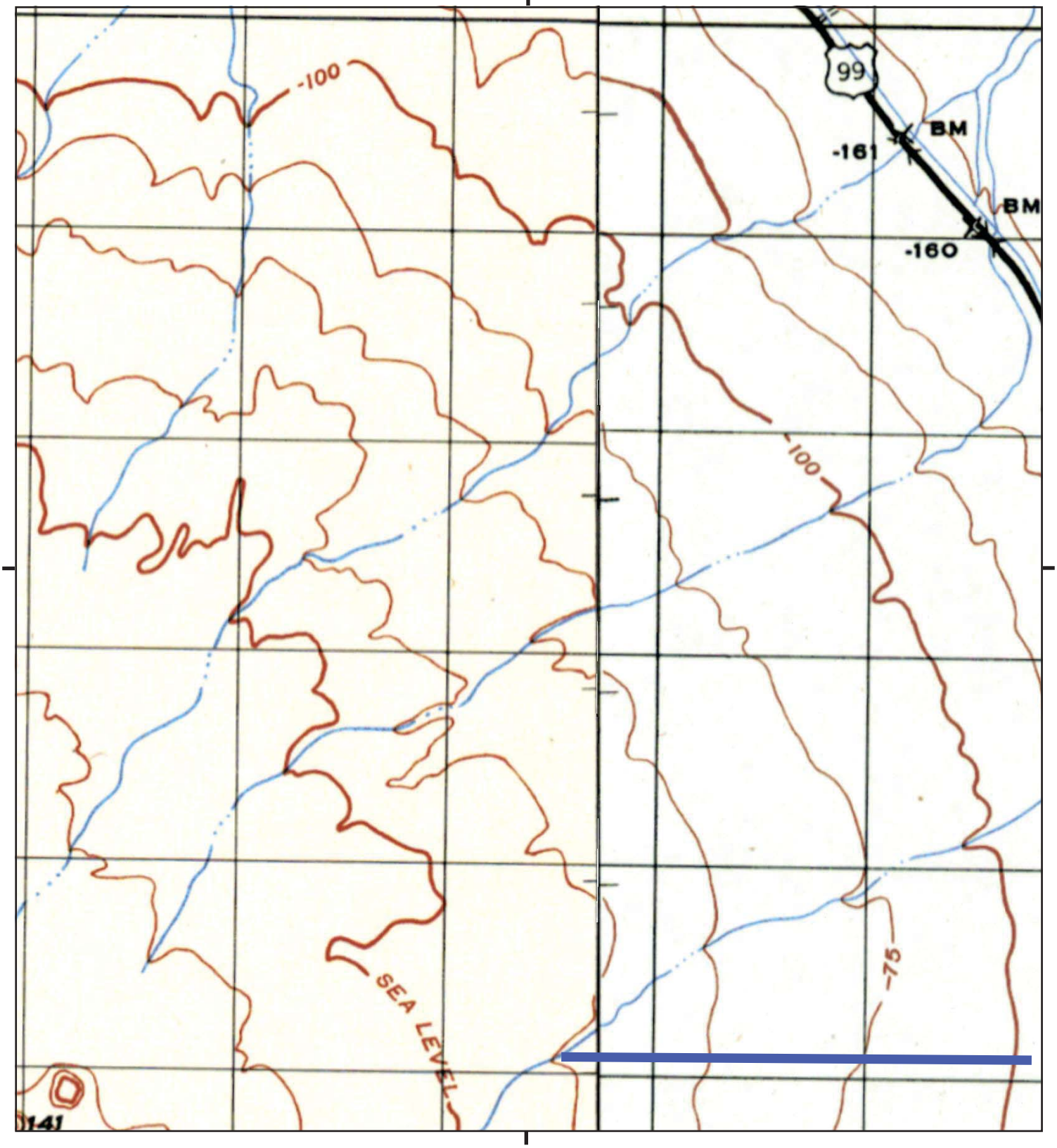
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, CALIPATRIA, 1947, 15-minute
SE, BRAWLEY, 1948, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

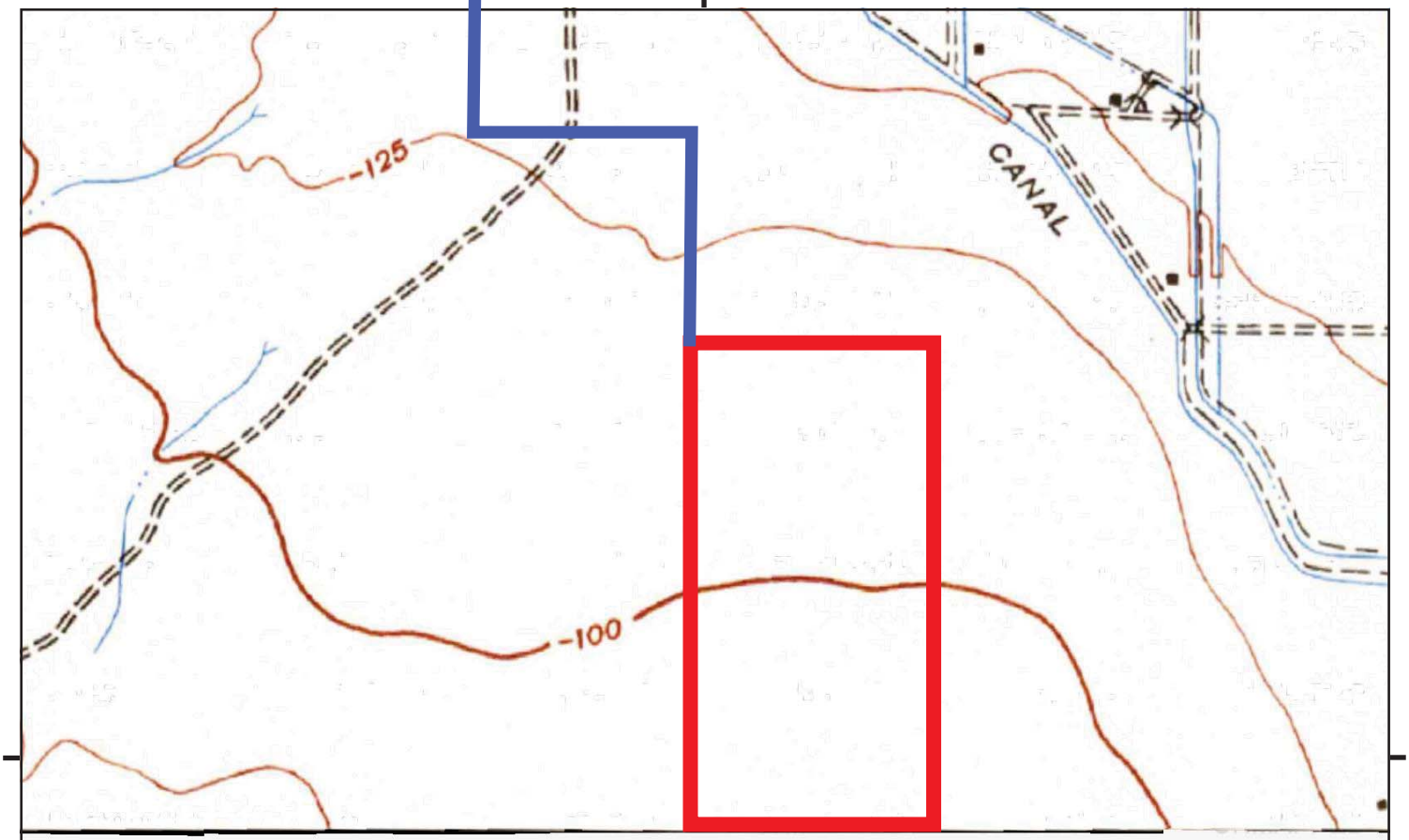
TP, KANE SPRING, 1947, 15-minute
NE, CALIPATRIA, 1947, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1945



This report includes information from the following map sheet(s).

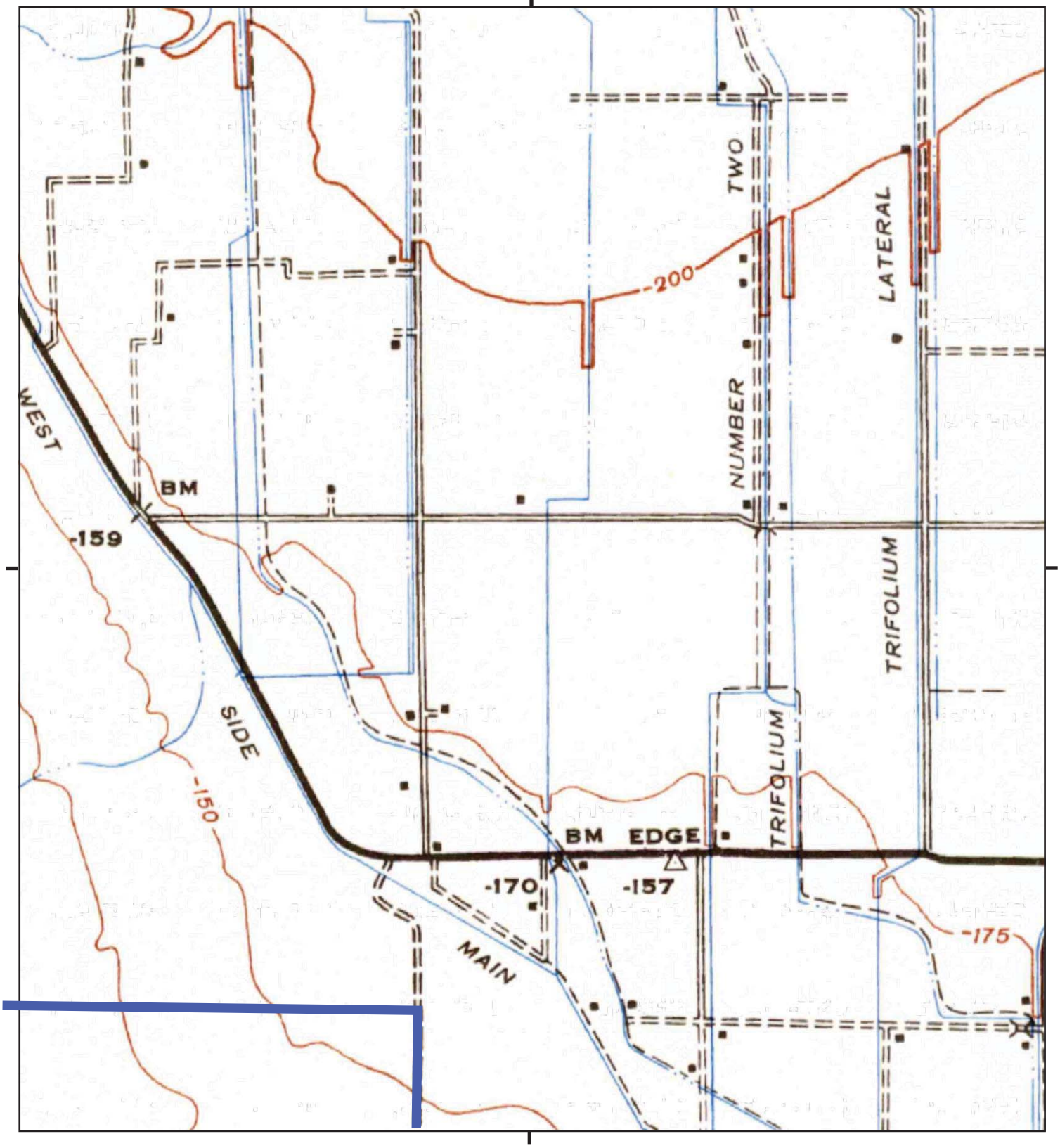
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Calipatria, 1945, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

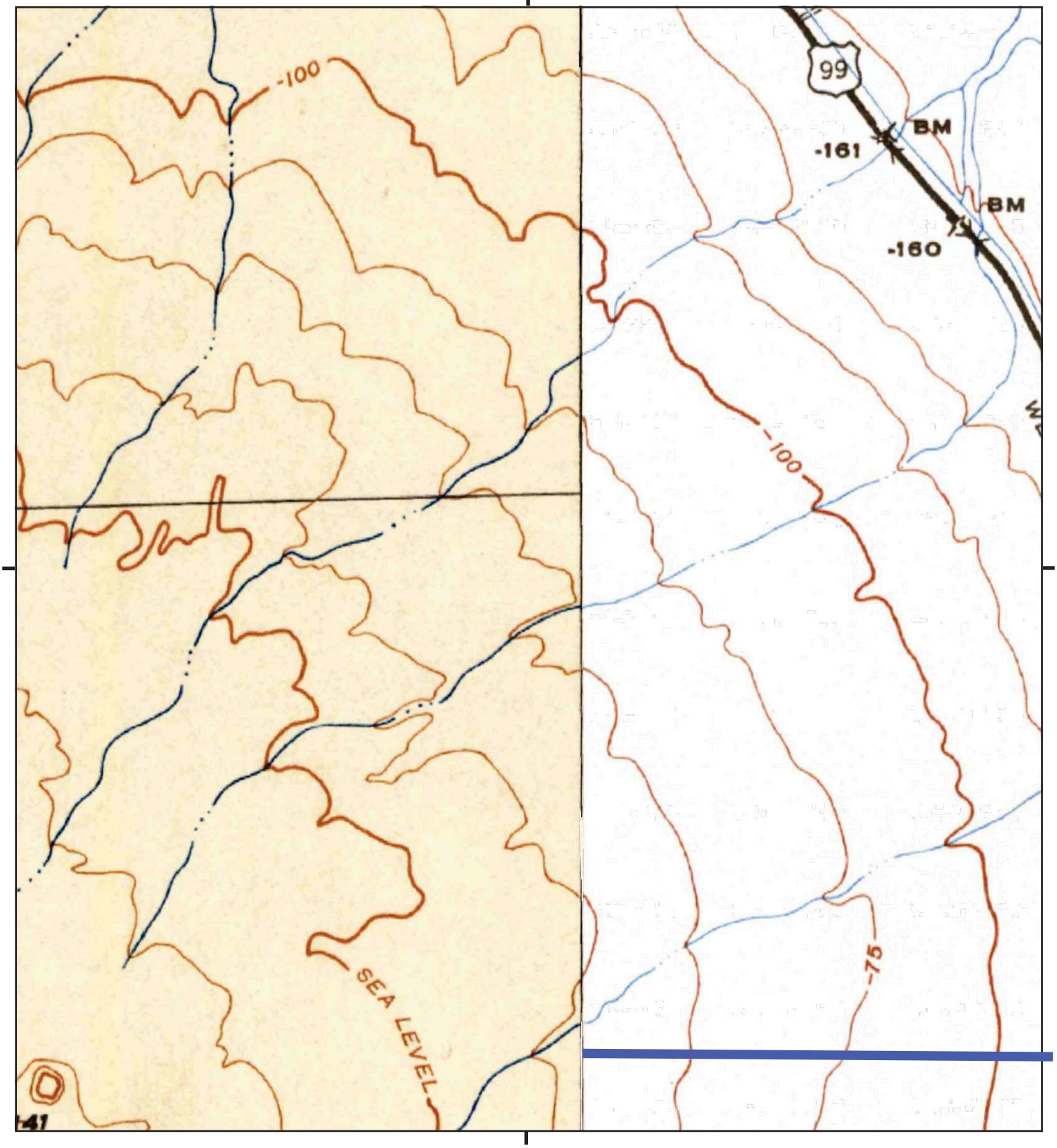
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Calipatria, 1945, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

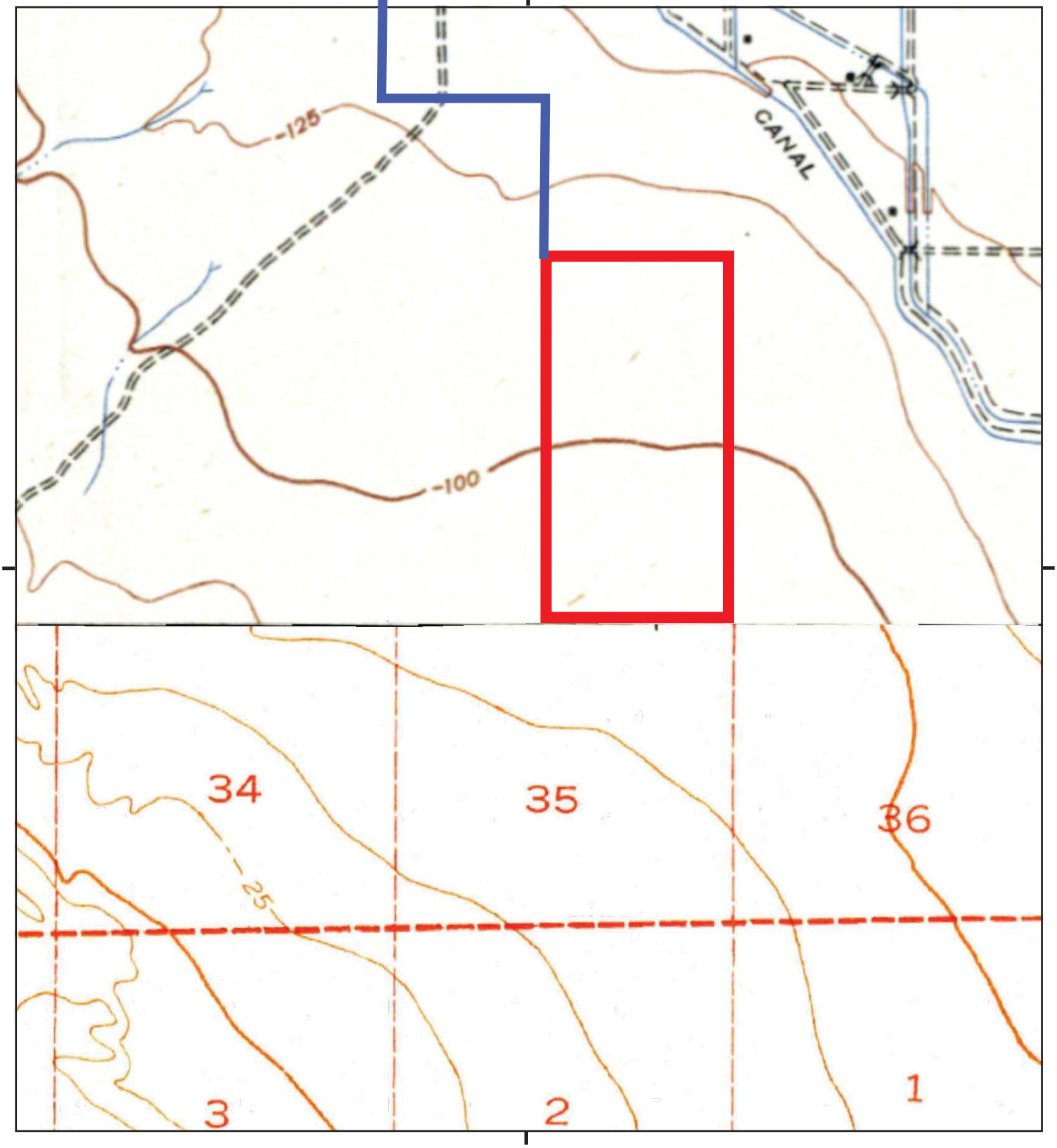
TP, Kane Spring, 1944, 15-minute
NE, Calipatria, 1945, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1940, 1943



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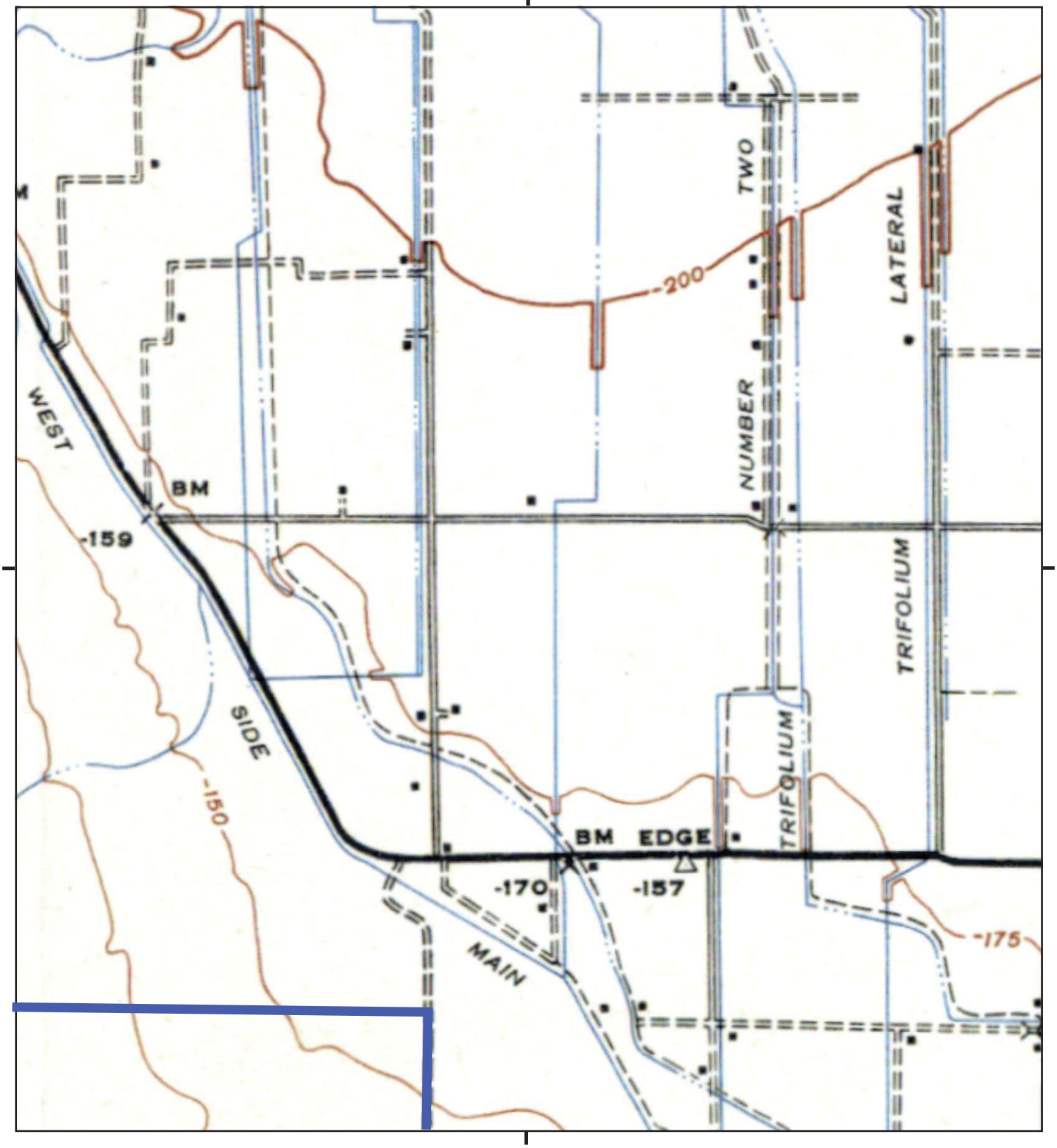
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, CALIPATRIA, 1943, 15-minute
SE, Brawley, 1940, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

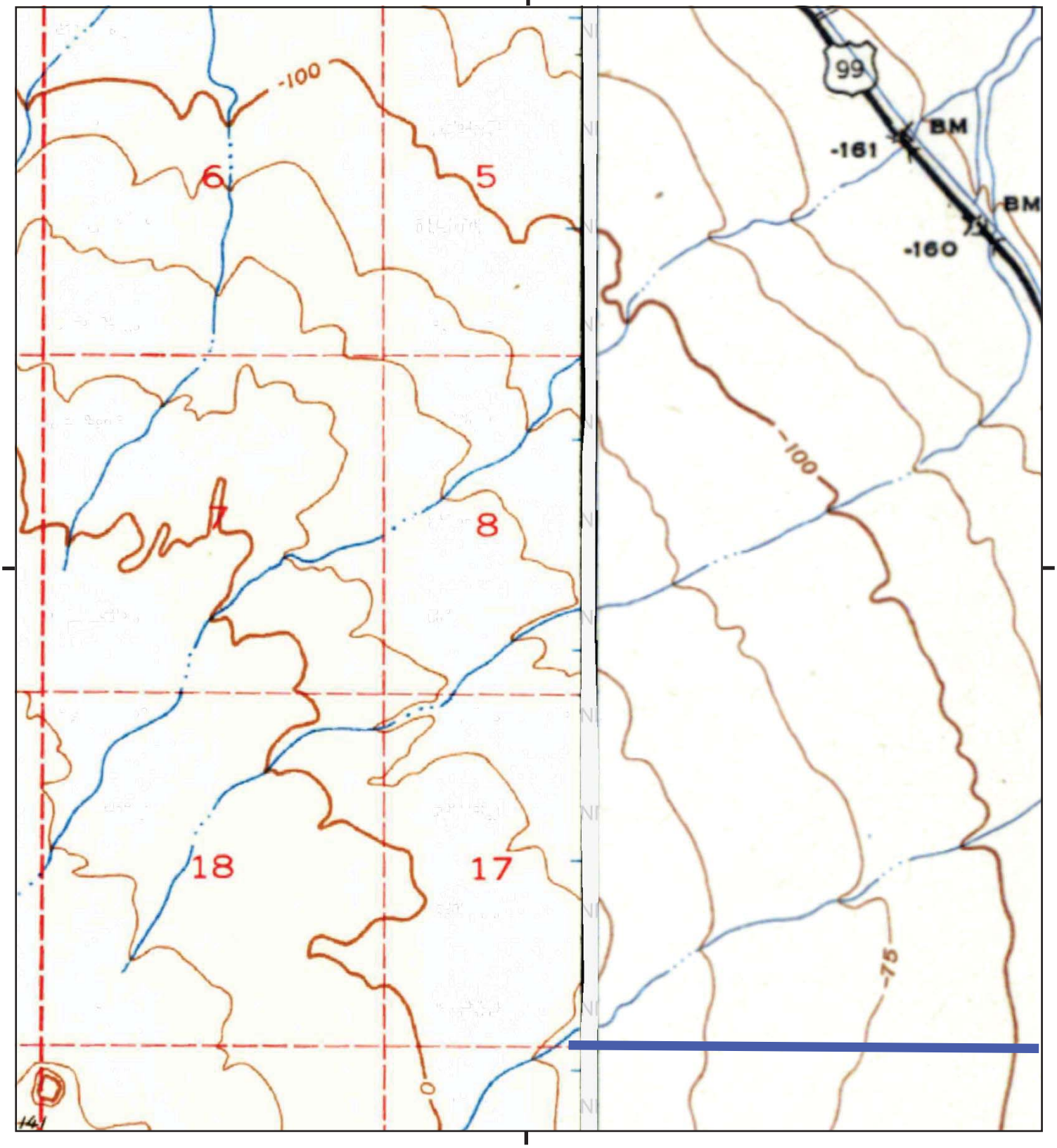
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, CALIPATRIA, 1943, 15-minute

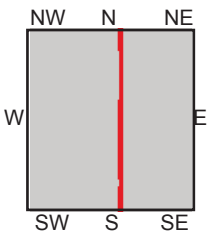
SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



TP, Kane Spring, 1940, 15-minute
NE, CALIPATRIA, 1943, 15-minute

SITE NAME: Cedar Solar 3
ADDRESS: Andre Road and Garvey Road, Imperial C
Brawley, CA 92227
CLIENT: GS Lyon Consultants

N

APPENDIX E

Cedar Solar 3
Andre Road and Garvey Road, Imperial County
Brawley, CA 92227

Inquiry Number: 6171647.3s
August 27, 2020

EDR Area / Corridor Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

SUBJECT PROPERTY INFORMATION

ADDRESS

ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

TARGET PROPERTY SEARCH RESULTS

The Target Property was identified in the following databases.

Page Numbers and Map Identifcations refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

MINES: Mines Site Location Listing

A review of the MINES list, as provided by EDR, and dated 06/08/2020 has revealed that there is 1 MINES site within the requested target property.

Site	Address	Map ID / Focus Map(s)	Page
HENSLER PIT	38000 MONROE STREET	1 / 8	27

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Page Numbers and Map Identifcations refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

A review of the CORRACTS list, as provided by EDR, and dated 03/23/2020 has revealed that there is 1 CORRACTS site within approximately1 mile of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
LAIDLAW ENVIRONMENTA	***5295 S GARVEY RD***	***N 1/2 - 1 (0.697 mi.)***	***8 / 2***	***46***
EPA ID:: CAD000633164				

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

A review of the ENVIROSTOR list, as provided by EDR, and dated 04/27/2020 has revealed that there is 1 ENVIROSTOR site within approximately1 mile of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
LAIDLAW ENVIRONMENTA	***5295 GARVEY***	***E 1/4 - 1/2 (0.450 mi.)***	***B6 / 8***	***33***
Facility Id: 80001334				
Status: Active				

State and tribal registered storage tank lists

AST: Aboveground Petroleum Storage Tank Facilities

A review of the AST list, as provided by EDR, has revealed that there is 1 AST site within approximately 0.25 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
IMPERIAL FARMING- WE	5253 GARVEY RD.	N 1/8 - 1/4 (0.247 mi.)	A3 / 3	28
Database: AST, Date of Government Version: 07/06/2016				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

Toxic Pits: Toxic Pits Cleanup Act Sites

A review of the Toxic Pits list, as provided by EDR, and dated 07/01/1995 has revealed that there is 1 Toxic Pits site within approximately1 mile of the requested target property.

EXECUTIVE SUMMARY

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
GSX, IMPERIAL Closure Date: 05/17/91 Task #: 87003 Status: CLOSED	5295 SOUTH GARVEY	E 1/4 - 1/2 (0.478 mi.)	B7 / 8	46

Other Ascertainable Records

CUPA Listings: Hazardous Material Business Plan

A review of the CUPA Listings list, as provided by EDR, has revealed that there are 2 CUPA Listings sites within approximately 0.25 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
IMPERIAL FARMING - W Database: CUPA IMPERIAL, Date of Government Version: 04/09/2020	***5253 GARVEY RD***	***N 1/8 - 1/4 (0.247 mi.)***	***A4 / 3***	***29***
RANCHO DOS HERMANOS, Database: CUPA IMPERIAL, Date of Government Version: 04/09/2020	5253 GARVEY RD	N 1/8 - 1/4 (0.247 mi.)	A5 / 3	33

CUPA Listings: Hazardous Material Business Plan

A review of the CUPA Listings list, as provided by EDR, has revealed that there are 2 CUPA Listings sites within approximately 0.25 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
IMPERIAL FARMING - W Database: CUPA IMPERIAL, Date of Government Version: 04/09/2020	***5253 GARVEY RD***	***N 1/8 - 1/4 (0.247 mi.)***	***A4 / 3***	***29***
RANCHO DOS HERMANOS, Database: CUPA IMPERIAL, Date of Government Version: 04/09/2020	5253 GARVEY RD	N 1/8 - 1/4 (0.247 mi.)	A5 / 3	33

HIST CORTESE: Hazardous Waste & Substance Site List

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
LAIDLAW ENVIRONMENTA Reg Id: 7A130315003	***5295 GARVEY***	***E 1/4 - 1/2 (0.450 mi.)***	***B6 / 8***	***33***

HWP: EnviroStor Permitted Facilities Listing

A review of the HWP list, as provided by EDR, and dated 05/18/2020 has revealed that there is 1 HWP site within approximately1 mile of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
LAIDLAW ENVIRONMENTA	***5295 S GARVEY RD***	***N 1/2 - 1 (0.697 mi.)***	***8 / 2***	***46***

EPA Id: CAD000633164
Cleanup Status: OPERATING PERMIT

MINES: Mines Site Location Listing

A review of the MINES list, as provided by EDR, and dated 06/08/2020 has revealed that there is 1 MINES site within approximately 0.25 miles of the requested target property.

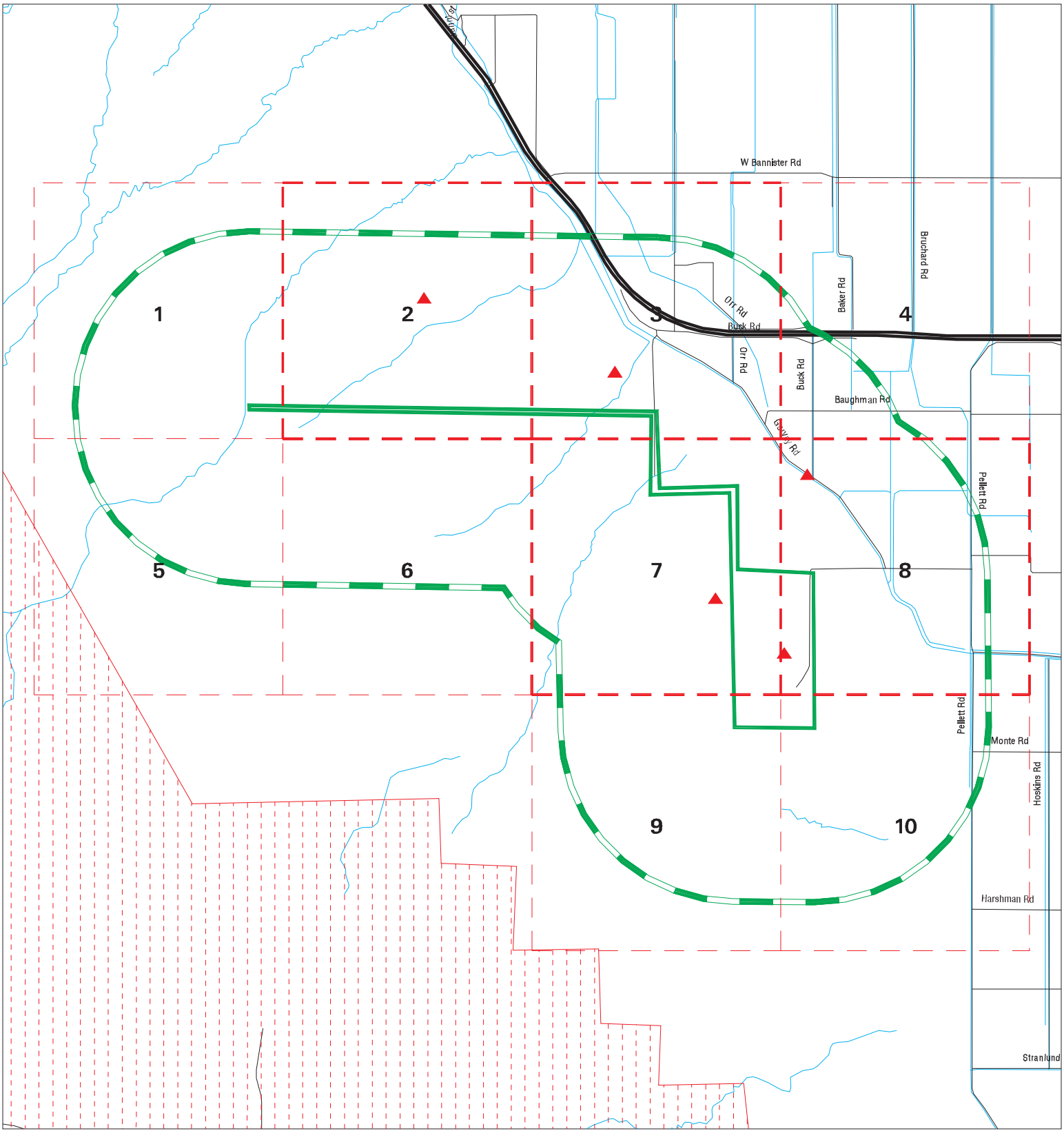
Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
ANDRE ROAD CLAY PIT	155 SOUTH 11TH STREE	W 0 - 1/8 (0.104 mi.)	2 / 7	27

MAPPED SITES SUMMARY

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 8	HENSLER PIT	38000 MONROE STREET	MINES	TP
2 / 7	ANDRE ROAD CLAY PIT	155 SOUTH 11TH STREE	MINES	547 0.104 West
A3 / 3	IMPERIAL FARMING- WE	5253 GARVEY RD.	AST	1305 0.247 North
A4 / 3	IMPERIAL FARMING - W	5253 GARVEY RD	CUPA Listings, CERS, HWTS	1305 0.247 North
A5 / 3	RANCHO DOS HERMANOS,	5253 GARVEY RD	CUPA Listings	1305 0.247 North
B6 / 8	LAIDLAW ENVIRONMENTA	5295 GARVEY	ENVIROSTOR, LDS, ENF, HIST CORTESE, NPDE...	2376 0.450 East
B7 / 8	GSX, IMPERIAL	5295 SOUTH GARVEY	Toxic Pits	2525 0.478 East
8 / 2	LAIDLAW ENVIRONMENTA	5295 S GARVEY RD	CORRACTS, RCRA-TSDF, RCRA-LQG, WMUDS/SWAT...	3681 0.697 North

Key Map - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/2 1 Miles

SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20 4:54 PM

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	1	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	1	0	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	1	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	1	0	NR	1
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	2	NR	NR	NR	2

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CUPA Listings	0.250		0	2	NR	NR	NR	2
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	1	NR	NR	1
HWP	1.000		0	0	0	1	NR	1
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250	1	1	0	NR	NR	NR	2
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
HWTS	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		1	1	5	3	2	0	12

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

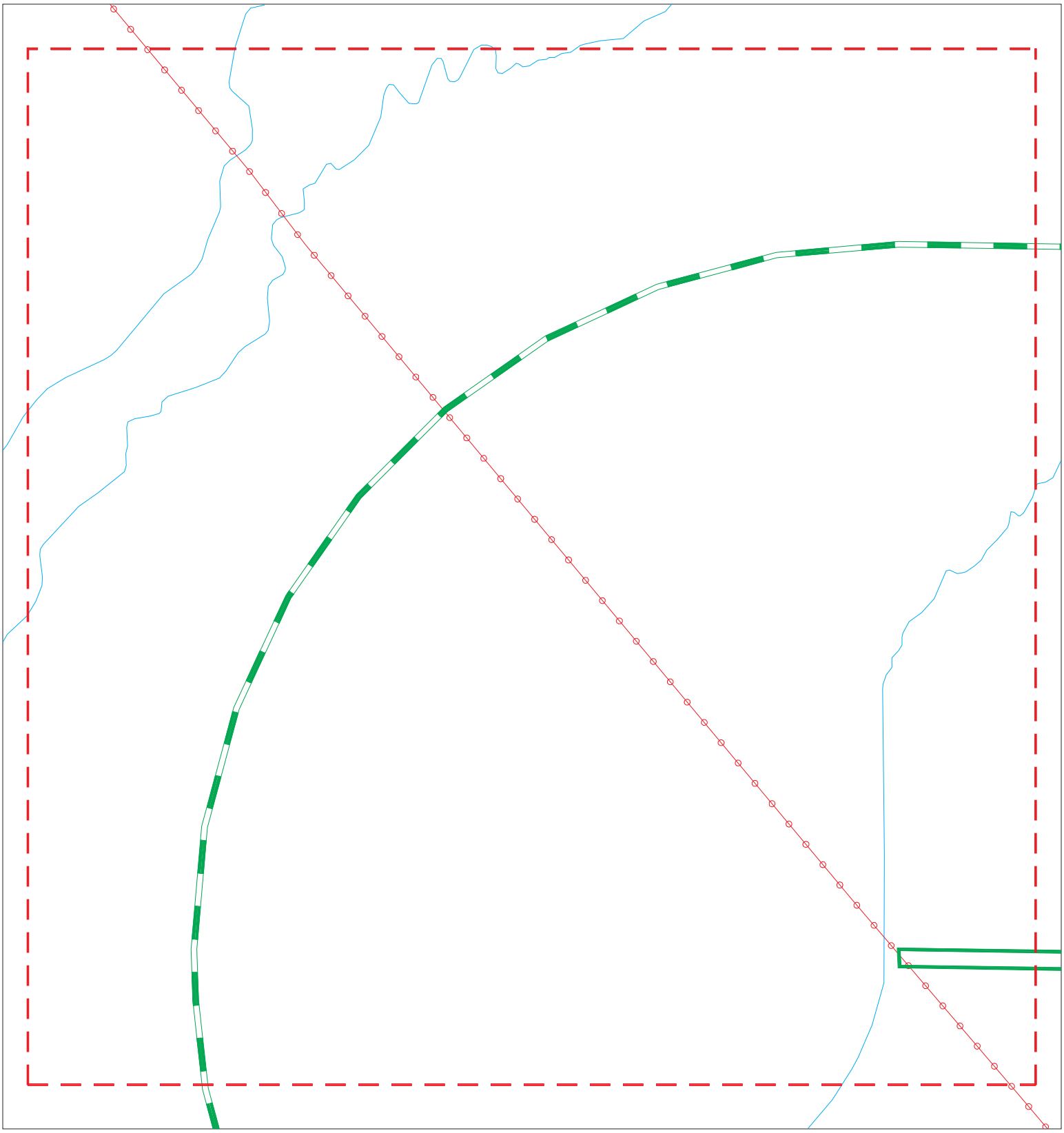
NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Focus Map - 1 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

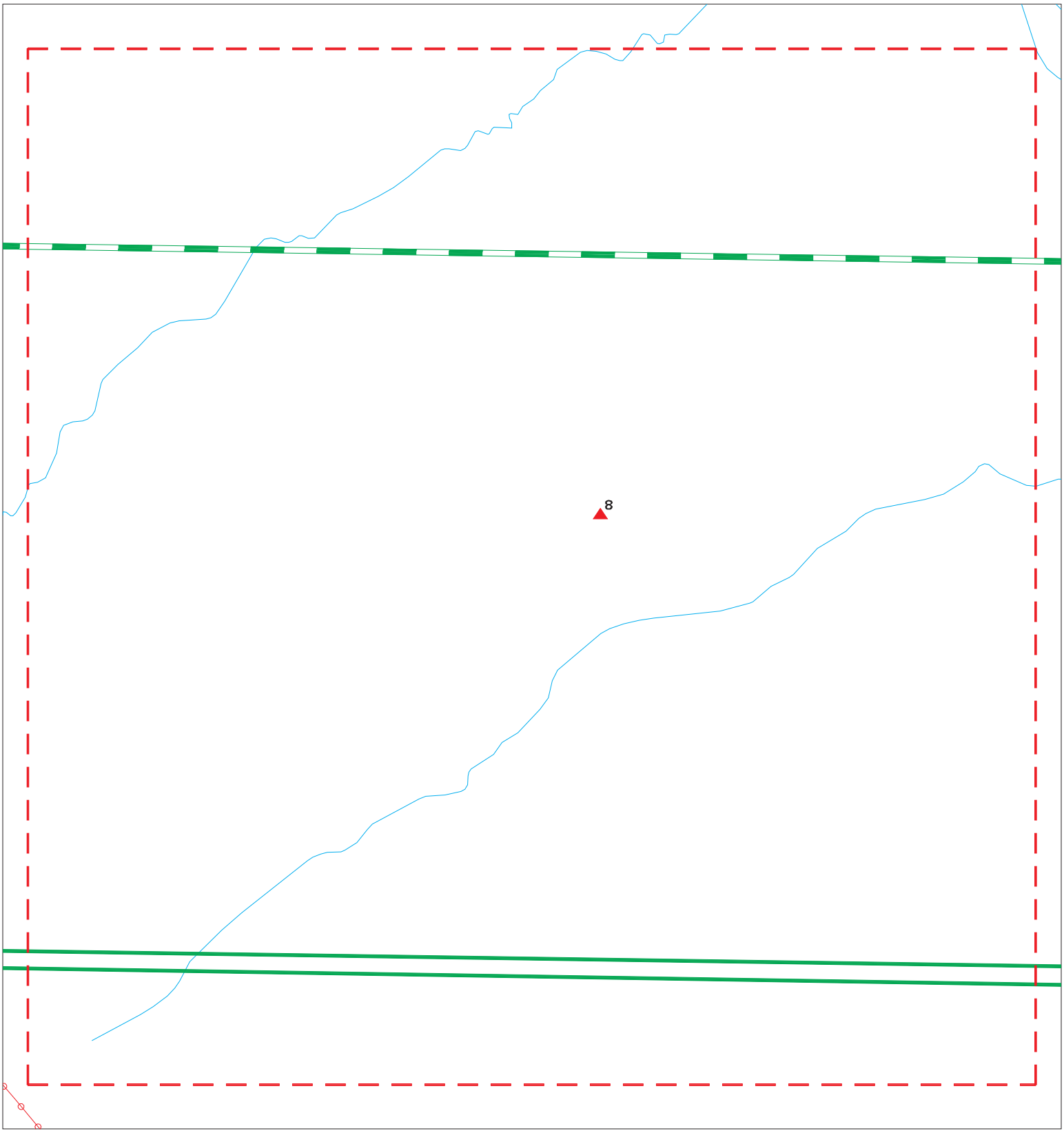
MAPPED SITES SUMMARY - FOCUS MAP 1

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 2 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

MAPPED SITES SUMMARY - FOCUS MAP 2

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
8 / 2	LAIDLAW ENVIRONMENTA	5295 S GARVEY RD	CORRACTS, RCRA-TSDF, RCRA-LQG, WMUDS/SWAT	3681 0.697 North

Focus Map - 3 - 6171647.3s

Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

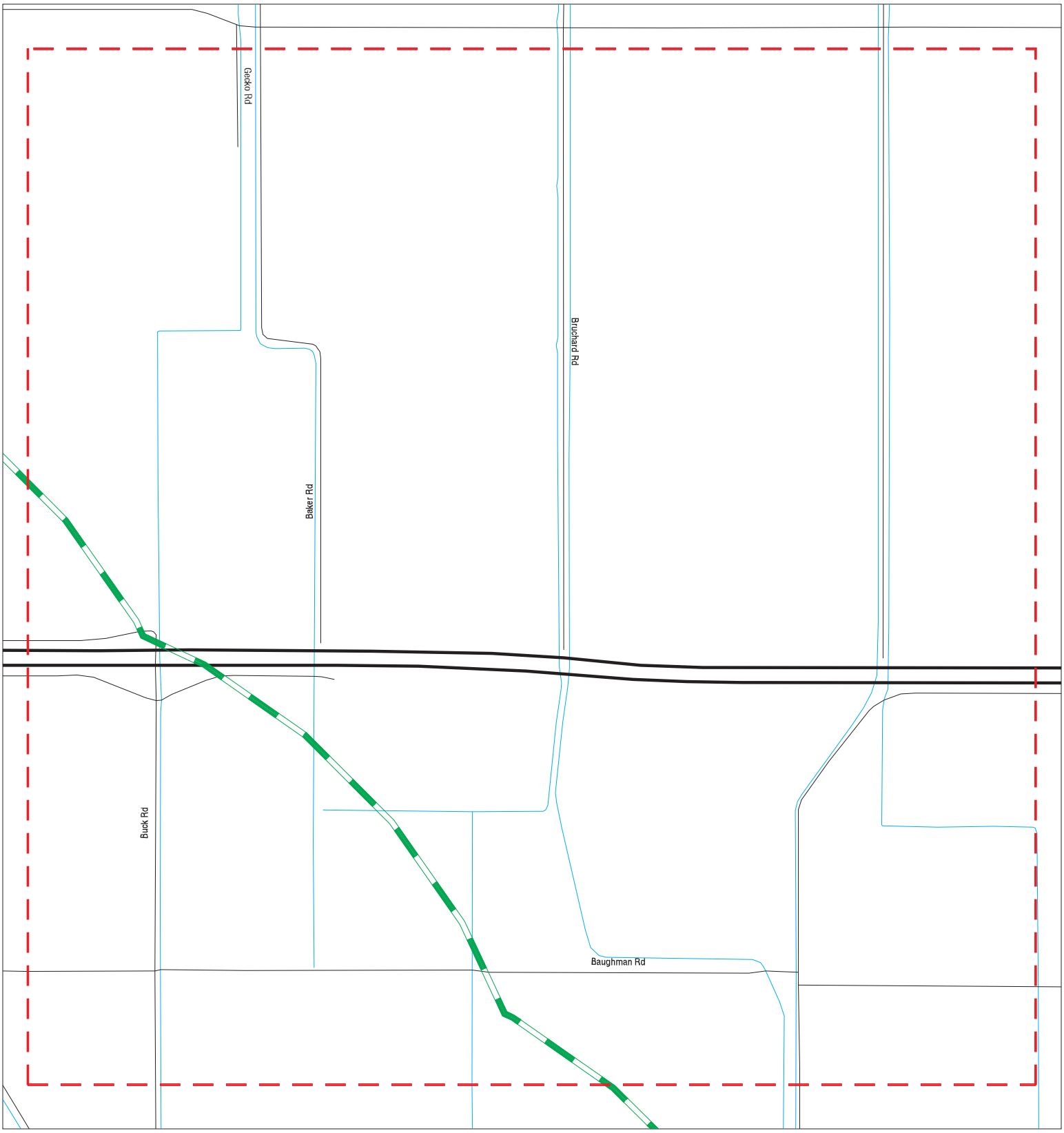
SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

MAPPED SITES SUMMARY - FOCUS MAP 3

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
A3 / 3	IMPERIAL FARMING- WE	5253 GARVEY RD.	AST	1305 0.247 North
A4 / 3	IMPERIAL FARMING - W	5253 GARVEY RD	CUPA Listings, CERS, HWTS	1305 0.247 North
A5 / 3	RANCHO DOS HERMANOS,	5253 GARVEY RD	CUPA Listings	1305 0.247 North

Focus Map - 4 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

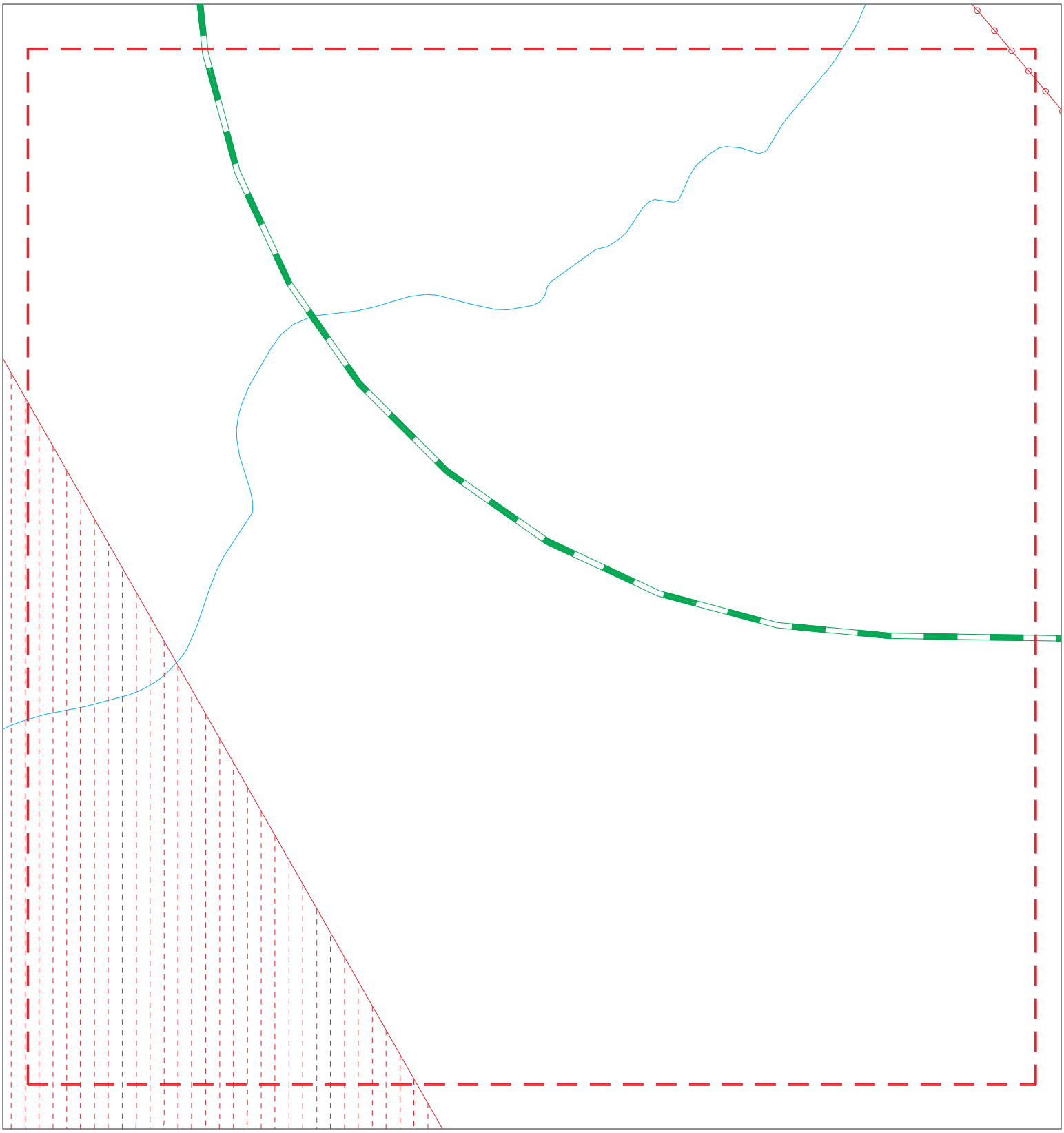
MAPPED SITES SUMMARY - FOCUS MAP 4

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 5 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

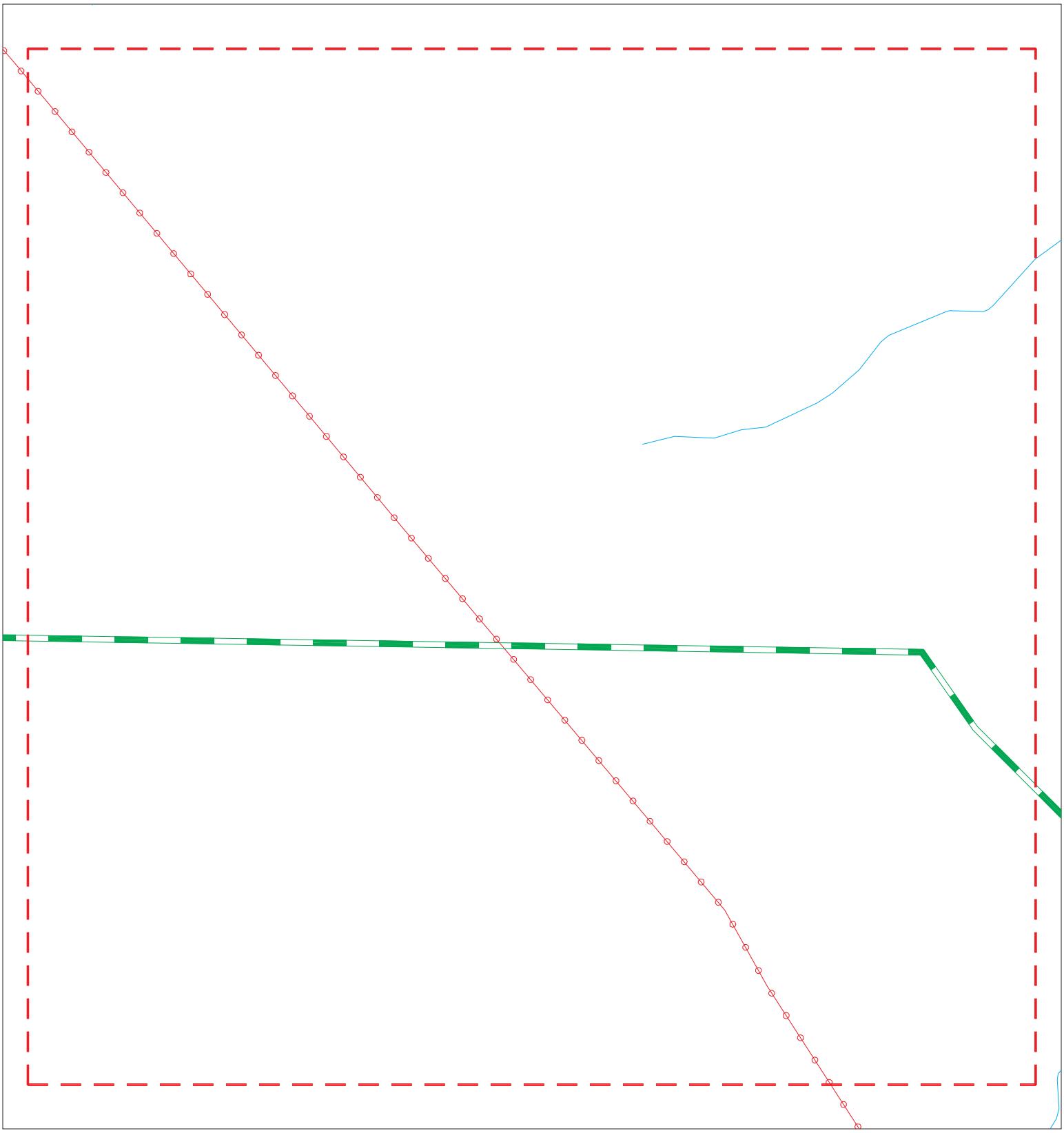
MAPPED SITES SUMMARY - FOCUS MAP 5

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 6 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

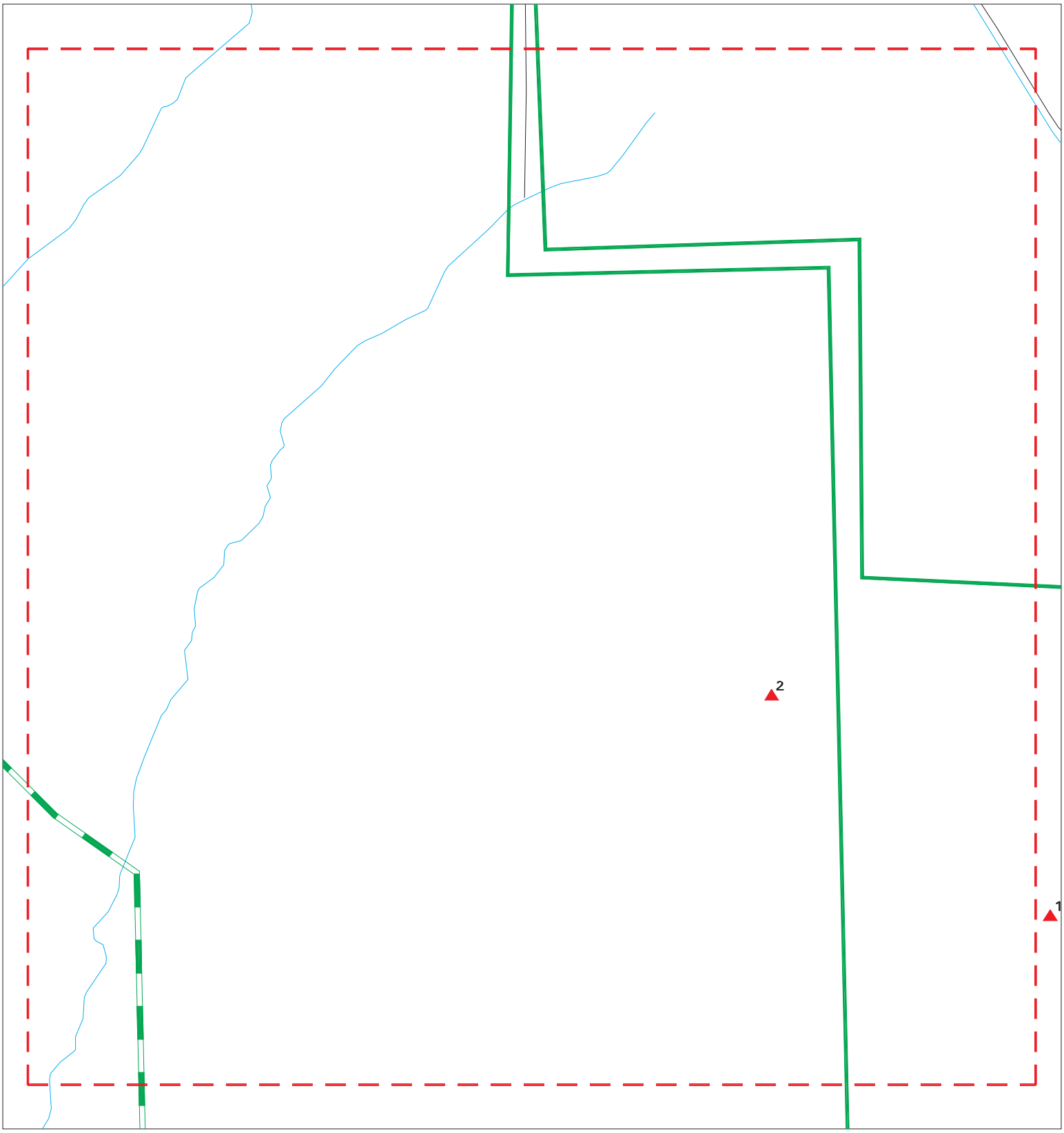
MAPPED SITES SUMMARY - FOCUS MAP 6

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 7 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

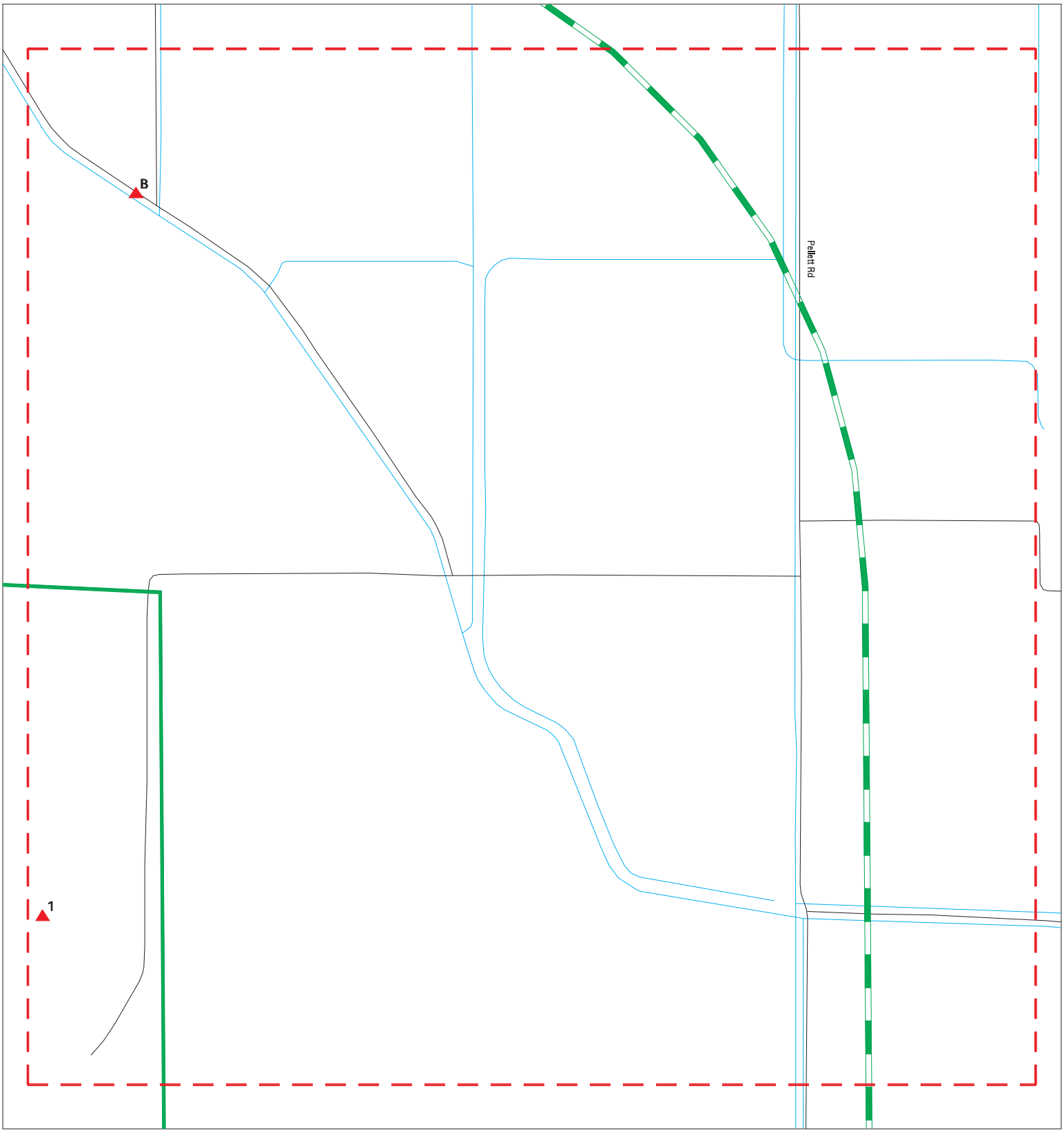
SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

MAPPED SITES SUMMARY - FOCUS MAP 7

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
2 / 7	ANDRE ROAD CLAY PIT	155 SOUTH 11TH STREE	MINES	547 0.104 West

Focus Map - 8 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

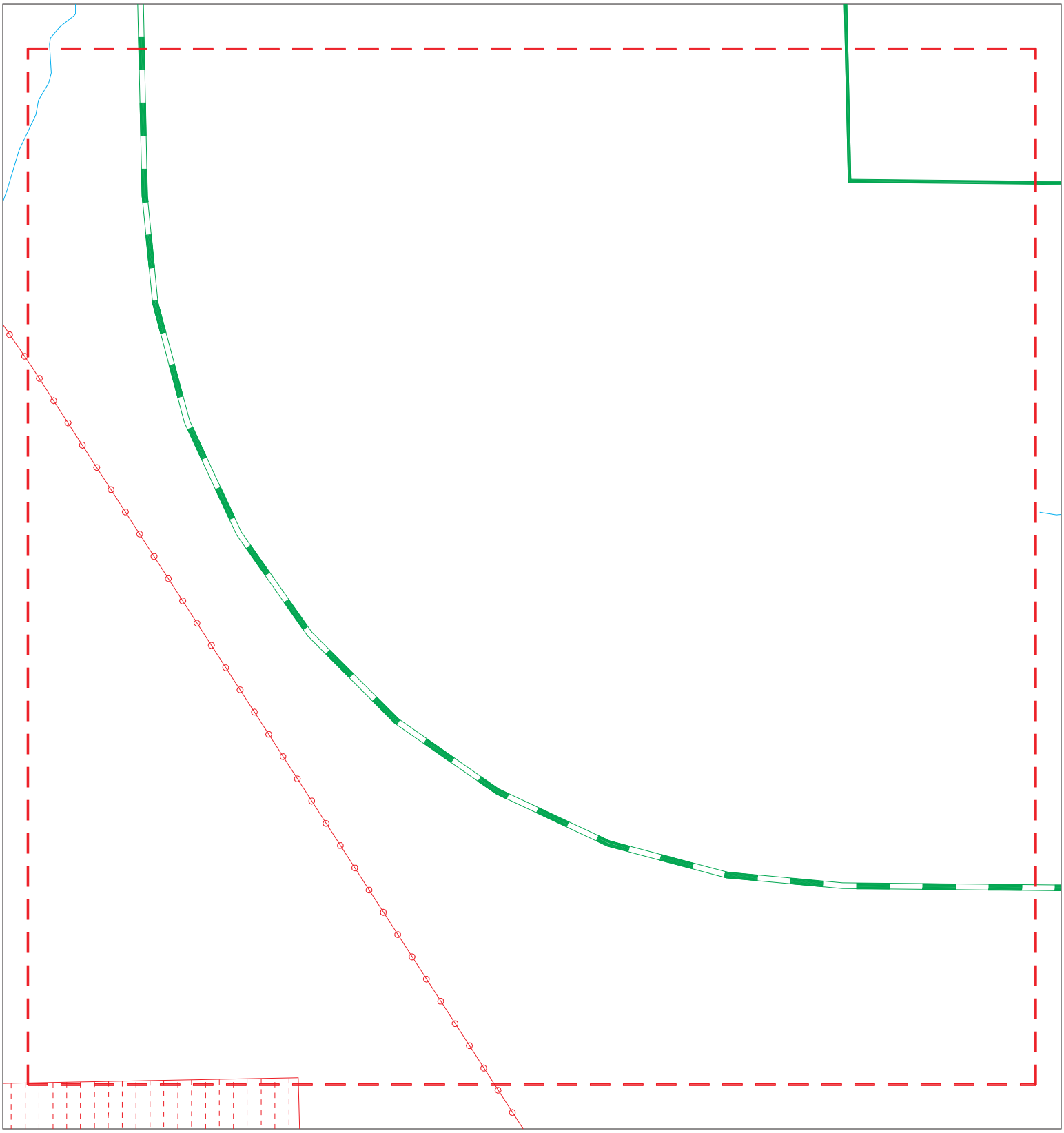
SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

MAPPED SITES SUMMARY - FOCUS MAP 8

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 8	HENSLER PIT	38000 MONROE STREET	MINES	TP
B6 / 8	LAIDLAW ENVIRONMENTA	5295 GARVEY	ENVIROSTOR, LDS, ENF, HIST CORTESE, NPDE...	2376 0.450 East
B7 / 8	GSX, IMPERIAL	5295 SOUTH GARVEY	Toxic Pits	2525 0.478 East

Focus Map - 9 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

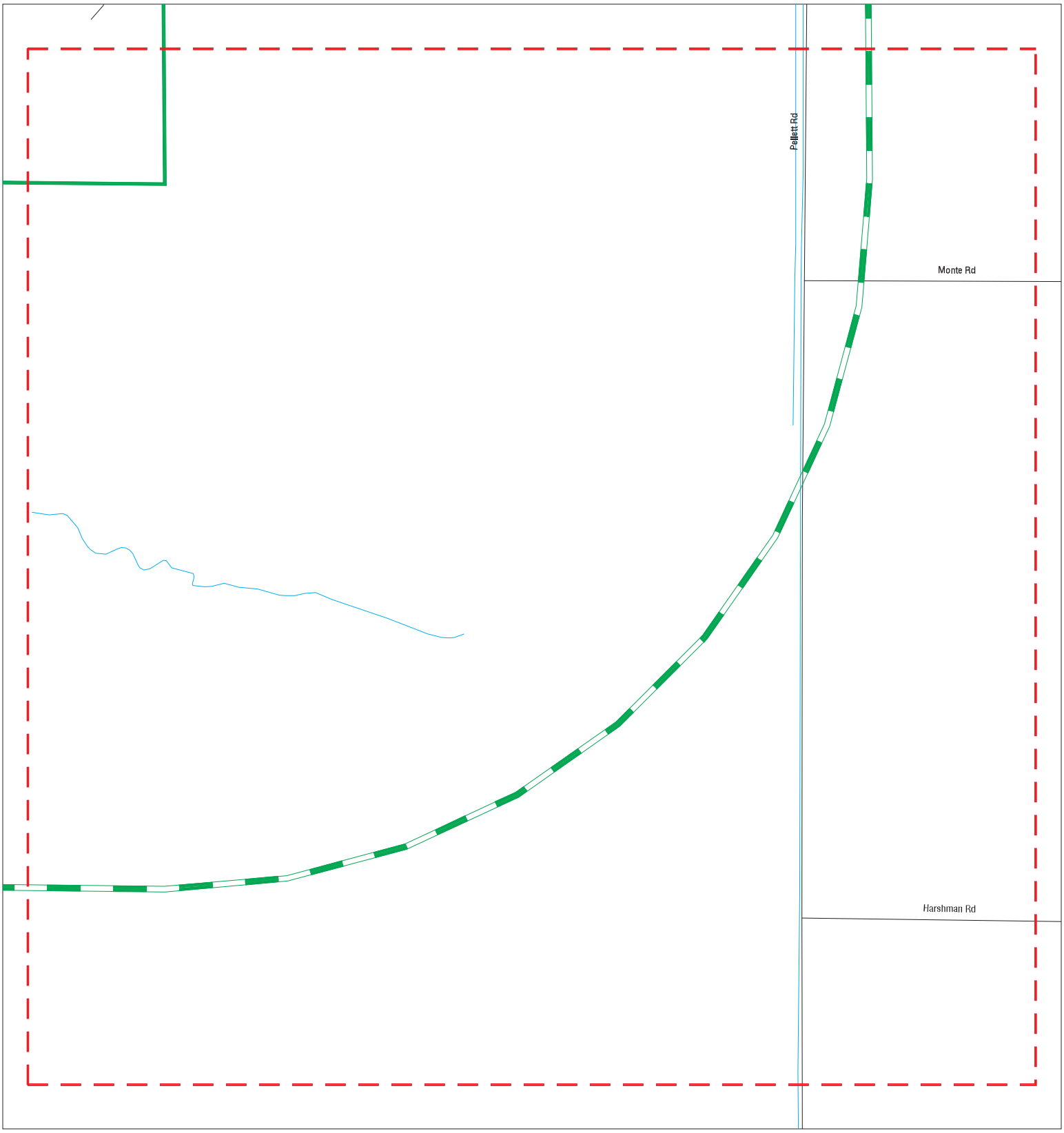
MAPPED SITES SUMMARY - FOCUS MAP 9

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 10 - 6171647.3s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Cedar Solar 3	CLIENT: GS Lyon Consultants
ADDRESS: Andre Road and Garvey Road, Imperial County	CONTACT: Peter E. Labrucherie
CITY/STATE: Brawley CA	INQUIRY #: 6171647.3s
ZIP: 92227	DATE: 08/27/20

MAPPED SITES SUMMARY - FOCUS MAP 10

Target Property:
ANDRE ROAD AND GARVEY ROAD, IMPERIAL COUNTY
BRAWLEY, CA 92227

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

1
Target Property

HENSLER PIT
38000 MONROE STREET
, CA

MINES **S117661734**
N/A

Actual:
-67 ft.

Focus Map:
8

MINES:

Name:	HENSLER PIT
Address:	38000 MONROE STREET
City,State,Zip:	CA
Latitude:	33.008333
Longitude:	-115.695833
Lead Agency identification code:	13
Lead Agency name:	County of Imperial
Year of the operator supplied annual report:	2018
Type of report submitted by operator:	2
Number of acres disturbed by the mine:	0
Status of mining operation:	CLOSED NO INTENT TO RESUME
Status of mine reclamation:	RECLAMATION IN PROGRESS
Mine operator:	GRANITE CONSTRUCTION COMPANY
Operator Address:	38000 MONROE ST
Operator City, State, Zip:	INDIO, CA 92203
Operator County:	Not reported
Mine owner:	GRANITE CONSTRUCTION COMPANY
Owner Address:	38000 MONROE ST
Owner City, State, Zip:	INDIO, CA 92203
Owner County:	Not reported
Reclamation plan identification number:	Not reported
Primary product produced by the mine:	Sand and Gravel
Other products produced by the mine:	Not reported
Type of mining utilized by mine:	OPEN PIT
Conditional use permit identification number:	CUP 1126-94
Number of acres permitted for mining disturbance:	110
Total amount of funds posted by the mine for reclamation:	42000
Financial Assurance Cost Estimate for reclamation:	Not reported

---

2
West
< 1/8
0.104 mi.
547 ft.

ANDRE ROAD CLAY PIT
155 SOUTH 11TH STREET
, CA

MINES **S117660979**
N/A

Actual:
-78 ft.

Focus Map:
7

MINES:

Name:	ANDRE ROAD CLAY PIT
Address:	155 SOUTH 11TH STREET
City,State,Zip:	CA
Latitude:	33.014167
Longitude:	-115.703056
Lead Agency identification code:	13
Lead Agency name:	County of Imperial
Year of the operator supplied annual report:	2018
Type of report submitted by operator:	2
Number of acres disturbed by the mine:	15.5
Status of mining operation:	CLOSED NO INTENT TO RESUME
Status of mine reclamation:	RECLAMATION IN PROGRESS
Mine operator:	IMPERIAL COUNTY, DEPARTMENT OF PUBLIC WORKS
Operator Address:	155 S. 11TH STREET
Operator City, State, Zip:	EL CENTRO, CA 92243
Operator County:	Not reported
Mine owner:	IMPERIAL COUNTY, DEPARTMENT OF PUBLIC WORKS
Owner Address:	155 S. 11TH STREET
Owner City, State, Zip:	EL CENTRO, CA 92243

ANDRE ROAD CLAY PIT (Continued) **S117660979**

Owner County:	Not reported
Reclamation plan identification number:	Not reported
Primary product produced by the mine:	Sand and Gravel
Other products produced by the mine:	Not reported
Type of mining utilized by mine:	OPEN PIT
Conditional use permit identification number:	CA 28595
Number of acres permitted for mining disturbance:	0
Total amount of funds posted by the mine for reclamation:	17341.07
Financial Assurance Cost Estimate for reclamation:	9264.86

A3 **IMPERIAL FARMING- WESTSIDE** **AST** **A100420953**
North **5253 GARVEY RD.** **N/A**
1/8-1/4 **WESTMORLAND, CA 92281**
0.247 mi.
1305 ft. **Site 1 of 3 in cluster A**

Actual:
-137 ft.

Focus Map:
3

AST:

Name:	IMPERIAL FARMING- WESTSIDE
Address:	5253 GARVEY RD.
City/Zip:	WESTMORLAND,92281
Certified Unified Program Agencies:	Not reported
Owner:	Imperial Farming LLC
Total Gallons:	Not reported
CERSID:	10134454
Facility ID:	13-000-0484
Business Name:	Rancho Dos Hermanos
Phone:	(760)348-9670
Fax:	Not reported
Mailing Address:	po box 930
Mailing Address City:	calipatria
Mailing Address State:	CA
Mailing Address Zip Code:	92233
Operator Name:	Bloom to Box Crop Care Inc.
Operator Phone:	(760)497-3966
Owner Phone:	(760)348-9670
Owner Mail Address:	113 S. La Brea Ave, 3rd Flr.
Owner State:	CA
Owner Zip Code:	90036
Owner Country:	United States
Property Owner Name:	Imperial Farming LLC
Property Owner Phone:	Not reported
Property Owner Mailing Address:	113 S. La Brea Ave, 3rd Flr.
Property Owner City:	Los Angeles
Property Owner Stat :	CA
Property Owner Zip Code:	90036
Property Owner Country:	United States
EPAID:	CAL000416072

A4 **IMPERIAL FARMING - WESTSIDE** **CUPA Listings** **S118739709**
North **5253 GARVEY RD** **CERS** **N/A**
1/8-1/4 **WESTMORLAND, CA 92281** **HWTS**
0.247 mi.
1305 ft. **Site 2 of 3 in cluster A**

Actual:
-137 ft.

Focus Map:
3

CUPA IMPERIAL:

Name:	IMPERIAL FARMING - WESTSIDE
Address:	5253 GARVEY RD
City,State,Zip:	WESTMORLAND, CA 92281
Facility ID:	Not reported
Region:	IMPERIAL

CERS:

Name:	RANCHOS DOS HOMBRES
Address:	5253 GARVEY RD.
City,State,Zip:	WESTMORLAND, CA 92281
Site ID:	395044
CERS ID:	10134454
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	395044
Site Name:	Ranchos Dos Hombres
Violation Date:	04-06-2016
Citation:	19 CCR 6.95 25508(a)(1) - California Code of Regulations, Title 19, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit the Business Activities Page and/or Business Owner Operator Identification Page.
Violation Notes:	Returned to compliance on 05/01/2016. Business Activities form on CERS missing EPA ID number.
Violation Division:	Imperial CUPA - DTSC
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	395044
Site Name:	Ranchos Dos Hombres
Violation Date:	04-06-2016
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 05/01/2016. Red diesel fuel tank not properly labeled.
Violation Division:	Imperial CUPA - DTSC
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	395044
Site Name:	Ranchos Dos Hombres
Violation Date:	04-06-2016
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain and/or maintain an Active EPA ID.
Violation Notes:	Returned to compliance on 05/01/2016.
Violation Division:	Imperial CUPA - DTSC
Violation Program:	HW
Violation Source:	CERS

IMPERIAL FARMING - WESTSIDE (Continued) **S118739709**

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-23-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	INSPECTOR E. MATHIS
Eval Division:	Imperial CUPA - DTSC
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-23-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	INSPECTOR E. MATHIS
Eval Division:	Imperial CUPA - DTSC
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-06-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	INSPECTOR E. MATHIS
Eval Division:	Imperial CUPA - DTSC
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2020
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Imperial CUPA - DTSC
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-02-2020
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Ranchos Dos Hombres no longer generates Hazardous Waste at this location and should be removed from the CUPA Haz Waste Program.
Eval Division:	Imperial CUPA - DTSC
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-06-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	INSPECTOR E. MATHIS
Eval Division:	Imperial CUPA - DTSC
Eval Program:	HMRRP
Eval Source:	CERS

IMPERIAL FARMING - WESTSIDE (Continued) **S118739709**

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Riverside Environmental Services, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	Rancho Dos Hombres
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	Imperial CUPA - DTSC
Entity Title:	Not reported
Affiliation Address:	627 Wake Avenue
Affiliation City:	El Centro
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92243
Affiliation Phone:	(760) 352-0381

Affiliation Type Desc:	Environmental Contact
Entity Name:	Marshal McBroom
Entity Title:	Not reported
Affiliation Address:	P.O.Box 960
Affiliation City:	Calipatria
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92233
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	po box 930
Affiliation City:	calipatria
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92233
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	William B. Embree
Entity Title:	Designated Rep.
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported

IMPERIAL FARMING - WESTSIDE (Continued) **S118739709**

Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Imperial Farming LLC
Entity Title:	Not reported
Affiliation Address:	113 S. La Brea Ave, 3rd Flr.
Affiliation City:	Los Angeles
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90036
Affiliation Phone:	(760) 348-9670
Affiliation Type Desc:	Operator
Entity Name:	Bloom to Box Crop Care Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 497-3966

HWTS:

Name:	IMPERIAL FARMING - WESTSIDE
Address:	5253 GARVEY RD
Address 2:	Not reported
City,State,Zip:	WESTMORLAND, CA 92281
EPA ID:	CAL000416072
Inactive Date:	09/06/2019
Create Date:	04/08/2016
Last Act Date:	09/17/2019
Mailing Name:	Not reported
Mailing Address:	PO BOX 960
Mailing Address 2:	Not reported
Mailing City,State,Zip:	CALIPATRIA, CA 92233
Owner Name:	IMPERIAL FARMING LLC
Owner Address:	113 LA BREA AVE 3RD FLR
Owner Address 2:	Not reported
Owner City,State,Zip:	LOS ANGELES, CA 90036
Contact Name:	MARSHAL MCBROOM
Contact Address:	PO BOX 960
Contact Address 2:	Not reported
City,State,Zip:	CALIPATRIA, CA 92233

NAICS:

EPA ID:	CAL000416072
Create Date:	2016-04-08 14:35:54
NAICS Code:	115116
NAICS Description:	Farm Management Services
Issued EPA ID Date:	2016-04-08 14:35:54
Inactive Date:	2019-09-06 00:00:00
Facility Name:	IMPERIAL FARMING - WESTSIDE
Facility Address:	5253 GARVEY RD
Facility Address 2:	Not reported

IMPERIAL FARMING - WESTSIDE (Continued) **S118739709**

Facility City:	WESTMORLAND
Facility County:	13
Facility State:	CA
Facility Zip:	92281

A5 **RANCHO DOS HERMANOS, LLC** **CUPA Listings** **S111785440**
North **5253 GARVEY RD** **N/A**
1/8-1/4 **WESTMORLAND, CA 92281**
0.247 mi.
1305 ft. **Site 3 of 3 in cluster A**

Actual:
-137 ft.

Focus Map:
3

CUPA IMPERIAL:

Name:	RANCHO DOS HERMANOS, LLC
Address:	5253 GARVEY RD
City,State,Zip:	WESTMORLAND, CA 92281
Facility ID:	Not reported
Region:	IMPERIAL

Detail As Of May 2012:

Name:	RANCHO DOS HERMANOS, LLC
Address:	5253 GARVEY RD
City,State,Zip:	WESTMORLAND, CA 92281
Facility Status:	Active
SIC Code:	0174
Program Element/Description:	4452 - HAZ WASTE GENERATOR < 1TON
Record Id:	PR0001495
Care Of:	MARK MCBROOM
Care Of 1:	MARK MCBROOM
Owner Dba:	BLOOM TO BOX CROP CARE INC.
New Owner Id:	OW0000415
Owner Name:	MARK MCBROOM
Owner Address1:	P.O. BOX 960
Owner City/State/Zip:	CALIPATRIA, CALIPATRIA 92233
Home Phone:	760-497-3966
Work/Business Phone:	760-348-9670
Employee Id And Name:	Not reported

B6 **LAIDLAW ENVIRONMENTAL 9** **ENVIROSTOR** **S105027391**
East **5295 GARVEY** **LDS** **N/A**
1/4-1/2 **WESTMORLAND, CA 94553** **ENF**
0.450 mi. **HIST CORTESE**
2376 ft. **Site 1 of 2 in cluster B** **NPDES**
CIWQS
Actual: **CERS**
-150 ft.

Focus Map:
8

ENVIROSTOR:

Name:	CLEAN HARBORS WESTMORLAND LLC
Address:	5295 SOUTH GARVEY ROAD
City,State,Zip:	WESTMORLAND, CA 922810158
Facility ID:	80001334
Status:	Active
Status Date:	01/01/2008
Site Code:	550092
Site Type:	Corrective Action
Site Type Detailed:	Corrective Action

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Acres: 0
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: WM
Program Manager: Shawn Browning
Supervisor: Edward Nieto
Division Branch: Office of Permitting
Assembly: 56
Senate: 40
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.04092
Longitude: -115.7350
APN: 125446
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: 125446
Alias Type: APN
Alias Name: CAD000633164
Alias Type: EPA Identification Number
Alias Name: 540001
Alias Type: Project Code (Site Code)
Alias Name: 550092
Alias Type: Project Code (Site Code)
Alias Name: 80001334
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SURFACE IMPOUNDMENTS
Completed Document Type: RCRA Facility Assessment Report
Completed Date: 09/30/1986
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SURFACE IMPOUNDMENTS
Completed Document Type: * Historical Operating Permit Authority
Completed Date: 11/15/1988
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: RCRA Facility Assessment Report
Completed Date: 01/01/1991
Comments: THE SURFACE IMPOUNDMENTS WERE CLEAN-CLOSED. THE RCRA LANDFILLS WERE CLOSED, CAPPED AND MANAGED UNDER A POST-CLOSURE PERMIT. THERE WERE NO CORRECTIVE ACTION ACTIVITIES. THIS FACILITY IS PART OF THE GPRA BASELINE SINCE IT IS AN OPERATING L

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Groundwater Migration Controlled
Completed Date: 04/06/2000
Comments: Not reported

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedy Construction Complete
Completed Date: 08/26/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Human Exposure Controlled
Completed Date: 04/06/2000
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

LDS:
Name: CLEAN HARBORS 94-005
Address: 5295 SOUTH GARVEY RD
City,State,Zip: WESTMORLAND, CA 92281

Global Id: L10006276681
Latitude: 33.04341
Longitude: -115.7354
Case Type: Land Disposal Site
Status: Open
Status Date: 01/01/1965
Lead Agency: COLORADO RIVER BASIN RWQCB (REGION 7)
Caseworker: ZO
Local Agency: Not reported
RB Case Number: 7A130315003
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Not reported
EDR Link ID: L10006276681
Potential Contaminants of Concern: Not reported
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

ENF:
Name: CLEAN HARBORS 94-005
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA 92281
Region: 7
Facility Id: 214781
Agency Name: Clean Harbors Westmorland LLC
Place Type: Waste Management Unit
Place Subtype: Land fill

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Facility Type:	Solid Waste Class I - hazardous wastes
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0
Threat To Water Quality:	1
Complexity:	A
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	7A130315003
Reg Measure Id:	136599
Reg Measure Type:	WDR
Region:	7
Order #:	94-005
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	03/21/2016
Effective Date:	01/18/1994
Expiration/Review Date:	01/17/2004
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Direction/Voice:	Passive
Enforcement Id(EID):	222755
Region:	7
Order / Resolution Number:	96-022
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	01/17/1996
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 7A130315003
Description:	RELEASE FROM CONTAINMENT OF AN ELEVATED TDS WETTING FRONT DETECTED BY GW MONITORING WELLS
Program:	LFNONOPER
Latest Milestone Completion Date:	3/15/1996
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

HIST CORTESE:

edr_fname:	LAIDLAW ENVIRONMENTAL 9
edr_fadd1:	5295 GARVEY
City,State,Zip:	WESTMORLAND, CA 94553
Region:	CORTESE
Facility County Code:	13
Reg By:	WBC&D
Reg Id:	7A130315003

NPDES:

Name:	CLEAN HARBORS WESTMORLAND LLC
Address:	5295 SOUTH GARVEY RD
City,State,Zip:	WESTMORLAND, CA 92281
Facility Status:	Active
NPDES Number:	CAS000001
Region:	7
Agency Number:	0
Regulatory Measure ID:	204963
Place ID:	Not reported
Order Number:	97-03-DWQ
WDID:	7 13I017619
Regulatory Measure Type:	Enrollee
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	11/15/2002
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	2500 West Lokern Road
Discharge Name:	Clean Harbors Buttonwillow LLC
Discharge City:	Buttonwillow

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Discharge State:	California
Discharge Zip:	93206
Status:	Not reported
Status Date:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	7
Regulatory Measure ID:	204963
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	7 13I017619
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	11/15/2002
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Clean Harbors Buttonwillow LLC
Discharge Address:	2500 West Lokern Road
Discharge City:	Buttonwillow
Discharge State:	California
Discharge Zip:	93206
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	7
Regulatory Measure ID:	204963
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	7 13I017619
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	11/15/2002
Status:	Active
Status Date:	11/15/2002
Place Size:	640
Place Size Unit:	Acres
Contact:	Marianna Buoni
Contact Title:	General Manager
Contact Phone:	661-762-6236

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Contact Phone Ext:	Not reported
Contact Email:	buoni.marianna@cleanharbors.com
Operator Name:	Clean Harbors Buttonwillow LLC
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Private Individual
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	661-201-7137
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Salton Sea Via Ephemeral Ditch
Certifier:	Marianna Buoni
Certifier Title:	general manager
Certification Date:	29-JAN-15
Primary Sic:	4953-Refuse Systems
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

Name:	CLEAN HARBORS WESTMORLAND LLC
Address:	5295 SOUTH GARVEY RD
City,State,Zip:	WESTMORLAND, CA 92281
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Place ID:	Not reported
Order Number:	Not reported
WDID:	7 13I017619
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	11/15/2002
Operator Name:	Clean Harbors Buttonwillow LLC
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

NPDES as of 03/2018:

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	7
Regulatory Measure ID:	204963
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	7 13I017619
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	11/15/2002
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Clean Harbors Buttonwillow LLC
Discharge Address:	2500 West Lokern Road
Discharge City:	Buttonwillow
Discharge State:	California
Discharge Zip:	93206
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	7
Regulatory Measure ID:	204963
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	7 13I017619
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	11/15/2002
Status:	Active
Status Date:	11/15/2002
Place Size:	640
Place Size Unit:	Acres
Contact:	Marianna Buoni
Contact Title:	General Manager
Contact Phone:	661-762-6236
Contact Phone Ext:	Not reported
Contact Email:	buoni.marianna@cleanharbors.com
Operator Name:	Clean Harbors Buttonwillow LLC
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Private Individual
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	661-201-7137
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Salton Sea Via Ephemeral Ditch
Certifier:	Marianna Buoni
Certifier Title:	general manager
Certification Date:	29-JAN-15
Primary Sic:	4953-Refuse Systems

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Secondary Sic: Not reported
Tertiary Sic: Not reported

CIWQS:
Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY RD
City,State,Zip: WESTMORLAND, CA 92281
Agency: Clean Harbors Buttonwillow LLC
Agency Address: 2500 West Lokern Road PO Box 787, Buttonwillow, CA 93206
Place/Project Type: Industrial - Refuse Systems
SIC/NAICS: 4953
Region: 7
Program: INDSTW
Regulatory Measure Status: Active
Regulatory Measure Type: Storm water industrial
Order Number: 2014-0057-DWQ
WDID: 7 13I017619
NPDES Number: CAS000001
Adoption Date: Not reported
Effective Date: 11/15/2002
Termination Date: Not reported
Expiration/Review Date: Not reported
Design Flow: Not reported
Major/Minor: Not reported
Complexity: Not reported
TTWQ: Not reported
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: 33.02472
Longitude: -115.69332

Name: CLEAN HARBORS 94-005
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA 92281
Agency: Clean Harbors Westmorland LLC
Agency Address: 5295 South Garvey Road, Westmorland, CA 92281-0158
Place/Project Type: Land fill
SIC/NAICS: 4953
Region: 7
Program: LFOPER, LNDISP
Regulatory Measure Status: Active
Regulatory Measure Type: WDR
Order Number: 94-005
WDID: 7A130315003
NPDES Number: Not reported
Adoption Date: 1/18/1994
Effective Date: 01/18/1994
Termination Date: Not reported
Expiration/Review Date: 01/17/2004
Design Flow: 0
Major/Minor: Not reported
Complexity: A
TTWQ: 1
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: Not reported

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Longitude: Not reported

CERS:
Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY RD
City,State,Zip: WESTMORLAND, CA 92281
Site ID: 529396
CERS ID: 217918
CERS Description: Industrial Facility Storm Water

Violations:
Site ID: 529396
Site Name: Clean Harbors Westmorland LLC
Violation Date: 07-02-2004
Citation: 2014-0057-DWQ - Industrial General Permit
Violation Description: SW - Deficient Report
Violation Notes: FTS 2003-2004 Annual Industrial Stormwater Report.
Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Enforcement Action:
Site ID: 529396
Site Name: Clean Harbors Westmorland LLC
Site Address: 5295 SOUTH GARVEY RD
Site City: WESTMORLAND
Site Zip: 92281
Enf Action Date: 11-29-2005
Enf Action Type: Notice of Violation
Enf Action Description: Notice of Violation
Enf Action Notes: 11/29/2005 Notice of Violation issued for failure to submit 2004-2005 Annual Report by July 1, 2005 due date.
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Affiliation:
Affiliation Type Desc: Owner/Operator
Entity Name: Clean Harbors Buttonwillow LLC
Entity Title: Operator
Affiliation Address: 2500 West Lokern RoadPO Box 787
Affiliation City: Buttonwillow
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93206
Affiliation Phone: Not reported

Name: CLEAN HARBORS 94-005
Address: 5295 SOUTH GARVEY RD
City,State,Zip: WESTMORLAND, CA 92281
Site ID: 208784
CERS ID: L10006276681
CERS Description: Land Disposal Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker

LAIDLAW ENVIRONMENTAL 9 (Continued) **S105027391**

Entity Name:	ZAKARY OWENS - COLORADO RIVER BASIN RWQCB (REGION 7)
Entity Title:	Not reported
Affiliation Address:	73-720 FRED WARING DR. STE 100
Affiliation City:	PALM DESERT
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B7 **GSX, IMPERIAL** **Toxic Pits** **S100925140**
East **5295 SOUTH GARVEY** **N/A**
1/4-1/2 **WESTMORELAND, CA**
0.478 mi.
2525 ft. **Site 2 of 2 in cluster B**

Actual:
-150 ft.

Focus Map:
8

TOXIC PITS:

Region:	07
Task #:	87003
Owner:	LAIDLAW ENVIRONMENTAL (GSX)
1/2 Mi Limit:	Y
Num. of Pits:	4
Cease Discharge Due:	/ /
Cease Discharge Complete:	09/28/89
Closure Due:	/ /
Closure Completed:	**05/17/91**
Status:	CLOSED
Hydro Geological Assessment Report Due:	/ /
Final Hydro Geological Assessment Review Completed:	03/25/90

---

8 **LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY** **CORRACTS** **1000180420**
North **5295 S GARVEY RD** **RCRA-TSDF** **CAD000633164**
1/2-1 **WESTMORLAND, CA 92281** **RCRA-LQG**
0.697 mi. **WMUDS/SWAT**
3681 ft. **HIST UST**
US FIN ASSUR
Actual: **2020 COR ACTION**
-88 ft. **RAATS**
ICIS
Focus Map: **US AIRS**
2 **CUPA Listings**
Financial Assurance
ICE
HWP
WDS
CERS

CORRACTS:

Region:	09
Name:	CLEAN HARBORS WESTMORLAND LLC
Address:	5295 SOUTH GARVEY ROAD
Address 2:	Not reported
City,State,Zip:	WESTMORLAND, CA 92281-0158
EPA ID:	CAD000633164
Area Name:	ENTIRE FACILITY
Corrective Action:	CA550RC

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Actual Date:	2016-08-26 00:00:00.0
NAICS Code 1:	562211
NAICS Code 2:	Not reported
NAICS Code 3:	Not reported
NAICS Code 4:	Not reported
Region:	09
Name:	CLEAN HARBORS WESTMORLAND LLC
Address:	5295 SOUTH GARVEY ROAD
Address 2:	Not reported
City,State,Zip:	WESTMORLAND, CA 92281-0158
EPA ID:	CAD000633164
Area Name:	ENTIRE FACILITY
Corrective Action:	CA725YE
Actual Date:	2000-04-06 00:00:00.0
NAICS Code 1:	562211
NAICS Code 2:	Not reported
NAICS Code 3:	Not reported
NAICS Code 4:	Not reported
Region:	09
Name:	CLEAN HARBORS WESTMORLAND LLC
Address:	5295 SOUTH GARVEY ROAD
Address 2:	Not reported
City,State,Zip:	WESTMORLAND, CA 92281-0158
EPA ID:	CAD000633164
Area Name:	ENTIRE FACILITY
Corrective Action:	CA750YE
Actual Date:	2000-04-06 00:00:00.0
NAICS Code 1:	562211
NAICS Code 2:	Not reported
NAICS Code 3:	Not reported
NAICS Code 4:	Not reported

RCRA-TSDF:

Date form received by agency:	2018-02-16 00:00:00.0
Facility name:	CLEAN HARBORS WESTMORLAND LLC
Facility address:	5295 SOUTH GARVEY ROAD WESTMORLAND, CA 92281-0158
EPA ID:	CAD000633164
Mailing address:	SOUTH GARVEY ROAD WESTMORLAND, CA 92281-0158
Contact:	MARIANNA BUONI
Contact address:	WEST LOKERN WESTMORELAND, CA 92281
Contact country:	US
Contact telephone:	661-762-6200
Contact email:	BUONI.MARIANNA@CLEANHARBORS.COM
EPA Region:	09
Land type:	Private
Classification:	TSDF
Description:	Handler is engaged in the treatment, storage or disposal of hazardous waste
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	CLEAN HARBORS OF WESTMORELAND
Owner/operator address:	SOUTH GARVEY ROAD WESTMORLAND, CA 92281
Owner/operator country:	US
Owner/operator telephone:	661-762-6200
Owner/operator email:	BUONI.MARIANNA@CLEANHARBORS.COM
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	2002-09-02 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	CLEAN HARBORS OF WESTMORELAND
Owner/operator address:	SOUTH GARVEY ROAD WESTMORLAND, CA 92281
Owner/operator country:	US
Owner/operator telephone:	661-762-6200
Owner/operator email:	BUONI.MARIANNA@CLEANHARBORS.COM
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	2002-09-02 00:00:00.
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	Yes
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	2016-02-19 00:00:00.0

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Site name: CLEAN HARBORS OF WESTMORELAND LLC
Classification: Large Quantity Generator

Date form received by agency: 2014-03-01 00:00:00.0
Site name: CLEAN HARBORS WESTMORELAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2012-08-21 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2010-07-16 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2008-02-27 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2006-01-22 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2004-02-06 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND LLC
Classification: Large Quantity Generator

Date form received by agency: 2002-02-28 00:00:00.0
Site name: SAFETY-KLEEN (WESTMORLAND) INC
Classification: Large Quantity Generator

Date form received by agency: 2000-10-12 00:00:00.0
Site name: SAFETY-KLEEN (WESTMORLAND), INC.
Classification: Large Quantity Generator

Date form received by agency: 1999-04-21 00:00:00.0
Site name: LAIDLAW ENVIRONMENTAL SERVICES (IMPERIAL
Classification: Small Quantity Generator

Date form received by agency: 1999-02-08 00:00:00.0
Site name: SAFETY KLEEN WESTMORLAND INC
Classification: Large Quantity Generator

Date form received by agency: 1996-09-01 00:00:00.0
Site name: SAFETY KLEEN WESTMORLAND INC
Classification: Small Quantity Generator

Date form received by agency: 1996-02-26 00:00:00.0
Site name: LAIDLAW ENVIRONMENTAL SERVICES INC
Classification: Small Quantity Generator

Date form received by agency: 1994-03-29 00:00:00.0
Site name: LAIDLAW ENV SERVICES, INC
Classification: Small Quantity Generator

Date form received by agency: 1992-02-28 00:00:00.0
Site name: LAIDLAW ENVIRONMENTAL SERVICES

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 221
. Waste name: Waste oil and mixed oil

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 741
. Waste name: Liquids with halogenated organic compounds > 1000 mg/l

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D018
. Waste name: BENZENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F039
. Waste name: LEACHATE RESULTING FROM THE TREATMENT, STORAGE, OR DISPOSAL OF WASTES CLASSIFIED BY MORE THAN ONE WASTE CODE UNDER SUBPART D, OR FROM A MIXTURE OF WASTES CLASSIFIED UNDER SUBPARTS C AND D OF THIS PART. (LEACHATE RESULTING FROM THE MANAGEMENT OF ONE OR MORE OF THE FOLLOWING EPA HAZARDOUS WASTES AND NO OTHER HAZARDOUS WASTES RETAINS ITS HAZARDOUS WASTE CODE(S): F020, F021, F022, F023, F026, F027, AND/OR F028.)

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:
Waste code: F039
Waste name: LEACHATE (LIQUIDS THAT HAVE PERCOLATED THROUGH LAND DISPOSED WASTES) RESULTING FROM THE DISPOSAL OF MORE THAN ONE RESTRICTED WASTE CLASSIFIED AS HAZARDOUS UNDER SUBPART D OF THIS PART. (LEACHATE RESULTING FROM THE DISPOSAL OF ONE OR MORE OF THE FOLLOWING EPA HAZARDOUS WASTES AND NO OTHER HAZARDOUS WASTES RETAINS ITS EPA

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

HAZARDOUS WASTES NUMBER(S): F020, F021, F022, F026, F027, AND/OR F028).
Amount (Lbs): 0

Corrective Action Summary:
Event date: 1986-09-30 00:00:00.0
Event: RFA COMPLETED

Event date: 1988-09-30 00:00:00.0
Event: 3004(U) C/A UNDER PERMIT

Event date: 1989-04-05 00:00:00.0
Event: INVESTIGATION IMPOSITION

Event date: 1991-01-01 00:00:00.0
Event: DETERMINATION OF NEED FOR AN INVESTIGATION-INVESTIGATION IS NOT NECESSARY

Event date: 1999-05-18 00:00:00.0
Event: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 1999-05-18 00:00:00.0
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 1999-05-26 00:00:00.0
Event: CA PRIORITIZATION-LOW CA PRIORITY

Event date: 2000-04-06 00:00:00.0
Event: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 2000-04-06 00:00:00.0
Event: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 2000-04-06 00:00:00.0
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 2000-04-06 00:00:00.0
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 2012-03-13 00:00:00.0
Event: REMEDY CONSTRUCTION-REMEDY CONSTRUCTED

Event date: 2016-08-26 00:00:00.0
Event: REMEDY CONSTRUCTION-REMEDY CONSTRUCTED

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 2019-05-21 00:00:00.0
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enforcement action date: 2019-10-16 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2015-06-10 00:00:00.0
Date achieved compliance: 2015-07-08 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2015-06-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Containment Building Standards
Date violation determined: 2015-06-10 00:00:00.0
Date achieved compliance: 2015-07-08 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2015-06-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Tank System Standards
Date violation determined: 2013-02-12 00:00:00.0
Date achieved compliance: 2013-11-15 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2013-02-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Manifest/Records/Reporting
Date violation determined: 2013-02-12 00:00:00.0
Date achieved compliance: 2013-11-15 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2013-02-12 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Tank System Standards
Date violation determined: 2012-04-30 00:00:00.0
Date achieved compliance: Not reported
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 2009-12-09 00:00:00.0
Date achieved compliance: 2010-03-15 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2010-02-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Financial Requirements
Date violation determined: 2006-05-11 00:00:00.0
Date achieved compliance: 2006-07-05 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2006-05-24 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2006-01-25 00:00:00.0
Date achieved compliance: 2006-02-03 00:00:00.0
Violation lead agency: State
Enforcement action: LETTER OF INTENT TO INITIATE ENFORCEMENT ACTION
Enforcement action date: 2006-09-13 00:00:00.0
Enf. disposition status: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2006-01-25 00:00:00.0
Date achieved compliance: 2006-02-03 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2006-01-25 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2006-01-25 00:00:00.0
Date achieved compliance: 2006-02-03 00:00:00.0
Violation lead agency: State
Enforcement action: SINGLE SITE CA/FO
Enforcement action date: 2007-01-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13680
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Landfill Standards
Date violation determined: 2006-01-25 00:00:00.0
Date achieved compliance: 2006-02-03 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2006-01-25 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Financial Requirements
Date violation determined: 2005-04-19 00:00:00.0
Date achieved compliance: 2005-05-18 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2005-05-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2004-04-06 00:00:00.0
Date achieved compliance: 2004-04-06 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2004-04-06 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date violation determined: 2003-04-09 00:00:00.0
Date achieved compliance: 2003-04-18 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2003-04-09 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date violation determined: 2002-02-20 00:00:00.0
Date achieved compliance: 2002-02-27 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2002-02-21 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2002-02-20 00:00:00.0
Date achieved compliance: 2002-02-27 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2002-02-21 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Tank System Standards
Date violation determined: 2001-04-05 00:00:00.0
Date achieved compliance: 2001-08-31 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-04-05 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Landfill Standards
Date violation determined: 2001-04-05 00:00:00.0
Date achieved compliance: 2001-08-31 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-04-05 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2001-02-21 00:00:00.0
Date achieved compliance: 2002-02-21 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-02-23 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2001-02-21 00:00:00.0
Date achieved compliance: 2002-02-21 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-02-23 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Tank System Standards
Date violation determined: 2001-02-21 00:00:00.0
Date achieved compliance: 2001-07-02 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-02-23 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2000-09-19 00:00:00.0
Date achieved compliance: 2000-12-18 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-10-25 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2000-02-09 00:00:00.0
Date achieved compliance: 2000-11-13 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-02-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2000-02-09 00:00:00.0
Date achieved compliance: 2000-02-09 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-02-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2000-02-09 00:00:00.0
Date achieved compliance: 2000-02-09 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-02-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 2000-01-10 00:00:00.0
Date achieved compliance: 2000-06-26 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-03-17 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 1999-01-11 00:00:00.0
Date achieved compliance: 1999-01-11 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 1999-01-11 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.50-56.D
Area of violation: TSD - General
Date violation determined: 1996-10-28 00:00:00.0
Date achieved compliance: 1996-11-12 00:00:00.0
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1996-11-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Regulation violated: FR - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 1995-02-08 00:00:00.0
Date achieved compliance: 1995-04-10 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1995-02-08 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 1995-02-08 00:00:00.0
Date achieved compliance: 1995-04-10 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1995-02-08 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1991-04-17 00:00:00.0
Date achieved compliance: 1991-07-26 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1991-05-24 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1990-09-26 00:00:00.0
Date achieved compliance: 1991-02-20 00:00:00.0
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Area of violation: TSD - General
Date violation determined: 1990-09-26 00:00:00.0
Date achieved compliance: 1991-02-20 00:00:00.0
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1991-01-02 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1990-09-20 00:00:00.0
Date achieved compliance: 2000-01-26 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1990-07-23 00:00:00.0
Date achieved compliance: 2002-02-20 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1990-09-06 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 268.7
Area of violation: LDR - General
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 2002-02-20 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 268 ALL
Area of violation: LDR - General

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 2002-02-20 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 2002-02-20 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 1990-06-15 00:00:00.0
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1990-05-16 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 1990-06-15 00:00:00.0
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1990-05-16 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1989-04-11 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date achieved compliance: 1989-06-02 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1989-05-25 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1988-05-11 00:00:00.0
Date achieved compliance: 1988-07-07 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1988-06-14 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1987-10-31 00:00:00.0
Date achieved compliance: 1988-07-07 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 1987-06-15 00:00:00.0
Date achieved compliance: 1988-05-11 00:00:00.0
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268.7
Area of violation: LDR - General
Date violation determined: 1987-06-15 00:00:00.0
Date achieved compliance: 1988-05-11 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1987-01-08 00:00:00.0
Date achieved compliance: 1989-07-14 00:00:00.0
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 1987-09-02 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 30000
Paid penalty amount: 18000

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1987-01-08 00:00:00.0
Date achieved compliance: 1989-07-14 00:00:00.0
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 1987-01-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 30000
Final penalty amount: 30000
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1987-01-08 00:00:00.0
Date achieved compliance: 1989-07-14 00:00:00.0
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 2019-05-29 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation lead agency: State

Evaluation date: 2019-05-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2018-06-22 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2018-06-07 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2017-09-06 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2017-05-24 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2016-06-07 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2016-05-26 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2015-08-05 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2015-06-10 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Containment Building Standards
Date achieved compliance: 2015-07-08 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2015-06-10 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2015-07-08 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2015-04-07 00:00:00.0
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2014-03-05 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2013-12-10 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2013-04-18 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2013-02-12 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Tank System Standards
Date achieved compliance: 2013-11-15 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2013-02-12 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Manifest/Records/Reporting
Date achieved compliance: 2013-11-15 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2012-04-30 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Tank System Standards
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 2012-01-19 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2011-12-14 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation lead agency: State

Evaluation date: 2010-12-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2010-11-01 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2009-12-21 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2009-12-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: 2010-03-15 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2008-12-15 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2008-11-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2008-04-18 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2008-03-26 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2007-10-26 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2007-05-09 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2007-03-15 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2007-03-13 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2006-05-23 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2006-05-11 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 2006-07-05 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2006-02-03 00:00:00.0
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2006-01-25 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2006-02-03 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2006-01-25 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: TSD - Landfill Standards
Date achieved compliance: 2006-02-03 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2006-01-25 00:00:00.0
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2005-06-16 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation lead agency: State

Evaluation date: 2005-04-19 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 2005-05-18 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2005-03-10 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2005-01-05 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-06-29 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-05-14 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-04-07 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-04-06 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2004-04-06 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2003-06-30 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2003-06-25 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2003-04-09 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date achieved compliance: 2003-04-18 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2003-02-11 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2002-04-11 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2002-04-10 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2002-02-28 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2002-02-20 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date achieved compliance: 2002-02-27 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2002-02-20 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2002-02-27 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2001-09-24 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2001-06-05 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2001-04-05 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: TSD - Tank System Standards
Date achieved compliance: 2001-08-31 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation lead agency: State

Evaluation date: 2001-04-05 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: TSD - Landfill Standards
Date achieved compliance: 2001-08-31 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2001-02-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Tank System Standards
Date achieved compliance: 2001-07-02 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2001-02-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2002-02-21 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2001-02-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2002-02-21 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-09-19 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2000-12-18 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-02-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2000-02-09 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-02-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2000-02-09 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-02-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2000-11-13 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-01-10 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 2000-06-26 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1999-01-14 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1999-01-11 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 1999-01-11 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1998-02-24 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1998-01-12 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1998-01-09 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 1997-06-12 00:00:00.0
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 1997-02-25 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1996-11-21 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 1996-08-27 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1996-11-12 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1996-02-29 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation lead agency: State

Evaluation date: 1996-01-09 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1995-07-25 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 1995-04-10 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1995-02-06 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1995-04-10 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1994-09-22 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1994-09-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1994-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1994-03-04 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1994-01-18 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1993-04-21 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1993-03-29 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1992-09-11 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1992-03-26 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1992-02-20 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1991-09-27 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1991-07-24 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1991-04-17 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1991-07-26 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1990-09-26 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1991-02-20 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1990-09-20 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 2000-01-26 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation lead agency: State

Evaluation date: 1990-07-23 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 2002-02-20 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1990-05-08 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1990-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1990-06-15 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1990-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 2002-02-20 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1990-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 1990-06-15 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1990-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 2002-02-20 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1989-07-14 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1989-04-17 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1989-04-11 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1989-06-02 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1988-05-11 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1988-07-07 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1988-04-21 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1987-10-31 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 1988-07-07 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1987-06-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 1988-05-11 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1987-01-08 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 1989-07-14 00:00:00.0
Evaluation lead agency: EPA

RCRA-LQG:
Date form received by agency: 2018-02-16 00:00:00.0
Facility name: CLEAN HARBORS WESTMORLAND LLC
Facility address: 5295 SOUTH GARVEY ROAD
WESTMORLAND, CA 92281-0158
EPA ID: CAD000633164
Mailing address: SOUTH GARVEY ROAD
WESTMORLAND, CA 92281-0158
Contact: MARIANNA BUONI
Contact address: WEST LOKERN
WESTMORELAND, CA 92281
Contact country: US
Contact telephone: 661-762-6200
Contact email: BUONI.MARIANNA@CLEANHARBORS.COM
EPA Region: 09
Land type: Private
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	CLEAN HARBORS OF WESTMORELAND
Owner/operator address:	SOUTH GARVEY ROAD WESTMORLAND, CA 92281
Owner/operator country:	US
Owner/operator telephone:	661-762-6200
Owner/operator email:	BUONI.MARIANNA@CLEANHARBORS.COM
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	2002-09-02 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	CLEAN HARBORS OF WESTMORELAND
Owner/operator address:	SOUTH GARVEY ROAD WESTMORLAND, CA 92281
Owner/operator country:	US
Owner/operator telephone:	661-762-6200
Owner/operator email:	BUONI.MARIANNA@CLEANHARBORS.COM
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	2002-09-02 00:00:00.
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	Yes
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	2016-02-19 00:00:00.0
Site name:	CLEAN HARBORS OF WESTMORELAND LLC
Classification:	Large Quantity Generator

Date form received by agency:	2014-03-01 00:00:00.0
Site name:	CLEAN HARBORS WESTMORELAND, LLC
Classification:	Large Quantity Generator

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date form received by agency: 2012-08-21 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2010-07-16 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2008-02-27 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2006-01-22 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND, LLC
Classification: Large Quantity Generator

Date form received by agency: 2004-02-06 00:00:00.0
Site name: CLEAN HARBORS WESTMORLAND LLC
Classification: Large Quantity Generator

Date form received by agency: 2002-02-28 00:00:00.0
Site name: SAFETY-KLEEN (WESTMORLAND) INC
Classification: Large Quantity Generator

Date form received by agency: 2000-10-12 00:00:00.0
Site name: SAFETY-KLEEN (WESTMORLAND), INC.
Classification: Large Quantity Generator

Date form received by agency: 1999-04-21 00:00:00.0
Site name: LAIDLAW ENVIRONMENTAL SERVICES (IMPERIAL
Classification: Small Quantity Generator

Date form received by agency: 1999-02-08 00:00:00.0
Site name: SAFETY KLEEN WESTMORLAND INC
Classification: Large Quantity Generator

Date form received by agency: 1996-09-01 00:00:00.0
Site name: SAFETY KLEEN WESTMORLAND INC
Classification: Small Quantity Generator

Date form received by agency: 1996-02-26 00:00:00.0
Site name: LAIDLAW ENVIRONMENTAL SERVICES INC
Classification: Small Quantity Generator

Date form received by agency: 1994-03-29 00:00:00.0
Site name: LAIDLAW ENV SERVICES, INC
Classification: Small Quantity Generator

Date form received by agency: 1992-02-28 00:00:00.0
Site name: LAIDLAW ENVIRONMENTAL SERVICES
Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: 135
. Waste name: Unspecified aqueous solution

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 221
. Waste name: Waste oil and mixed oil

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 741
. Waste name: Liquids with halogenated organic compounds > 1000 mg/l

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D018
. Waste name: BENZENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F039
. Waste name: LEACHATE RESULTING FROM THE TREATMENT, STORAGE, OR DISPOSAL OF WASTES CLASSIFIED BY MORE THAN ONE WASTE CODE UNDER SUBPART D, OR FROM A MIXTURE OF WASTES CLASSIFIED UNDER SUBPARTS C AND D OF THIS PART. (LEACHATE RESULTING FROM THE MANAGEMENT OF ONE OR MORE OF THE FOLLOWING EPA HAZARDOUS WASTES AND NO OTHER HAZARDOUS WASTES RETAINS ITS HAZARDOUS WASTE CODE(S): F020, F021, F022, F023, F026, F027, AND/OR F028.)

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:
Waste code: F039
Waste name: LEACHATE (LIQUIDS THAT HAVE PERCOLATED THROUGH LAND DISPOSED WASTES) RESULTING FROM THE DISPOSAL OF MORE THAN ONE RESTRICTED WASTE CLASSIFIED AS HAZARDOUS UNDER SUBPART D OF THIS PART. (LEACHATE RESULTING FROM THE DISPOSAL OF ONE OR MORE OF THE FOLLOWING EPA HAZARDOUS WASTES AND NO OTHER HAZARDOUS WASTES RETAINS ITS EPA HAZARDOUS WASTES NUMBER(S): F020, F021, F022, F026, F027, AND/OR F028).
Amount (Lbs): 0

Corrective Action Summary:
Event date: 1986-09-30 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Event: RFA COMPLETED

Event date: 1988-09-30 00:00:00.0
Event: 3004(U) C/A UNDER PERMIT

Event date: 1989-04-05 00:00:00.0
Event: INVESTIGATION IMPOSITION

Event date: 1991-01-01 00:00:00.0
Event: DETERMINATION OF NEED FOR AN INVESTIGATION-INVESTIGATION IS NOT NECESSARY

Event date: 1999-05-18 00:00:00.0
Event: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 1999-05-18 00:00:00.0
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 1999-05-26 00:00:00.0
Event: CA PRIORITIZATION-LOW CA PRIORITY

Event date: 2000-04-06 00:00:00.0
Event: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 2000-04-06 00:00:00.0
Event: RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 2000-04-06 00:00:00.0
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 2000-04-06 00:00:00.0
Event: HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

Event date: 2012-03-13 00:00:00.0
Event: REMEDY CONSTRUCTION-REMEDY CONSTRUCTED

Event date: 2016-08-26 00:00:00.0
Event: REMEDY CONSTRUCTION-REMEDY CONSTRUCTED

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 2019-05-21 00:00:00.0
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2019-10-16 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2015-06-10 00:00:00.0
Date achieved compliance: 2015-07-08 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2015-06-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Containment Building Standards
Date violation determined: 2015-06-10 00:00:00.0
Date achieved compliance: 2015-07-08 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2015-06-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Tank System Standards
Date violation determined: 2013-02-12 00:00:00.0
Date achieved compliance: 2013-11-15 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2013-02-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Manifest/Records/Reporting
Date violation determined: 2013-02-12 00:00:00.0
Date achieved compliance: 2013-11-15 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2013-02-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Area of violation: TSD - Tank System Standards
Date violation determined: 2012-04-30 00:00:00.0
Date achieved compliance: Not reported
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 2009-12-09 00:00:00.0
Date achieved compliance: 2010-03-15 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2010-02-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Financial Requirements
Date violation determined: 2006-05-11 00:00:00.0
Date achieved compliance: 2006-07-05 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2006-05-24 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2006-01-25 00:00:00.0
Date achieved compliance: 2006-02-03 00:00:00.0
Violation lead agency: State
Enforcement action: LETTER OF INTENT TO INITIATE ENFORCEMENT ACTION
Enforcement action date: 2006-09-13 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date violation determined: 2006-01-25 00:00:00.0
Date achieved compliance: 2006-02-03 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2006-01-25 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2006-01-25 00:00:00.0
Date achieved compliance: 2006-02-03 00:00:00.0
Violation lead agency: State
Enforcement action: SINGLE SITE CA/FO
Enforcement action date: 2007-01-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 13680
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Landfill Standards
Date violation determined: 2006-01-25 00:00:00.0
Date achieved compliance: 2006-02-03 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2006-01-25 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Financial Requirements
Date violation determined: 2005-04-19 00:00:00.0
Date achieved compliance: 2005-05-18 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2005-05-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2004-04-06 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date achieved compliance: 2004-04-06 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2004-04-06 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date violation determined: 2003-04-09 00:00:00.0
Date achieved compliance: 2003-04-18 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2003-04-09 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date violation determined: 2002-02-20 00:00:00.0
Date achieved compliance: 2002-02-27 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2002-02-21 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2002-02-20 00:00:00.0
Date achieved compliance: 2002-02-27 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2002-02-21 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Tank System Standards
Date violation determined: 2001-04-05 00:00:00.0
Date achieved compliance: 2001-08-31 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-04-05 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Landfill Standards
Date violation determined: 2001-04-05 00:00:00.0
Date achieved compliance: 2001-08-31 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-04-05 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2001-02-21 00:00:00.0
Date achieved compliance: 2002-02-21 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-02-23 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2001-02-21 00:00:00.0
Date achieved compliance: 2002-02-21 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2001-02-23 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Tank System Standards
Date violation determined: 2001-02-21 00:00:00.0
Date achieved compliance: 2001-07-02 00:00:00.0
Violation lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enforcement action: Not reported
Enforcement action date: 2001-02-23 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2000-09-19 00:00:00.0
Date achieved compliance: 2000-12-18 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-10-25 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2000-02-09 00:00:00.0
Date achieved compliance: 2000-11-13 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-02-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 2000-02-09 00:00:00.0
Date achieved compliance: 2000-02-09 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-02-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General Facility Standards
Date violation determined: 2000-02-09 00:00:00.0
Date achieved compliance: 2000-02-09 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enforcement action date: 2000-02-10 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 2000-01-10 00:00:00.0
Date achieved compliance: 2000-06-26 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 2000-03-17 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Container Use and Management
Date violation determined: 1999-01-11 00:00:00.0
Date achieved compliance: 1999-01-11 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 1999-01-11 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.50-56.D
Area of violation: TSD - General
Date violation determined: 1996-10-28 00:00:00.0
Date achieved compliance: 1996-11-12 00:00:00.0
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1996-11-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 1995-02-08 00:00:00.0
Date achieved compliance: 1995-04-10 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1995-02-08 00:00:00.0

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.10-18.B
Area of violation: TSD - General
Date violation determined: 1995-02-08 00:00:00.0
Date achieved compliance: 1995-04-10 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1995-02-08 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1991-04-17 00:00:00.0
Date achieved compliance: 1991-07-26 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1991-05-24 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1990-09-26 00:00:00.0
Date achieved compliance: 1991-02-20 00:00:00.0
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1990-09-26 00:00:00.0
Date achieved compliance: 1991-02-20 00:00:00.0
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1991-01-02 00:00:00.0
Enf. disposition status: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1990-09-20 00:00:00.0
Date achieved compliance: 2000-01-26 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1990-07-23 00:00:00.0
Date achieved compliance: 2002-02-20 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1990-09-06 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 268.7
Area of violation: LDR - General
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 2002-02-20 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 268 ALL
Area of violation: LDR - General
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 2002-02-20 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 2002-02-20 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 1990-06-15 00:00:00.0
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1990-05-16 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1990-03-15 00:00:00.0
Date achieved compliance: 1990-06-15 00:00:00.0
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1990-05-16 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1989-04-11 00:00:00.0
Date achieved compliance: 1989-06-02 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1989-05-25 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 1988-05-11 00:00:00.0
Date achieved compliance: 1988-07-07 00:00:00.0
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 1988-06-14 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1987-10-31 00:00:00.0
Date achieved compliance: 1988-07-07 00:00:00.0
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268 ALL
Area of violation: LDR - General
Date violation determined: 1987-06-15 00:00:00.0
Date achieved compliance: 1988-05-11 00:00:00.0
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 268.7
Area of violation: LDR - General
Date violation determined: 1987-06-15 00:00:00.0
Date achieved compliance: 1988-05-11 00:00:00.0
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1987-01-08 00:00:00.0
Date achieved compliance: 1989-07-14 00:00:00.0
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 1987-09-02 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 30000
Paid penalty amount: 18000

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1987-01-08 00:00:00.0
Date achieved compliance: 1989-07-14 00:00:00.0
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 1987-01-12 00:00:00.0
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 30000
Final penalty amount: 30000
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 1987-01-08 00:00:00.0
Date achieved compliance: 1989-07-14 00:00:00.0
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 2019-05-29 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2019-05-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: Not reported
Evaluation lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation date: 2018-06-22 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2018-06-07 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2017-09-06 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2017-05-24 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2016-06-07 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2016-05-26 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2015-08-05 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2015-06-10 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Containment Building Standards
Date achieved compliance: 2015-07-08 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2015-06-10 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2015-07-08 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2015-04-07 00:00:00.0
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2014-03-05 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2013-12-10 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2013-04-18 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2013-02-12 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Tank System Standards
Date achieved compliance: 2013-11-15 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2013-02-12 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Manifest/Records/Reporting
Date achieved compliance: 2013-11-15 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2012-04-30 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Tank System Standards
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 2012-01-19 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2011-12-14 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2010-12-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation date: 2010-11-01 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2009-12-21 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2009-12-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: 2010-03-15 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2008-12-15 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2008-11-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2008-04-18 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2008-03-26 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2007-10-26 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2007-05-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2007-03-15 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2007-03-13 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2006-05-23 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2006-05-11 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 2006-07-05 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2006-02-03 00:00:00.0
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2006-01-25 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2006-02-03 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2006-01-25 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: TSD - Landfill Standards
Date achieved compliance: 2006-02-03 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2006-01-25 00:00:00.0
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2005-06-16 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2005-04-19 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 2005-05-18 00:00:00.0
Evaluation lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation date: 2005-03-10 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2005-01-05 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-06-29 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-05-14 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-04-07 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2004-04-06 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2004-04-06 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2003-06-30 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2003-06-25 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2003-04-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date achieved compliance: 2003-04-18 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2003-02-11 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2002-04-11 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2002-04-10 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2002-02-28 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2002-02-20 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date achieved compliance: 2002-02-27 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2002-02-20 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2002-02-27 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2001-09-24 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2001-06-05 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 2001-04-05 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: TSD - Tank System Standards
Date achieved compliance: 2001-08-31 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2001-04-05 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: TSD - Landfill Standards
Date achieved compliance: 2001-08-31 00:00:00.0
Evaluation lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation date: 2001-02-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Tank System Standards
Date achieved compliance: 2001-07-02 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2001-02-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2002-02-21 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2001-02-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2002-02-21 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-09-19 00:00:00.0
Evaluation: FOLLOW-UP INSPECTION
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2000-12-18 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-02-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2000-02-09 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-02-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management
Date achieved compliance: 2000-02-09 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-02-09 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 2000-11-13 00:00:00.0
Evaluation lead agency: State

Evaluation date: 2000-01-10 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 2000-06-26 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1999-01-14 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1999-01-11 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Container Use and Management

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date achieved compliance: 1999-01-11 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1998-02-24 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1998-01-12 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1998-01-09 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 1997-06-12 00:00:00.0
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 1997-02-25 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1996-11-21 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 1996-08-27 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1996-11-12 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1996-02-29 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1996-01-09 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation date: 1995-07-25 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 1995-04-10 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1995-02-06 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1995-04-10 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1994-09-22 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1994-09-21 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1994-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1994-03-04 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1994-01-18 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1993-04-21 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1993-03-29 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1992-09-11 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1992-03-26 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1992-02-20 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1991-09-27 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1991-07-24 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1991-04-17 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1991-07-26 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1990-09-26 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1991-02-20 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1990-09-20 00:00:00.0
Evaluation: OPERATION AND MAINTENANCE INSPECTION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 2000-01-26 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1990-07-23 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 2002-02-20 00:00:00.0
Evaluation lead agency: State

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Evaluation date: 1990-05-08 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1990-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1990-06-15 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1990-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 2002-02-20 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1990-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 1990-06-15 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1990-03-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 2002-02-20 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1989-07-14 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1989-04-17 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1989-04-11 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1989-06-02 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1988-05-11 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 1988-07-07 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1988-04-21 00:00:00.0
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 1987-10-31 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 1988-07-07 00:00:00.0
Evaluation lead agency: State

Evaluation date: 1987-06-15 00:00:00.0
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 1988-05-11 00:00:00.0
Evaluation lead agency: EPA

Evaluation date: 1987-01-08 00:00:00.0
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 1989-07-14 00:00:00.0
Evaluation lead agency: EPA

WMUDS/SWAT:
Edit Date: Not reported
Complexity: Category A - Any major NPDES facility, any non-NPDES facility (particularly those with toxic wastes) that would be a major if discharge was made to surface or ground waters, or any Class I disposal site. Includes any small-volume complex facility (particularly those with toxicwastes) with numerous discharge points, leak detection systems or ground water monitoring wells.
Primary Waste: SLDWST
Primary Waste Type: Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.
Secondary Waste: Solid Wastes
Secondary Waste Type: H
Base Meridian: Not reported
NPID: Not reported
Tonnage: 0
Regional Board ID: Not reported
Municipal Solid Waste: False
Superorder: False
Open To Public: False
Waste List: True
Agency Type: Private
Agency Name: LAIDLAW ENV SERV (IMP VAL)INC.
Agency Department: Not reported
Agency Address: PO BOX 158
Agency City,St,Zip: WESTMORLAND ,CA 92281
Agency Contact: ROGER HIGSON
Agency Telephone: Not reported
Land Owner Name: LAIDLAW ENVIRONMENTAL SERVICE
Land Owner Address: 7004 GAS COMPANY ROAD
Land Owner City,St,Zip: TAFT, CA 93268
Land Owner Contact: ROGER HIGSON ,COMPLIANCE MANAG
Land Owner Phone: Not reported
Region: 7
Facility Type: Solid Waste Site-Class I - A solid waste facility at which hazardous

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

waste may be treated or stored.
Facility Description: Not reported
Facility Telephone: 6193449400
SWAT Facility Name: WASTE MANAGEMENT UNIT #3
Primary SIC: 4953
Secondary SIC: Not reported
Comments: Not reported
Last Facility Editors: Not reported
Waste Discharge System: True
Solid Waste Assessment Test Program: True
Toxic Pits Cleanup Act Program: True
Resource Conservation Recovery Act: True
Department of Defence: False
Solid Waste Assessment Test Program: LAIDLAW ENVIRONMENTAL SERVICE CORP.
Threat to Water Quality: Major Threat to Water Quality. A violation could render unusable a ground water or surface water resource used as a significant drink water supply, require closure of an area used for contact recreation, result in long-term deleterious effects on shell fish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.
Sub Chapter 15: True
Regional Board Project Officer: N K
Number of WMUDS at Facility: 1
Section Range: Not reported
RCRA Facility: Yes
Waste Discharge Requirements: H
Self-Monitoring Rept. Frequency: Monthly Submittal
Waste Discharge System ID: 7A130315001
Solid Waste Information ID: Not reported

HIST UST:
Name: IT CORPORATION IMPERIAL
Address: 5295 SOUTH GARVEY ROAD AT WEST
City,State,Zip: WESTMORLAND, CA 92281
File Number: 00023F6C
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00023F6C.pdf
Region: STATE
Facility ID: 00000019606
Facility Type: Other
Other Type: DISPOSAL SITE
Contact Name: RALPH DICORI
Telephone: 6193449400
Owner Name: IT CORPORATION
Owner Address: 23456 HAWTHORNE BLVD.
Owner City,St,Zip: TORRANCE, CA 90505
Total Tanks: 0008

Tank Num: 001
Container Num: TANK 1
Year Installed: 1980
Tank Capacity: 00001000
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 002

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Container Num:	MS-1
Year Installed:	1983
Tank Capacity:	18000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	36
Leak Detection:	Visual, Groundwater Monitoring Well

Tank Num:	003
Container Num:	MS-2
Year Installed:	1983
Tank Capacity:	18000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	36
Leak Detection:	Visual, Groundwater Monitoring Well

Tank Num:	004
Container Num:	MS-3
Year Installed:	1983
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	36
Leak Detection:	Visual, Groundwater Monitoring Well

Tank Num:	005
Container Num:	3
Year Installed:	1980
Tank Capacity:	18000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	36
Leak Detection:	Visual, Groundwater Monitoring Well

Tank Num:	006
Container Num:	5
Year Installed:	1980
Tank Capacity:	18000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	36
Leak Detection:	Visual, Groundwater Monitoring Well

Tank Num:	007
Container Num:	8
Year Installed:	1980
Tank Capacity:	18000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	36
Leak Detection:	Visual, Groundwater Monitoring Well

Tank Num:	008
Container Num:	POND 9
Year Installed:	1983
Tank Capacity:	18000000

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: 36
Leak Detection: Visual, Groundwater Monitoring Well

Click here for Geo Tracker PDF:

US FIN ASSUR:
Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA
EPA ID: CAD000633164
County: Not reported
Mechanism type: I
Mechanism Type Description: INSURANCE
Cost estimate: 6000000
Face value: 22329554
Effective date: 2015-11-01 00:00:00
Provider: INDIAN HARBOR INS. CO.
EPA region: 9

Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA
EPA ID: CAD000633164
County: Not reported
Mechanism type: I
Mechanism Type Description: INSURANCE
Cost estimate: 2938902.53
Face value: 2938902.53
Effective date: 2006-09-06 00:00:00
Provider: STEADFAST INS.
EPA region: 9

Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA
EPA ID: CAD000633164
County: Not reported
Mechanism type: I
Mechanism Type Description: INSURANCE
Cost estimate: 10542680.37
Face value: 10542680.37
Effective date: 2006-09-06 00:00:00
Provider: STEADFAST INS.
EPA region: 9

Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA
EPA ID: CAD000633164
County: Not reported
Mechanism type: I
Mechanism Type Description: INSURANCE
Cost estimate: 6000000
Face value: 6000000
Effective date: 2008-11-01 00:00:00

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Provider: STEADFAST INS.
EPA region: 9

Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA
EPA ID: CAD000633164
County: Not reported
Mechanism type: I
Mechanism Type Description: INSURANCE
Cost estimate: 2830408
Face value: 22329554
Effective date: 2015-11-01 00:00:00
Provider: INDIAN HARBOR INS. CO.
EPA region: 9

Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA
EPA ID: CAD000633164
County: Not reported
Mechanism type: I
Mechanism Type Description: INSURANCE
Cost estimate: 10961584
Face value: 22329554
Effective date: 2015-11-01 00:00:00
Provider: INDIAN HARBOR INS. CO.
EPA region: 9

Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA
EPA ID: CAD000633164
County: Not reported
Mechanism type: I
Mechanism Type Description: INSURANCE
Cost estimate: 2000000
Face value: 22329554
Effective date: 2015-11-01 00:00:00
Provider: INDIAN HARBOR INS. CO.
EPA region: 9

Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA
EPA ID: CAD000633164
County: Not reported
Mechanism type: I
Mechanism Type Description: INSURANCE
Cost estimate: 2000000
Face value: 2000000
Effective date: 2008-11-01 00:00:00
Provider: STEADFAST INS.
EPA region: 9

2020 COR ACTION:
EPA ID: CAD000633164

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Region: 9
Action: Remedy Construction

RAATS:
Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-85-0012
Region: 09
Issue Date: Not reported
Final Date: 06/20/1985
Status: Complaint Issued
Additional: Not reported
Action ID: 487
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 1 42 U.S.C. 6925
Total No Cited: Not reported
Reg Type: Federal
Prop. Penalty: 25,000.00
Final Penalty: .00
Total Prop. Penalty: 25,000.00
Comments: Not reported

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-85-0012
Region: 09
Issue Date: Not reported
Final Date: 06/20/1985
Status: Complaint Issued
Additional: Not reported
Action ID: 487
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 2 270.10(E)(5)
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: *
Final Penalty: .00
Total Prop. Penalty: 25,000.00
Comments: Not reported

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 1 3007(A)

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Total No Cited: Not reported
Reg Type: Federal
Prop. Penalty: 15,000.00
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 2 270.72
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: 17,500.00
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 3 270.71(A)(2)
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: 9,500.00
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 4 270.72(C)
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: *
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 5 265.251
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: 8,000.00
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 6 265.31
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: 14,499.00
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 7 265.223
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: 2,999.00
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 8 265.31
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: *
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 1 3007(A)
Total No Cited: Not reported
Reg Type: Federal
Prop. Penalty: 15,000.00
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Region:	09
Issue Date:	02/10/1987
Final Date:	09/18/1986
Status:	Consent Agreement/Final Order
Additional:	Not reported
Action ID:	444
Action:	3008 (A)
Violation No:	Not reported
Viol No Cited:	2 270.72
Total No Cited:	Not reported
Reg Type:	CFR
Prop. Penalty:	17,500.00
Final Penalty:	42,000.00
Total Prop. Penalty:	67,498.00
Comments:	WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No:	1
Facility ID:	CAD000633164
Type:	Not reported
Docket No:	RCRA-09-86-0007
Region:	09
Issue Date:	02/10/1987
Final Date:	09/18/1986
Status:	Consent Agreement/Final Order
Additional:	Not reported
Action ID:	444
Action:	3008 (A)
Violation No:	Not reported
Viol No Cited:	3 270.71(A)(2)
Total No Cited:	Not reported
Reg Type:	CFR
Prop. Penalty:	9,500.00
Final Penalty:	42,000.00
Total Prop. Penalty:	67,498.00
Comments:	WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No:	1
Facility ID:	CAD000633164
Type:	Not reported
Docket No:	RCRA-09-86-0007
Region:	09
Issue Date:	02/10/1987
Final Date:	09/18/1986
Status:	Consent Agreement/Final Order
Additional:	Not reported
Action ID:	444
Action:	3008 (A)
Violation No:	Not reported
Viol No Cited:	4 270.72(C)
Total No Cited:	Not reported
Reg Type:	CFR
Prop. Penalty:	*
Final Penalty:	42,000.00
Total Prop. Penalty:	67,498.00
Comments:	WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No:	1

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Facility ID:	CAD000633164
Type:	Not reported
Docket No:	RCRA-09-86-0007
Region:	09
Issue Date:	02/10/1987
Final Date:	09/18/1986
Status:	Consent Agreement/Final Order
Additional:	Not reported
Action ID:	444
Action:	3008 (A)
Violation No:	Not reported
Viol No Cited:	5 265.251
Total No Cited:	Not reported
Reg Type:	CFR
Prop. Penalty:	8,000.00
Final Penalty:	42,000.00
Total Prop. Penalty:	67,498.00
Comments:	WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No:	1
Facility ID:	CAD000633164
Type:	Not reported
Docket No:	RCRA-09-86-0007
Region:	09
Issue Date:	02/10/1987
Final Date:	09/18/1986
Status:	Consent Agreement/Final Order
Additional:	Not reported
Action ID:	444
Action:	3008 (A)
Violation No:	Not reported
Viol No Cited:	6 265.31
Total No Cited:	Not reported
Reg Type:	CFR
Prop. Penalty:	14,499.00
Final Penalty:	42,000.00
Total Prop. Penalty:	67,498.00
Comments:	WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No:	1
Facility ID:	CAD000633164
Type:	Not reported
Docket No:	RCRA-09-86-0007
Region:	09
Issue Date:	02/10/1987
Final Date:	09/18/1986
Status:	Consent Agreement/Final Order
Additional:	Not reported
Action ID:	444
Action:	3008 (A)
Violation No:	Not reported
Viol No Cited:	7 265.223
Total No Cited:	Not reported
Reg Type:	CFR
Prop. Penalty:	2,999.00
Final Penalty:	42,000.00
Total Prop. Penalty:	67,498.00

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

Entry No: 1
Facility ID: CAD000633164
Type: Not reported
Docket No: RCRA-09-86-0007
Region: 09
Issue Date: 02/10/1987
Final Date: 09/18/1986
Status: Consent Agreement/Final Order
Additional: Not reported
Action ID: 444
Action: 3008 (A)
Violation No: Not reported
Viol No Cited: 8 265.31
Total No Cited: Not reported
Reg Type: CFR
Prop. Penalty: *
Final Penalty: 42,000.00
Total Prop. Penalty: 67,498.00
Comments: WESTMORLAND FACILITY AKA IMPERIAL FACILITY.

ICIS:
Enforcement Action ID: CAIMPA000006025I225300050
FRS ID: 110000479116
Action Name: CLEAN HARBORS WESTMORLAND, LLC 06025I225300050
Facility Name: CLEAN HARBORS WESTMORLAND, LLC
Facility Address: 5295 S GARVEY RD
WESTMORLAND, CA 92281
Enforcement Action Type: Administrative Order
Facility County: IMPERIAL
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Formal
EA Type Code: SCAAAO
Facility SIC Code: 8999
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 33.035978
Longitude in Decimal Degrees: -115.73713
Permit Type Desc: Not reported
Program System Acronym: CAIMP00006025I2253
Facility NAICS Code: 562211
Tribal Land Code: Not reported

Enforcement Action ID: CAIMPA000006025I225300048
FRS ID: 110000479116
Action Name: CLEAN HARBORS WESTMORLAND, LLC 06025I225300048
Facility Name: CLEAN HARBORS WESTMORLAND, LLC
Facility Address: 5295 S GARVEY RD
WESTMORLAND, CA 92281
Enforcement Action Type: Notice of Violation
Facility County: IMPERIAL
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Informal
EA Type Code: NOV
Facility SIC Code: 8999
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 33.035978

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Longitude in Decimal Degrees: -115.73713
Permit Type Desc: Not reported
Program System Acronym: CAIMP000060251225 3
Facility NAICS Code: 562211
Tribal Land Code: Not reported

Enforcement Action ID: CAIMPA000006025I225300040
FRS ID: 110000479116
Action Name: CLEAN HARBORS WESTMORLAND, LLC 06025I225300040
Facility Name: CLEAN HARBORS WESTMORLAND, LLC
Facility Address: 5295 S GARVEY RD
WESTMORLAND, CA 92281
Enforcement Action Type: Administrative Order
Facility County: IMPERIAL
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Formal
EA Type Code: SCAAAO
Facility SIC Code: 8999
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 33.035978
Longitude in Decimal Degrees: -115.73713
Permit Type Desc: Not reported
Program System Acronym: CAIMP000060251225 3
Facility NAICS Code: 562211
Tribal Land Code: Not reported

Enforcement Action ID: CAIMPA000006025I225300039
FRS ID: 110000479116
Action Name: CLEAN HARBORS WESTMORLAND, LLC 06025I225300039
Facility Name: CLEAN HARBORS WESTMORLAND, LLC
Facility Address: 5295 S GARVEY RD
WESTMORLAND, CA 92281
Enforcement Action Type: Notice of Violation
Facility County: IMPERIAL
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Informal
EA Type Code: NOV
Facility SIC Code: 8999
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 33.035978
Longitude in Decimal Degrees: -115.73713
Permit Type Desc: Not reported
Program System Acronym: CAIMP000060251225 3
Facility NAICS Code: 562211
Tribal Land Code: Not reported

Enforcement Action ID: CAIMPA000006025I225300011
FRS ID: 110000479116
Action Name: CLEAN HARBORS WESTMORLAND, LLC 06025I225300011
Facility Name: CLEAN HARBORS WESTMORLAND, LLC
Facility Address: 5295 S GARVEY RD
WESTMORLAND, CA 92281
Enforcement Action Type: Warning Letter
Facility County: IMPERIAL
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Informal
EA Type Code: DAWL

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Facility SIC Code: 8999
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 33.035978
Longitude in Decimal Degrees: -115.73713
Permit Type Desc: Not reported
Program System Acronym: CAIMP000060251 2253
Facility NAICS Code: 562211
Tribal Land Code: Not reported

US AIRS (AFS):
Envid: 1000180420
Region Code: 09
County Code: CA025
Programmatic ID: AIR CAIMP000060251 2253
Facility Registry ID: 110000479116
D and B Number: Not reported
Facility Site Name: CLEAN HARBORS WESTMORLAND, LLC
Primary SIC Code: 8999
NAICS Code: 562211
Default Air Classification Code: SMI
Facility Type of Ownership Code: POF
Air CMS Category Code: SMI
HPV Status: Not reported

CUPA IMPERIAL:
Name: CLEAN HARBORS WESTMORLAND, LLC
Address: 5295 S GARVEY RD
City,State,Zip: WESTMORLAND, CA 92281
Facility ID: FA0000715
Region: IMPERIAL

Detail As Of May 2012:
Name: CLEAN HARBORS WESTMORLAND, LLC
Address: 5295 S GARVEY RD
City,State,Zip: WESTMORLAND, CA 92281
Facility Status: Active
SIC Code: 4953
Program Element/Description: 4452 - HAZ WASTE GENERATOR < 1TON
Record Id: PR0002223
Care Of: CLEAN HARBORS WESTMORLAND, LLC
Care Of 1: Not reported
Owner Dba: Not reported
New Owner Id: OW0000620
Owner Name: CLEAN HARBORS WESTMORLAND, LLC
Owner Address1: P.O. BOX 787
Owner City/State/Zip: BUTTONWILLOW, BUTTONWILLOW 93206-0787
Home Phone: Not Specified
Work/Business Phone: 760-344-9400
Employee Id And Name: Not reported

CA Financial Assurance 1:
Name: CLEAN HARBORS - WESTMORLAND (AKA SAFETY KLEEN (FKA LAIDLAW)
Address: 5295 S GARVEY RD
City: WESTMORLAND

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

EPA ID Number:	CAD000633164
Sudden Amount1:	$2,000,000.00
Non Sudden Amount1:	$6,000,000.00
Closure Mechanism:	Ins
Closure Amount:	$3,058,050.00
Post Closure Mechanism:	Ins
Post Closure Amount:	$12,044,169.00
Corrective Action Mechanism:	Not reported
Corrective Action Amount:	Not reported
Sudden Mechanism Type:	Ins
Sudden Mechanism Amount:	$1,000,000.00
Non Sudden Mechanism Type:	Ins
Non Sudden Mechanism Amount:	$3,000,000.00
O and M Mechanism Type:	Not reported
O and M Amount:	Not reported
Closure Mechanism Date of Mechanism:	2019-09-06 00:00:00
Closure Mechanism Renewal Date:	Not reported
Closure Mechanism Provider:	Indian Harbor Ins. Co.
Postclosure Mechanism Date of Mechanism:	2019-09-06 00:00:00
Postclosure Mechanism Renewal Date:	Not reported
Postclosure Mechanism Provider:	Indian Harbor Ins. Co.
O and M Mechanism Date of Mechanism:	Not reported
O and M Mechanism Renewal Date:	Not reported
O and M Mechanism Provider:	Not reported
Corrective Action Mechanism Date of Mechanism:	Not reported
Corrective Action Mechanism Renewal Date:	Not reported
Corrective Action Mechanism Provider:	Not reported
Sudden Mechanism Date of Mechanism:	2018-11-01 00:00:00
Sudden Mechanism Renewal Date:	Not reported
Sudden Mechanism Provider:	Indian Harbor Ins. Co.
Non-Sudden Mechanism Date of Mechanism:	2019-11-01 00:00:00
Non-Sudden Mechanism Renewal Date:	Not reported
Non-Sudden Mechanism Provider:	Indian Harbor Ins. Co.
Date Entered into EnviroStor:	2018-01-11 00:00:00
Authorization Type:	Operating Permit
Comments:	Not reported

ICE:

Envirostor ID:	3002738
Name:	CLEAN HARBORS WESTMORLAND LLC
Address:	5295 SOUTH GARVEY ROAD
City,State,Zip:	WESTMORLAND, CA 92281
EPA ID:	CAD000633164
Site Type:	INSPECTION
Facility Status:	Out of Compliance

Enforcement:

Action Type:	Consent Order with Enforcement and Settlement - Federal CA/FO (385)
Action Date:	01/12/2007

Inspection:

Action Type:	Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date:	11/21/2008
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Compliance Evaluation Inspection - Treatment, Storage and Disposal

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Action Date: 12/09/2009
Violation Class: Class 2
RTC Date: 03/15/2010

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 05/23/2006
Violation Class: No Violations
RTC Date: Not reported

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 10/26/2007
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 03/26/2008
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 04/18/2008
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 12/15/2008
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 03/13/2007
Violation Class: No Violations
RTC Date: Not reported

Action Type: Groundwater Monitoring Evaluation - Treatment, Storage and Disposal
Action Date: 01/05/2005
Violation Class: No Violations
RTC Date: Not reported

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 09/24/2001
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 02/21/2001
Violation Class: Class 2, Minor
RTC Date: 02/21/2002

Action Type: Operation and Maintenance - Treatment, Storage and Disposal
Action Date: 01/14/1999
Violation Class: No Violations
RTC Date: Not reported

Action Type: Operation and Maintenance - Treatment, Storage and Disposal
Action Date: 04/07/2004
Violation Class: No Violations

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 05/11/2006
Violation Class: Minor
RTC Date: 07/05/2006

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 05/14/2004
Violation Class: No Violations
RTC Date: Not reported

Action Type: Operation and Maintenance - * OAM
Action Date: 01/10/2000
Violation Class: Class 2
RTC Date: 06/26/2000

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 06/05/2001
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 02/09/2000
Violation Class: Class 2, Minor
RTC Date: 11/13/2000

Action Type: Operation and Maintenance - Treatment, Storage and Disposal
Action Date: 04/11/2002
Violation Class: No Violations
RTC Date: Not reported

Action Type: Operation and Maintenance - Treatment, Storage and Disposal
Action Date: 04/05/2001
Violation Class: Class 2
RTC Date: 08/31/2001

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 04/18/2013
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 01/11/1999
Violation Class: Class 2
RTC Date: 01/11/1999

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 03/10/2005
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 04/19/2005
Violation Class: Class 2, Minor
RTC Date: 05/18/2005

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 04/06/2004
Violation Class: Minor
RTC Date: 04/06/2004

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 02/20/2002
Violation Class: Minor
RTC Date: 02/27/2002

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 05/09/2007
Violation Class: No Violations
RTC Date: Not reported

Action Type: Operation and Maintenance - Treatment, Storage and Disposal
Action Date: 02/11/2003
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 06/16/2005
Violation Class: No Violations
RTC Date: Not reported

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 01/25/2006
Violation Class: Class 1, Minor
RTC Date: 02/03/2006

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 04/10/2002
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 11/01/2010
Violation Class: No Violations
RTC Date: Not reported

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 06/25/2003
Violation Class: No Violations
RTC Date: Not reported

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 06/29/2004
Violation Class: No Violations
RTC Date: Not reported

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 09/19/2000
Violation Class: Minor
RTC Date: 12/18/2000

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 12/21/2009

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 02/28/2002
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 06/30/2003
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 04/09/2003
Violation Class: Minor
RTC Date: 04/18/2003

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 12/14/2011
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 12/09/2010
Violation Class: No Violations
RTC Date: Not reported

Action Type: Follow-up Inspection - Treatment, Storage and Disposal
Action Date: 03/15/2007
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 01/19/2012
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 12/10/2013
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 02/12/2013
Violation Class: Class 2
RTC Date: 11/15/2013

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 03/05/2014
Violation Class: No Violations
RTC Date: Not reported

Action Type: Focused Compliance Inspection - Treatment, Storage and Disposal
Action Date: 04/07/2015
Violation Class: No Violations
RTC Date: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 05/26/2016
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 06/07/2016
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 05/24/2017
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 06/10/2015
Violation Class: Minor
RTC Date: 07/08/2015

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 08/05/2015
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 06/07/2018
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 09/06/2017
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 05/21/2019
Violation Class: Minor
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 05/29/2019
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 06/22/2018
Violation Class: No Violations
RTC Date: Not reported

HWP:
Name: CLEAN HARBORS WESTMORLAND LLC
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA 922810158
EPA Id: CAD000633164
Cleanup Status: OPERATING PERMIT

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Latitude:	33.04092
Longitude:	-115.7350
Facility Type:	Permitted - Operating
Facility Size:	Land Disposal
Team:	MUZHDA FEROUZ
Supervisor:	Not reported
Site Code:	510781, 540001, 540001, 550092
Assembly District:	56
Senate District:	40
Public Information Officer:	Not reported
Public Information Officer:	Not reported

Activities:

EPA Id:	CAD000633164
Facility Type:	Permitted - Operating
Unit Names:	CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	Operating with PC Renewal Combination - With Changes - FINAL COMBINATION PERMIT (EFFECTIVE)
Actual Date:	05/02/1994

EPA Id:	CAD000633164
Facility Type:	Permitted - Operating
Unit Names:	CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	Operating with PC Renewal Combination - With Changes - FINAL COMBINATION PERMIT
Actual Date:	04/25/1994

EPA Id:	CAD000633164
Facility Type:	Permitted - Operating
Unit Names:	CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	Operating with PC Renewal Combination - With Changes - FINAL CEQA
Actual Date:	01/31/1991

EPA Id:	CAD000633164
Facility Type:	Permitted - Operating
Unit Names:	CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	Operating with PC Renewal Combination - With Changes - FINAL COMBINATION PERMIT (EXPIRES)
Actual Date:	05/02/2004

EPA Id:	CAD000633164
Facility Type:	Permitted - Operating
Unit Names:	LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description:	New Operating Permit - RESPONSE TO 1ST NOD RECEIVED
Actual Date:	08/18/1985

EPA Id:	CAD000633164
Facility Type:	Permitted - Operating
Unit Names:	LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description:	New Operating Permit - FINAL PERMIT (EXPIRES)
Actual Date:	04/04/1994

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT (EFFECTIVE)
Actual Date: 04/05/1989

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Operating with PC Renewal Combination - With Changes - APPLICATION PART A RECEIVED
Actual Date: 03/21/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT
Actual Date: 09/30/1988

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date: 01/07/2004

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - FINAL POST-CLOSURE PERMIT (EXPIRES)
Actual Date: 05/02/2004

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - CALL-IN LETTER ISSUED
Actual Date: 02/09/1984

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - FINAL POST-CLOSURE PERMIT (EFFECTIVE)
Actual Date: 05/02/1994

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - 2ND NOTICE OF DEFICIENCY ISSUED
Actual Date: 04/21/1986

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL
Actual Date: 02/26/1992

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - ADMINISTRATIVE REVIEW APPROVED
Actual Date: 02/17/2004

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: *Mod Class 2 - 2 or More Units - FINAL PERMIT MODIFICATION
Actual Date: 06/29/2006

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: *Mod Class 2 - 2 or More Units - FINAL PERMIT MODIFICATION (EFFECTIVE)
Actual Date: 06/29/2006

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - RESPONSE TO 1ST NOD RECEIVED
Actual Date: 03/23/2006

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - APPLICATION PART B RECEIVED
Actual Date: 12/15/1989

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - DISCLOSURE (CLEARED)

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Actual Date: 11/21/2008

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - PERMIT APPEALED - FINAL DECISION
Actual Date: 07/29/1993

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - PUBLIC COMMENT (PUBLIC HEARING)
Actual Date: 08/28/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - DRAFT PERMIT
Actual Date: 07/12/1988

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - CALL-IN LETTER ISSUED
Actual Date: 04/01/1988

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - 2ND NOTICE OF DEFICIENCY ISSUED
Actual Date: 06/05/2007

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date: 05/06/1985

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - PERMIT APPEALED - APPEAL RECEIVED
Actual Date: 10/10/1988

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Event Description: Renewal - With Changes - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date: 07/11/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - PUBLIC COMMENT (END)
Actual Date: 12/24/1984

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - APPLICATION PART A RECEIVED
Actual Date: 03/21/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL
Actual Date: 04/25/1994

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - APPLICATION PART A RECEIVED
Actual Date: 03/21/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT (EFFECTIVE)
Actual Date: 01/03/1985

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - PUBLIC COMMENT (PUBLIC HEARING)
Actual Date: 08/18/1988

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - FINAL CEQA
Actual Date: 01/31/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - PUBLIC COMMENT (BEGIN)
Actual Date: 07/29/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Unit Names: CONTAIN1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - APPLICATION PART B RECEIVED
Actual Date: 03/21/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Operating with PC Renewal Combination - With Changes - APPLICATION PART B RECEIVED
Actual Date: 03/21/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - RESPONSE TO 3RD NOD RECEIVED
Actual Date: 01/03/2020

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - 3RD NOTICE OF DEFICIENCY ISSUED
Actual Date: 08/21/1987

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT
Actual Date: 01/03/1985

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - APPLICATION PART B RECEIVED
Actual Date: 03/20/1984

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - PERMIT APPEALED - APPEAL RECEIVED
Actual Date: 03/05/1992

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL CEQA
Actual Date: 01/31/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - PUBLIC COMMENT (END)
Actual Date: 09/12/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL (EXPIRES)
Actual Date: 05/02/2004

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date: 07/11/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 01/31/2006

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT (EXPIRES)
Actual Date: 01/03/1990

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - PUBLIC COMMENT (END)
Actual Date: 09/04/1988

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - APPLICATION PART B RECEIVED
Actual Date: 12/08/2003

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - DRAFT PERMIT
Actual Date: 11/09/1984

EPA Id: CAD000633164
Facility Type: Permitted - Operating

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - PUBLIC COMMENT (BEGIN)
Actual Date: 07/12/1988

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: *Mod Class 2 - 2 or More Units - APPLICATION PART A RECEIVED
Actual Date: 02/17/2006

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL (EXPIRES)
Actual Date: 02/26/2002

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL (EFFECTIVE)
Actual Date: 02/26/1992

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - PUBLIC COMMENT (BEGIN)
Actual Date: 11/09/1984

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - FINAL POST-CLOSURE PERMIT
Actual Date: 04/25/1994

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - APPLICATION PART B RECEIVED
Actual Date: 03/21/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - PUBLIC NOTICE - PERMIT RECEIVED
Actual Date: 07/29/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Event Description: New Operating Permit - APPLICATION PART B RECEIVED
Actual Date: 08/20/1984

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), SURFSTR1 (GPRA Unit)
Event Description: New Operating Permit - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 06/20/1985

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9, SURFSTR1 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - CALL-IN LETTER ISSUED
Actual Date: 08/01/2003

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Renewal - With Changes - FINAL PERMIT RENEWAL (EFFECTIVE)
Actual Date: 05/02/1994

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: CONTAIN1 (GPRA Unit), LANDFIL1 (GPRA Unit), LANDFIL2 (GPRA Unit), LANDFIL3 (GPRA Unit), LANDFIL4, LANDFIL5 (GPRA Unit), TANKSTR1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Operating with PC Renewal Combination - With Changes - INITIAL ADMINISTRATIVE REVIEW COMPLE
Actual Date: 07/11/1991

Closure:

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9
Event Description: Closure - RESPONSE TO 1ST NOD RECEIVED
Actual Date: 03/23/1992

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL3 (GPRA Unit)
Event Description: Closure - CLOSURE PLAN APPROVED
Actual Date: 02/26/1992

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit)
Event Description: Closure - CLOSURE PLAN APPROVED
Actual Date: 10/26/1990

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL3 (GPRA Unit)
Event Description: Closure - RECEIVE CLOSURE CERTIFICATION

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Actual Date: 03/16/1992

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SURFSTR1 (GPRA Unit)
Event Description: Closure - CLOSURE PLAN RECEIVED
Actual Date: 03/01/1989

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SURFSTR1 (GPRA Unit)
Event Description: Closure - ISSUE CLOSURE VERIFICATION
Actual Date: 03/23/1997

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit)
Event Description: Closure - ISSUE CLOSURE VERIFICATION
Actual Date: 03/16/1992

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SURFSTR1 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (BEGIN)
Actual Date: 06/06/1990

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (END)
Actual Date: 07/08/1990

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (BEGIN)
Actual Date: 06/08/1990

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SURFSTR1 (GPRA Unit)
Event Description: Closure - CLOSURE PLAN APPROVED
Actual Date: 10/26/1990

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit)
Event Description: Closure - RECEIVE CLOSURE CERTIFICATION
Actual Date: 01/17/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL3 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (END)
Actual Date: 08/28/1991

EPA Id: CAD000633164

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Facility Type: Permitted - Operating
Unit Names: LANDFIL3 (GPRA Unit)
Event Description: Closure - RESPONSE TO 1ST NOD RECEIVED
Actual Date: 12/15/1989

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9
Event Description: Closure - PUBLIC COMMENT (BEGIN)
Actual Date: 06/15/1994

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL1 (GPRA Unit)
Event Description: Closure - CLOSURE PLAN RECEIVED
Actual Date: 06/02/1989

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SURFSTR1 (GPRA Unit)
Event Description: Closure - RECEIVE CLOSURE CERTIFICATION
Actual Date: 07/08/1992

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SURFSTR1 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (END)
Actual Date: 07/06/1990

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL3 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (PUBLIC HEARING)
Actual Date: 08/28/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL3 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (BEGIN)
Actual Date: 07/29/1991

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9
Event Description: Closure - RECEIVE CLOSURE CERTIFICATION
Actual Date: 09/07/1994

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL3 (GPRA Unit)
Event Description: Closure - CLOSURE PLAN RECEIVED
Actual Date: 08/20/1984

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9
Event Description: Closure - PUBLIC COMMENT (END)

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Actual Date: 07/15/1994

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9
Event Description: Closure - PUBLIC COMMENT (PUBLIC HEARING)
Actual Date: 07/19/1994

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9
Event Description: Closure - ISSUE CLOSURE VERIFICATION
Actual Date: 06/02/1995

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: SUMP3-WMU3, SUMP5-WMU5, SUMP8-WMU8, SUMP9-WMU9
Event Description: Closure - CLOSURE PLAN REQUESTED
Actual Date: 06/02/1989

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Unit Names: LANDFIL3 (GPRA Unit)
Event Description: Closure - ISSUE CLOSURE VERIFICATION
Actual Date: 06/28/1996

Alias:
EPA Id: CAD000633164
Facility Type: Permitted - Operating
Alias Type: APN
Alias: 125446

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Alias Type: Project Code (Site Code)
Alias: 510781

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Alias Type: Project Code (Site Code)
Alias: 540001

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Alias Type: Project Code (Site Code)
Alias: 540001

EPA Id: CAD000633164
Facility Type: Permitted - Operating
Alias Type: Project Code (Site Code)
Alias: 550092

Maintenance:
EPA Id: CAD000633164
Title: Proposed Unit LC-5 groundwater monitoring destruction and installation
Document Type: Monitoring Report - Other

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Received Date: 10/21/2010

EPA Id: CAD000633164
Title: 2006_Annual_Hydro_Monitoring
Document Type: Monitoring Report - Groundwater
Received Date: 03/01/2007

EPA Id: CAD000633164
Title: 2007 Annual Hydrologic Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 03/01/2008

EPA Id: CAD000633164
Title: 2008 Annual Hydrologic Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 04/01/2009

EPA Id: CAD000633164
Title: 2009 Annual Hydrologic Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 04/01/2010

EPA Id: CAD000633164
Title: Demonstration Report for Statistical Exceedences
Document Type: Monitoring Report - Groundwater
Received Date: 07/17/2017

EPA Id: CAD000633164
Title: Q2 2014 Groundwater Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 07/24/2014

EPA Id: CAD000633164
Title: Demonstration Report for Statistical Exceedances
Document Type: Monitoring Workplan - Groundwater
Received Date: 07/05/2018

EPA Id: CAD000633164
Title: QUARTERLY SUMMARY OF RESULTS PHASE III AMBIENT AIR MONITORING PROGRAM
Document Type: Monitoring Report - Air
Received Date: 06/01/2018

EPA Id: CAD000633164
Title: Q4 2017 Groundwater monitoring report
Document Type: Monitoring Workplan - Groundwater
Received Date: 03/15/2018

EPA Id: CAD000633164
Title: Q3 2018 Groundwater monitoring report
Document Type: Monitoring Workplan - Groundwater
Received Date: 05/23/2019

EPA Id: CAD000633164
Title: Q1 2018 Groundwater monitoring report
Document Type: Monitoring Workplan - Groundwater
Received Date: 07/13/2018

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

EPA Id: CAD000633164
Title: Q2 2018 Groundwater monitoring report
Document Type: Monitoring Report - Groundwater
Received Date: 01/04/2019

EPA Id: CAD000633164
Title: QUARTERLY SUMMARY OF RESULTS PHASE III AMBIENT AIR MONITORING PROGRAM
Document Type: Monitoring Workplan - Air
Received Date: 06/27/2018

EPA Id: CAD000633164
Title: Quarterly Waste Monitoring Reports
Document Type: Monitoring Report - Other
Received Date: 05/14/2018

EPA Id: CAD000633164
Title: Quarterly Waste Monitoring Reports
Document Type: Monitoring Report - Other
Received Date: 07/25/2018

EPA Id: CAD000633164
Title: Quarterly Waste Monitoring Reports
Document Type: Monitoring Report - Other
Received Date: 10/26/2018

EPA Id: CAD000633164
Title: Quarterly Waste Monitoring Reports
Document Type: Monitoring Report - Other
Received Date: 02/05/2019

EPA Id: CAD000633164
Title: Site visit and sampling observations
Document Type: Meeting with Facility
Received Date: 10/25/2013

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City: WESTMORLAND
Facility ID: 7 13I003100
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 7
Facility Telephone: 7603449400
Facility Contact: ANDREW YADVISH
Agency Name: SAFETYKLEEN CORP
Agency Address: PO Box 158
Agency City,St,Zip: Westmorland 922810158

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Agency Contact:	ANDREW YADVISH
Agency Telephone:	7603449400
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste Type:	Not reported
Primary Waste:	Not reported
Waste Type2:	Not reported
Waste2:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

CERS:

Name:	CLEAN HARBORS WESTMO
Address:	5295 SOUTH GARVEY ROAD
City,State,Zip:	WESTMORLAND, CA 922810158
Site ID:	336181
CERS ID:	80001334
CERS Description:	Corrective Action

Affiliation:

Affiliation Type Desc:	Supervisor
Entity Name:	Edward Nieto
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Lead Project Manager
Entity Name:	SHAWN BROWNING
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	SACRAMENTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Name:	CLEAN HARBORS WESTMORLAND LLC
Address:	5295 SOUTH GARVEY ROAD
City,State,Zip:	WESTMORLAND, CA 922810158
Site ID:	195251
CERS ID:	CAD000633164
CERS Description:	Hazardous Waste

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-10-2000
Violations Found:	Yes
Eval Type:	DTSC Operation and Maintenance Inspection
Eval Notes:	Operation and Maintenance - * OAM Return To Compliance: 2000-06-26 00:00:00
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-11-1999
Violations Found:	Yes
Eval Type:	DTSC Compliance Evaluation Inspection
Eval Notes:	Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 1999-01-11 00:00:00
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-14-1999
Violations Found:	No
Eval Type:	DTSC Operation and Maintenance Inspection
Eval Notes:	Operation and Maintenance - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-09-2000
Violations Found:	Yes
Eval Type:	DTSC Compliance Evaluation Inspection
Eval Notes:	Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2000-11-13 00:00:00
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-11-2003
Violations Found:	No
Eval Type:	DTSC Operation and Maintenance Inspection
Eval Notes:	Operation and Maintenance - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ

Eval General Type:	Information Request
Eval Date:	02-28-2002

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Followup Inspection
Eval Date: 03-10-2005
Violations Found: No
Eval Type: DTSC Follow-up Inspection
Eval Notes: Follow-up Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-26-2008
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-06-2004
Violations Found: Yes
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Return To Compliance: 2004-04-06 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 04-19-2005
Violations Found: Yes
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal Return To
Compliance: 2005-05-18 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-09-2007
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 05-14-2004
Violations Found: No

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-26-2016
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-16-2005
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 08-05-2015
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 11-01-2010
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-21-2008
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-10-2013
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-05-2005
Violations Found: No
Eval Type: DTSC Groundwater Monitoring Evaluation
Eval Notes: Groundwater Monitoring Evaluation - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-20-2002
Violations Found: Yes
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Return To Compliance: 2002-02-27 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-07-2004
Violations Found: No
Eval Type: DTSC Operation and Maintenance Inspection
Eval Notes: Operation and Maintenance - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Followup Inspection
Eval Date: 04-10-2002
Violations Found: No
Eval Type: DTSC Follow-up Inspection
Eval Notes: Follow-up Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-11-2002
Violations Found: No
Eval Type: DTSC Operation and Maintenance Inspection
Eval Notes: Operation and Maintenance - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 04-18-2008
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Eval General Type: Information Request
Eval Date: 04-18-2013
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 05-11-2006
Violations Found: Yes
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal Return To Compliance: 2006-07-05 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2006
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-24-2017
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 06-07-2016
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 09-06-2017
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Followup Inspection
Eval Date: 09-24-2001

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Violations Found:	No
Eval Type:	DTSC Follow-up Inspection
Eval Notes:	Follow-up Inspection - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Followup Inspection
Eval Date:	01-25-2006
Violations Found:	Yes
Eval Type:	DTSC Follow-up Inspection
Eval Notes:	Follow-up Inspection - Treatment, Storage and Disposal Return To Compliance: 2006-02-03 00:00:00
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-21-2001
Violations Found:	Yes
Eval Type:	DTSC Compliance Evaluation Inspection
Eval Notes:	Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2002-02-21 00:00:00
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-07-2015
Violations Found:	No
Eval Type:	DTSC Focused Compliance Inspection
Eval Notes:	Focused Compliance Inspection - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Followup Inspection
Eval Date:	06-05-2001
Violations Found:	No
Eval Type:	DTSC Follow-up Inspection
Eval Notes:	Follow-up Inspection - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-10-2015
Violations Found:	Yes
Eval Type:	DTSC Compliance Evaluation Inspection
Eval Notes:	Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2015-07-08 00:00:00
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Followup Inspection
Eval Date:	06-29-2004

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Violations Found: No
Eval Type: DTSC Follow-up Inspection
Eval Notes: Follow-up Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Followup Inspection
Eval Date: 09-19-2000
Violations Found: Yes
Eval Type: DTSC Follow-up Inspection
Eval Notes: Follow-up Inspection - Treatment, Storage and Disposal Return To Compliance: 2000-12-18 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-09-2010
Violations Found: No
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 12-15-2008
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 01-19-2012
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-12-2013
Violations Found: Yes
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2013-11-15 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 03-05-2014
Violations Found: No

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 03-13-2007
Violations Found: No
Eval Type: DTSC Financial Records Review
Eval Notes: Financial Records Review - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Followup Inspection
Eval Date: 03-15-2007
Violations Found: No
Eval Type: DTSC Follow-up Inspection
Eval Notes: Follow-up Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-05-2001
Violations Found: Yes
Eval Type: DTSC Operation and Maintenance Inspection
Eval Notes: Operation and Maintenance - Treatment, Storage and Disposal Return To Compliance: 2001-08-31 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-09-2003
Violations Found: Yes
Eval Type: DTSC Compliance Evaluation Inspection
Eval Notes: Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2003-04-18 00:00:00
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Compliance Followup Inspection
Eval Date: 06-25-2003
Violations Found: No
Eval Type: DTSC Follow-up Inspection
Eval Notes: Follow-up Inspection - Treatment, Storage and Disposal
Eval Division: Department of Toxic Substances Control
Eval Program: DTSC_ENF
Eval Source: ENVSTORHAZ

Eval General Type: Information Request
Eval Date: 06-30-2003
Violations Found: No
Eval Type: DTSC Financial Records Review

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Eval Notes:	Financial Records Review - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Followup Inspection
Eval Date:	10-26-2007
Violations Found:	No
Eval Type:	DTSC Follow-up Inspection
Eval Notes:	Follow-up Inspection - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-09-2009
Violations Found:	Yes
Eval Type:	DTSC Compliance Evaluation Inspection
Eval Notes:	Compliance Evaluation Inspection - Treatment, Storage and Disposal Return To Compliance: 2010-03-15 00:00:00
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-14-2011
Violations Found:	No
Eval Type:	DTSC Compliance Evaluation Inspection
Eval Notes:	Compliance Evaluation Inspection - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ
Eval General Type:	Information Request
Eval Date:	12-21-2009
Violations Found:	No
Eval Type:	DTSC Financial Records Review
Eval Notes:	Financial Records Review - Treatment, Storage and Disposal
Eval Division:	Department of Toxic Substances Control
Eval Program:	DTSC_ENF
Eval Source:	ENVSTORHAZ

Enforcement Action:

Site ID:	195251
Site Name:	CLEAN HARBORS WESTMORLAND LLC
Site Address:	5295 SOUTH GARVEY ROAD
Site City:	WESTMORLAND
Site Zip:	922810158
Enf Action Date:	01-12-2007
Enf Action Type:	Federal Consent Order with Enforcement and Settlement
Enf Action Description:	Federal Consent Order with Enforcement and Settlement
Enf Action Notes:	Not reported
Enf Action Division:	Department of Toxic Substances Control
Enf Action Program:	DTSC_ENF
Enf Action Source:	ENVSTORHAZ

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Affiliation:
Affiliation Type Desc: Facility Contact
Entity Name: MARIANNA BUONI/GENERAL MANAGER
Entity Title: Not reported
Affiliation Address: 5295 SOUTH GARVEY ROAD
Affiliation City: WESTMORLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 922810158
Affiliation Phone: 7603449400

Affiliation Type Desc: Facility Owner
Entity Name: Clean Harbors Westmorland LLC
Entity Title: Not reported
Affiliation Address: 5295 S GARVEY RD
Affiliation City: WESTMORLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 922810158
Affiliation Phone: 7603449400

Name: CLEAN HARBORS
Address: 5295 SOUTH GARVEY ROAD
City,State,Zip: WESTMORLAND, CA 92281
Site ID: 461140
CERS ID: 110000479116
CERS Description: US EPA Air Emission Inventory System (EIS)

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Marianna Buoni
Entity Title: General Manager
Affiliation Address: 2500 WEST LOKERN ROAD
Affiliation City: BUTTONWILLOW
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Public Contact
Entity Name: David Nielsen
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: ANDREW YADVISH
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported

LAIDLAW ENVIRONMENTAL SVCS IMPERIAL VLY (Continued) **1000180420**

Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	MARIANNA BUONI
Entity Title:	GENERAL MANAGER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Count: 5 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BRAWLEY	S124600154	NABORS DRILLING	ANDRE RD	92227	HWTS
BRAWLEY	93213082		ANDRE ROAD		ERNS
BRAWLEY	S105629381		HOVELY / ANDRE		CHMIRS
BRAWLEY	S122249914	WELL PAD 18 16	ANDRE ROAD	92227	NPDES
BRAWLEY	S121659206	NORTH BRAWLEY 2 GEOTHERMAL PROJECT EXPLORATION WELLFIELD	ANDRE RD	92227	CIWQS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 30

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/23/2020
Next Scheduled EDR Contact: 11/01/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 86

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/05/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 03/01/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/15/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/15/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/01/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/21/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 08/25/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/21/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 08/26/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/19/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 08/26/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 80
Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 76
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/14/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

KERN CO CUPA: Hazardous Material Business Plan

A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 08/26/2020
Number of Days to Update: 113

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/04/2020
Date Data Arrived at EDR: 06/05/2020
Date Made Active in Reports: 08/17/2020
Number of Days to Update: 73

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/24/2020
Next Scheduled EDR Contact: 12/13/2020
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 05/29/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 75

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/16/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICE: ICE
Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/17/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/28/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/28/2020
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/12/2020
Date Data Arrived at EDR: 03/13/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 08/20/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 06/06/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System
The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data
The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)
Non-Case Information sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)
Other Oil & Gas Projects sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/19/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55
Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/08/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 07/01/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 04/09/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 08/02/2020
Next Scheduled EDR Contact: 10/18/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 16

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 03/27/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/06/2020
Number of Days to Update: 77

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 04/16/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/08/2020
Number of Days to Update: 79

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/07/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/23/2020
Number of Days to Update: 77

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/13/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/10/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/19/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 26

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/21/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/14/2020
Number of Days to Update: 77

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/13/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 1

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 06/10/2020
Date Made Active in Reports: 08/24/2020
Number of Days to Update: 75

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 04/24/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 71

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 08/14/2020
Number of Days to Update: 73

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 87

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/12/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/19/2020
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 04/22/2020
Date Data Arrived at EDR: 04/24/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 13

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 71

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 05/28/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 77

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 08/25/2020
Next Scheduled EDR Contact: 12/14/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/26/2020
Date Data Arrived at EDR: 06/09/2020
Date Made Active in Reports: 08/20/2020
Number of Days to Update: 72
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 77
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 79
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2020
Next Scheduled EDR Contact: 11/30/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

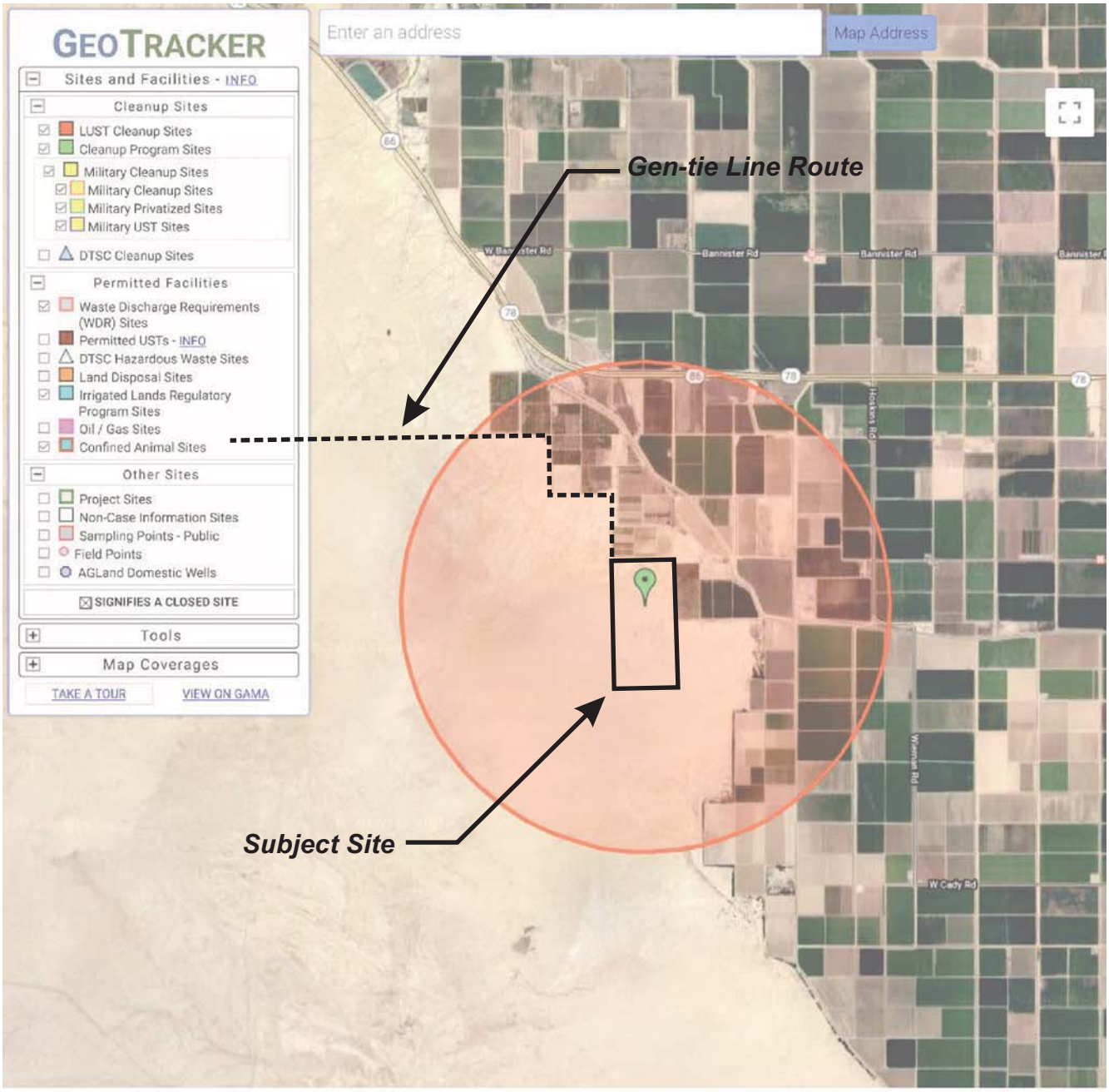
Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

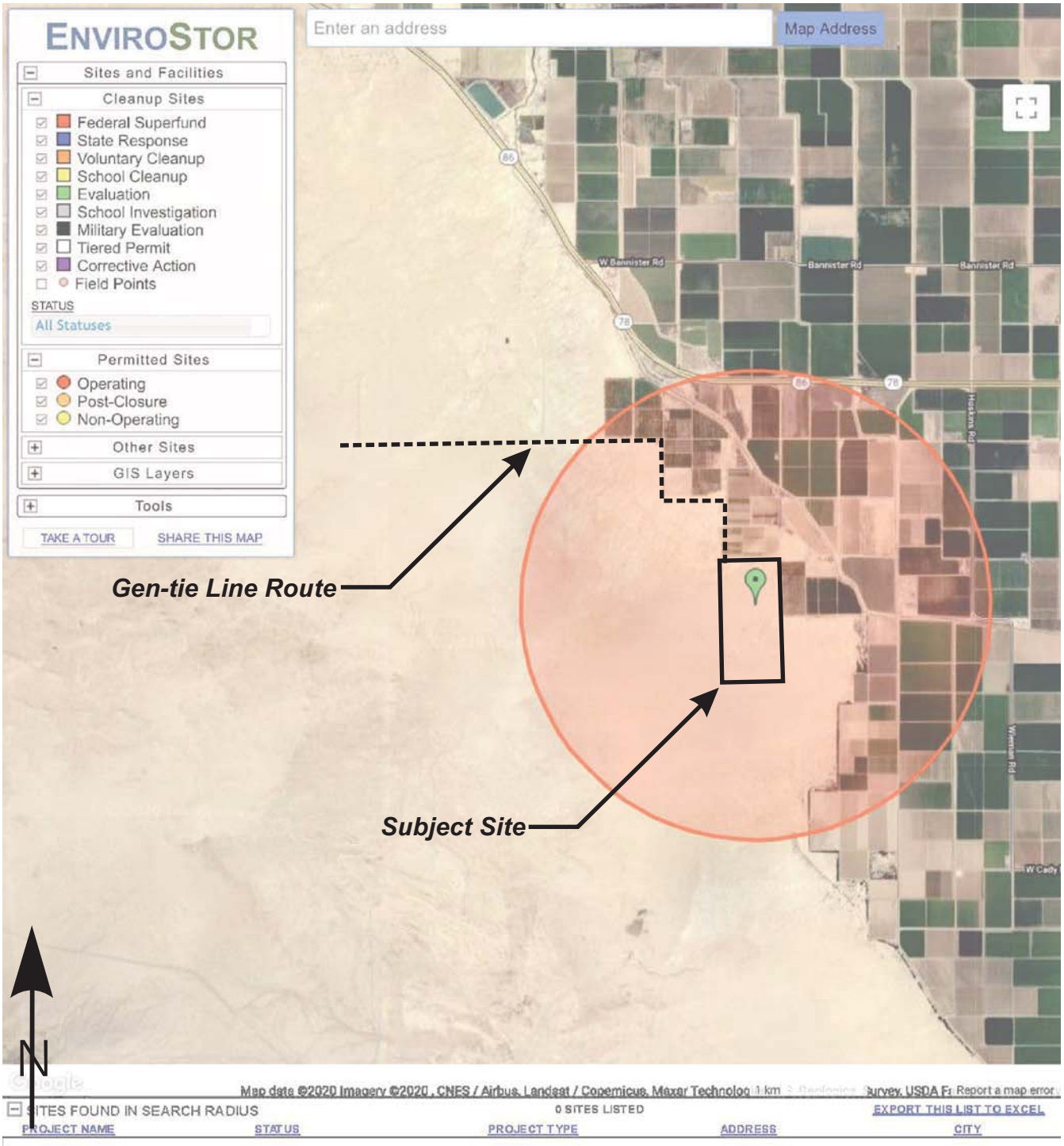
STREET AND ADDRESS INFORMATION

APPENDIX F



N

GS Lyon Project No.: GS2017	Geotracker Map	Plate 16



GSLyon Project No.: GS2017	Envirostor Map	Plate 17

APPENDIX G

Fidelity National Title Company
4210 Riverwalk Parkway, Suite 200
Riverside, CA 92505
Phone: (951) 710-5912 • Fax:

Issuing Policies of Fidelity National Title Insurance Company

Title Officer: Mitch LaRiva
Escrow Officer: Major Accounts OAC

Order No.: 997-**30043577**-ML6

TO:

ZGlobal
604 Sutter Street, Suite 250
Folsom, CA 95630

ATTN: .**Jamie Nichole Nagel**
YOUR REFERENCE: **apn 034-160-002**

PROPERTY ADDRESS: **No situs APN 034-160-002, Unincorporated County of Imperial, CA**

PRELIMINARY REPORT

In response to the application for a policy of title insurance referenced herein, ***Fidelity National Title Company*** *hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a policy or policies of title insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions of said policy forms.*

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Attachment One. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Attachment One. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Fidelity National Title Insurance Company, a Florida Corporation.

Please read the exceptions shown or referred to herein and the exceptions and exclusions set forth in Attachment One of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.

Countersigned by:

Authorized Signature

Fidelity National Title Company
4210 Riverwalk Parkway, Suite 200
Riverside, CA 92505
Phone: (951) 710-5912 • Fax:

PRELIMINARY REPORT

EFFECTIVE DATE: **January 31, 2020 at 7:30 a.m.**

ORDER NO.: 997-30043577-ML6

The form of policy or policies of title insurance contemplated by this report is:

ALTA Standard Owners Policy (6-17-06)

1. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

   A FEE

2. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

   MARY LOUISE CHURCHILL, as trustee of the Exemption Trust created under the Trust, a 10% interest; to MARY LOUISE CHURCHILL, as trustee of the General Trust created under the Trust, a 40% interest; and to MARY LOUISE CHURCHILL, as trustee of the Survivor's Trust created under the Trust, a 50% interest

3. THE LAND REFERRED TO IN THIS REPORT IS DESCRIBED AS FOLLOWS:

   See Exhibit A attached hereto and made a part hereof.

EXHIBIT A

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE EAST HALF OF SECTION 26, TOWNSHIP 13 SOUTH, RANGE 12 EAST, SAN BERNARDINO BASE AND MERIDIAN, COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIALS, WHETHER OR NOT OF COMMERCIAL VALUE, TOGETHER WITH THE RIGHT OF THE UNITED STATES THROUGH ITS AUTHORIZED AGENTS OR REPRESENTATIVES AT ANY TIME TO ENTER UPON THE LAND AND PROSPECT FOR, MINE, AND REMOVE THE SAME, AS RESERVED BY THE UNITED STATES OF AMERICA IN PATENT RECORDED OCTOBER 28, 1953 IN BOOK 871, PAGE 23, OFFICIAL RECORDS.

APN: 034-160-002-000

EXCEPTIONS

AT THE DATE HEREOF, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN SAID POLICY FORM WOULD BE AS FOLLOWS:

A. Property taxes, which are a lien not yet due and payable, including any assessments collected with taxes to be levied for the fiscal year 2020-2021.

B. Taxes and assessments levied by the Imperial Irrigation District.

C. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.

1. Water rights, claims or title to water, whether or not disclosed by the public records.

2. Easement(s) in favor of the public over any existing roads lying within said Land.

3. Rights or claims or title to water, whether or not disclosed by the public records.

4. Reservations, exceptions and provisions contained in the patent from the United States of America, and in the acts authorizing the issuance thereof.

   Recording Date: October 28, 1953
   Recording No: in Book 871, Page 23, Official Records

5. Matters contained in that certain document

   Entitled: Agreement for Conditional Use Permit #1126-94 for Hensler Pit
   Recording Date: October 26, 1994
   Recording No: 94025464, in Book 1787, Page 502, Official Records

   Reference is hereby made to said document for full particulars.

   Matters contained in that certain document

   Entitled: Amended Agreement for Conditional Use Permit #1126-94 for Hensler Pit (Granite Construction Company)
   Recording Date: December 20, 1995
   Recording No: as Document No. 95028201 in Book 1831, Page 1371 of Official Records

   Reference is hereby made to said document for full particulars.

6. A right of first refusal to purchase said Land with certain terms, covenants, conditions and provisions as set forth in the document

   Executed by: Mary Louise Churchill
   Disclosed by: Quitclaim Deed
   Recording Date: March 3, 2010
   Recording No: 2010-005971, Official Records

EXCEPTIONS
(Continued)

7. An option to purchase said Land with certain terms, covenants, conditions and provisions as set forth therein.

Optionor:	Hensler Properties LLC
Optionee:	Apex Energy Solutions, LLC, a California limited liability company
Disclosed by:	Memorandum of Option for Purchase of Real Property
Recording Date:	January 28, 2020
Recording No:	2020001776, Official Records

8. Notwithstanding the Covered Risks as set forth in the policy, the Company does not insure against loss or damage by reason of a lack of a right of access to and from the Land.

9. Any invalidity or defect in the title of the vestees in the event that the trust referred to herein is invalid or fails to grant sufficient powers to the trustee(s) or in the event there is a lack of compliance with the terms and provisions of the trust instrument.

   If title is to be insured in the trustee(s) of a trust, (or if their act is to be insured), this Company will require a Trust Certification pursuant to California Probate Code Section 18100.5.

   The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

10. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

11. Matters which may be disclosed by an inspection and/or by a correct ALTA/NSPS Land Title Survey of said Land that is satisfactory to the Company, and/or by inquiry of the parties in possession thereof.

12. Any easements not disclosed by the public records as to matters affecting title to real property, whether or not said easements are visible and apparent.

13. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other matters which a correct survey would disclose and which are not shown by the public records.

PLEASE REFER TO THE "INFORMATIONAL NOTES" AND "REQUIREMENTS" SECTIONS WHICH FOLLOW FOR INFORMATION NECESSARY TO COMPLETE THIS TRANSACTION.

END OF EXCEPTIONS

REQUIREMENTS SECTION

1. Prior to the close of escrow, the Company requires a Statement of Information to be completed by the following party(s),

   Party(s): All Parties

   The Company reserves the right to add additional items or make further requirements after review of the requested Statement of Information.

2. The Company will require either (a) a complete copy of the trust agreement and any amendments thereto certified by the trustee(s) to be a true and complete copy with respect to the hereinafter named trust, or (b) a Certification, pursuant to California Probate Code Section 18100.5, executed by all of the current trustee(s) of the hereinafter named trust, a form of which is attached.

   Name of Trust: The Hensler Family Trust

3. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below:

   Limited Liability Company: Hensler Properties, LLC

   a) A copy of its operating agreement, if any, and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.

   b) If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendments thereto with the appropriate filing stamps.

   c) If the Limited Liability Company is member-managed, a full and complete current list of members certified by the appropriate manager or member.

   d) A current dated certificate of good standing from the proper governmental authority of the state in which the entity is currently domiciled.

   e) If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

   f) If Limited Liability Company is a Single Member Entity, a Statement of Information for the Single Member will be required.

   g) Each member and manager of the LLC without an Operating Agreement must execute in the presence of a notary public the Certificate of California LLC (Without an Operating Agreement) Status and Authority form.

END OF REQUIREMENTS

INFORMATIONAL NOTES SECTION

1. Note: Property taxes, including any personal property taxes and any assessments collected with taxes, are paid. For proration purposes the amounts were:

Tax Identification No.:	034-160-002-000
Fiscal Year:	2019-2020
1st Installment:	$199.41
2nd Installment:	$199.41
Exemption:	$0.00
Code Area:	090-001

2. Note: The policy of title insurance will include an arbitration provision. The Company or the insured may demand arbitration. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the insured arising out of or relating to this policy, any service of the Company in connection with its issuance or the breach of a policy provision or other obligation. Please ask your escrow or title officer for a sample copy of the policy to be issued if you wish to review the arbitration provisions and any other provisions pertaining to your Title Insurance coverage.

3. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

4. Pursuant to Government Code Section 27388.1, as amended and effective as of 1-1-2018, a Documentary Transfer Tax (DTT) Affidavit may be required to be completed and submitted with each document when DTT is being paid or when an exemption is being claimed from paying the tax. If a governmental agency is a party to the document, the form will not be required. DTT Affidavits may be available at a Tax Assessor-County Clerk-Recorder.

END OF INFORMATIONAL NOTES

Mitch LaRiva/ng

Wire Fraud Alert

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the phone number of relevant parties to the transaction as soon as an escrow account is opened**. DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
http://www.fbi.gov

Internet Crime Complaint Center:
http://www.ic3.gov

FIDELITY NATIONAL FINANCIAL, INC.
PRIVACY NOTICE

Effective January 1, 2020

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF," "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

A limited number of FNF subsidiaries have their own privacy notices. If a subsidiary has its own privacy notice, the privacy notice will be available on the subsidiary's website and this Privacy Notice does not apply.

Collection of Personal Information

FNF may collect the following categories of Personal Information:

- contact information (*e.g.*, name, address, phone number, email address);
- demographic information (*e.g.*, date of birth, gender, marital status);
- identity information (*e.g.* Social Security Number, driver's license, passport, or other government ID number);
- financial account information (*e.g.* loan or bank account information); and
- other personal information necessary to provide products or services to you.

We may collect Personal Information about you from:

- information we receive from you or your agent;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

Collection of Browsing Information

FNF automatically collects the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website.

Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to unaffiliated third-party websites. FNF is not responsible for the privacy practices or content of those websites. We recommend that you read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for three main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and others' products and services, jointly or independently.

When Information Is Disclosed

We may disclose your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;

- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law. We do share Personal Information among affiliates (other companies owned by FNF) to directly market to you. Please see "Choices with Your Information" to learn how to restrict that sharing.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Security of Your Information
We maintain physical, electronic, and procedural safeguards to protect your Personal Information.

Choices With Your Information
If you do not want FNF to share your information among our affiliates to directly market to you, you may send an "opt out" request by email, phone, or physical mail as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties, except as permitted by California law. For additional information about your California privacy rights, please visit the "California Privacy" link on our website (https://fnf.com/pages/californiaprivacy.aspx) or call (888) 413-1748.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.
For Oregon Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not disclose information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children
The FNF Websites are not intended or designed to attract persons under the age of eighteen (18).We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users
FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans
Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except as required or authorized by contract with the mortgage loan servicer or lender, or as required by law or in the good-faith belief that such disclosure is necessary: to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes; Use of Comments or Feedback
By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The Privacy Notice's effective date will show the

last date changes were made. If you provide information to us following any change of the Privacy Notice, that signifies your assent to and acceptance of the changes to the Privacy Notice. We may use comments or feedback that you submit to us in any manner without notice or compensation to you.

Accessing and Correcting Information; Contact Us

If you have questions, would like to correct your Personal Information, or want to opt-out of information sharing for affiliate marketing, send your requests to privacy@fnf.com, by phone to (888) 934-3354, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

Notice of Available Discounts

Pursuant to Section 2355.3 in Title 10 of the California Code of Regulations Fidelity National Financial, Inc. and its subsidiaries ("FNF") must deliver a notice of each discount available under our current rate filing along with the delivery of escrow instructions, a preliminary report or commitment. Please be aware that the provision of this notice does not constitute a waiver of the consumer's right to be charged the filed rate. As such, your transaction may not qualify for the below discounts.

You are encouraged to discuss the applicability of one or more of the below discounts with a Company representative. These discounts are generally described below; consult the rate manual for a full description of the terms, conditions and requirements for such discount. These discounts only apply to transactions involving services rendered by the FNF Family of Companies. This notice only applies to transactions involving property improved with a one-to-four family residential dwelling.

Not all discounts are offered by every FNF Company. The discount will only be applicable to the FNF Company as indicated by the named discount.

FNF Underwritten Title Company	**Underwritten by FNF Underwriters**
CTC – Chicago Title company	CTIC – Chicago Title Insurance Company
CLTC – Commonwealth Land Title Company	CLTIC - Commonwealth Land Title Insurance Company
FNTC – Fidelity National Title Company of California	FNTIC – Fidelity National Title Insurance Company
FNTCCA - Fidelity National Title Company of California	FNTIC - Fidelity National Title Insurance Company
TICOR – Ticor Title Company of California	CTIC – Chicago Title Insurance Company
LTC – Lawyer's Title Company	CLTIC – Commonwealth Land Title Insurance Company
SLTC – ServiceLink Title Company	CTIC – Chicago Title Insurance Company

Available Discounts

DISASTER LOANS (CTIC, CLTIC, FNTIC)
The charge for a Lender's Policy (Standard or Extended coverage) covering the financing or refinancing by an owner of record, within twenty-four (24) months of the date of a declaration of a disaster area by the government of the United States or the State of California on any land located in said area, which was partially or totally destroyed in the disaster, will be fifty percent (50%) of the appropriate title insurance rate.

CHURCHES OR CHARITABLE NON-PROFIT ORGANIZATIONS (CTIC, FNTIC)
On properties used as a church or for charitable purposes within the scope of the normal activities of such entities, provided said charge is normally the church's obligation the charge for an owner's policy shall be fifty percent (50%) to seventy percent (70%) of the appropriate title insurance rate, depending on the type of coverage selected. The charge for a lender's policy shall be forty (40%) to fifty percent (50%) of the appropriate title insurance rate, depending on the type of coverage selected.

Available Escrow Discounts

MILITARY RATE (SLTC)
On residential escrows that are not REO Sale Transactions, a discount of $100 of the escrow fee for a refinance transaction or 20% of the escrow fees for a purchase transaction may apply for loans guaranteed by the United States Veterans Administration

ATTACHMENT ONE

CALIFORNIA LAND TITLE ASSOCIATION

STANDARD COVERAGE POLICY – 1990

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
   Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building;
   b. zoning;
   c. land use;

d. improvements on the Land;
e. land division; and
f. environmental protection.

This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.

2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.

   This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.
8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

- For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1.00% % of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 10,000.00
Covered Risk 18:	1.00% % of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 19:	1.00% of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 21:	1.00% of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 5,000.00

2006 ALTA LOAN POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;

   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;

(b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13 or 14); or
(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.

4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

(Except as provided in Schedule B - Part II,(t(or T)his policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:

(PART I

(The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.

PART II

In addition to the matters set forth in Part I of this Schedule, the Title is subject to the following matters, and the Company insures against loss or damage sustained in the event that they are not subordinate to the lien of the Insured Mortgage:)

2006 ALTA OWNER'S POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
      (i) the occupancy, use, or enjoyment of the Land;
      (ii) the character, dimensions, or location of any improvement erected on the Land;
      (iii) the subdivision of land; or
      (iv) environmental protection;
      or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or

(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.

4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of: (The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and that are not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.
7. (Variable exceptions such as taxes, easements, CC&R's, etc. shown here.)

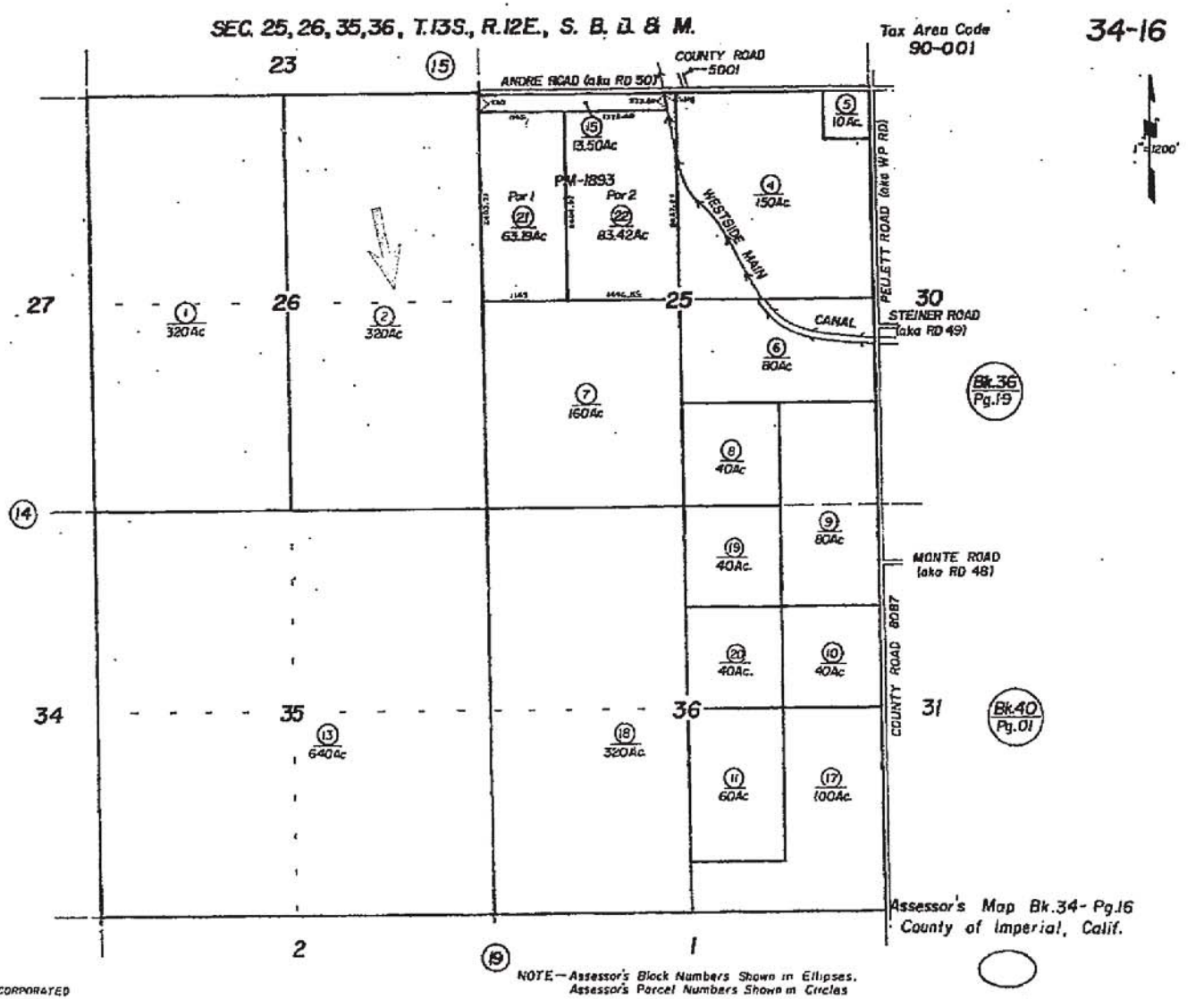
ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (04-02-15)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.

8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.
10. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
11. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.



RECORDING REQUESTED BY
Fidelity National Title Company
WHEN RECORDED MAIL TO:
=addressee=

ORDER NO.: **30043577-997-ML6**

SPACE ABOVE THIS LINE FOR RECORDER'S USE

CERTIFICATION OF TRUST
California Probate Code Section 18100.5

The undersigned declare(s) under penalty of perjury under the laws of the State of California that the following is true and correct:

1. The Trust known as _____, executed on _____, is a valid and existing trust.

2. The name(s) of the settlor(s) of the Trust is (are): _____
_____

3. The name(s) of the currently acting trustee(s) is (are): _____
_____

4. The trustee(s) of the Trust have the following powers (initial applicable line(s)):
_____Power to acquire additional property.
_____Power to sell and execute deeds.
_____Power to encumber, and execute deeds of trust.
_____Other: _____

5. The Trust is (check one): _____ Revocable _____ Irrevocable

   The name of the person who may revoke the Trust is: _____

6. The number of trustees who must sign documents in order to exercise the powers of the Trust is (are): _____, whose name(s) is (are): _____

7. Title to Trust assets is to be taken as follows: _____

8. The Trust has not been revoked, modified or amended in any manner which would cause the representations contained herein to be incorrect.

9. I (we) am (are) all of the currently acting trustees.

10. I (we) understand that I (we) may be required to provide copies of excerpts from the original Trust documents which designate the trustees and confer the power to act in the pending transaction.

Dated: _____ _____

_____

(Acknowledgement must be attached)

CERTIFICATE OF ACKNOWLEDGEMENT OF NOTARY PUBLIC

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF } SS:

On _____ before me,
_____,
a Notary Public, personally appeared _____
who proved to me on the basis of satisfactory evidence to be the person(s)whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s)on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

CERTIFICATE OF ACKNOWLEDGEMENT OF NOTARY PUBLIC

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

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I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

APPENDIX H

780 N. 4th Street
El Centro, CA 92243
(760) 337-1100

Phase I Environmental Site Assessment (ESA)
User Questionnaire

1) **Environmental liens that are filed or recorded against the *property*.**
Did a search of *recorded land title records* (or judicial records where appropriate) identify any environmental liens filed or recorded against the *property* under federal, tribal, state, or local law?

NO

2) **Activity and use limitations that are in place on the *property* or that have been filed or recorded against the *property*.**
Did a search of *recorded land title records* (or judicial records where appropriate) identify any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the property and/or have been filed or recorded against the *property* under federal, tribal, state or local law?

NO

3) **Specialized knowledge or experience of the person seeking to qualify for the LLP.**
Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the *property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

NO

4) **Relationship of the purchase price to the fair market value of the *property* if it were not contaminated.**

Does the purchase price being paid for this *property* reasonable reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

YES

5) **Commonly known or *reasonably ascertainable* information about the *property*.**

Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example,

a. Do you know the past uses of the *property*?

YES, AGGREGATE PIT

b. Do you know of specific chemicals or oils that are present or once were present at the *property*?

NO

c. Do you know of spills or other chemical releases that have taken place at the *property*?

NO

d. Do you know of any environmental cleanups that have taken place at the *property*?

NO

6) **The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation.**

Based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of releases at the *property*?

NO

Additional Information

1) Reason why Phase I ESA is required:

2) Type of Property:

Commercial	☐
Industrial	☐
Residential	☐
Vacant/Undeveloped	☒
Other	

Type of Transaction:

Purchase	☒
Financing	☐
Sale	☐
Lease	☒
Other	

3) Complete and correct address for the property:

APN: 034-160-002-000

4) Are there any existing environmental report, documents, correspondence, etc. available for review?

UNKNOWN

~~User Name~~ Company: HENSLER PROPERTIES, LLC MARY CHURCHILL, MANAGER

Address: 1432 STERLING ROAD
REDLANDS, CA 92373

~~User~~ Signature: Mary Churchill

Date: 12-11-2020

APPENDIX I

Jeffrey O. Lyon, PE
Principal Engineer

Education

B.S. Civil Engineering (Magna Cum Laude)
California Polytechnic University, Pomona Campus 1978

Registration

Registered Civil Engineer No. 31921, California
Registered Civil Engineer No. 16994, Arizona

Professional Experience

1987 - Present	Principal Engineer Southland Geotechnical, Inc.
1982 - 1987	Principal Engineer Lyon Engineers, Inc.
1978 - 1981	Partner/Senior Engineer Tesco Engineering
1974 - 1977	Survey Party Chief Tesco Engineering
1972 - 1973	Survey Party Chief Lyon & Associates

Summary of Experience

As Principal Engineer, Mr. Lyon is responsible for financial and technical management of all employees in Southland Geotechnical's four branch offices. Mr. Lyon has performed site investigations for residential subdivisions, geogrid-reinforced slopes, shopping centers, military airfields, roadways, administration and office buildings, elementary and high schools, goldmine mill processing facilities, hydro-electric plants, power transmission lines, electrical substations, co-generation power plants and geothermal power plants. He has provided design for drilled piers, driven piles, stone columns and floating (rigid) mats, and has performed seismic risk evaluations, ground shaking analyses, liquefaction studies and liquefaction induced settlements studies. Mr. Lyon has conducted Phase I and Phase II ESA's throughout the Imperial and Coachella Valleys for over 7 years. Mr. Lyon's experience also includes forensic investigations for foundation/structural distress to residential, commercial and educational facilities, and has performed pressure grout stabilization and lifting for distress remediation.

Selected Project Experience

- **Aten Road Improvements, Imperial, CA**

Performed Phase I environmental site assessment for improvements to Aten Road in accordance to CalTrans requirements.

- **Gateway to the Americas, Calexico, CA**

Conducted Phase I ESA, geologic hazards study and geotechnical investigation including liquefaction evaluation for 1,700 acre development associated with new Port of Entry east of Calexico

- **El Centro Magistrate Court, El Centro, CA**

Conducted geotechnical investigation and Phase I ESA for new Federal Magistrate Court building at site with soft soil conditions requiring foundation settlement analysis

- **El Centro Regional Medical Center, El Centro, CA**

Conducted Phase I ESA and geotechnical investigation for 50,000 sf, 2-story addition to the medical center's emergency room, operating rooms, and recovery rooms.

- **Brawley Union High School, Brawley, CA**

Conducted Phase II investigation for PCB and lead contamination of surficial soil and hydrocarbon contamination of subsurface soil of a property proposed for purchase.

- **EW Corporation Site, Westmorland, CA**

Conducted Phase II investigation for hydrocarbon contamination of subsurface soil of a service station site with leaking underground storage tanks prior to property purchase

- **Various Apartment Complexes, Imperial County, CA**

Conducted Phase I environmental investigation at numerous proposed apartment complex site within the Imperial Valley

- **Hwy 98 Improvements, Imperial, CA**

Performed Phase I environmental site assessment for improvements to Hwy 98 for a new intersection in accordance to CalTrans requirements.

Professional Affiliations

American Society of Civil Engineers, Member
American Society of Testing Materials, Member
American Concrete Institute, Certified Examiner
Association of Professional Firms Practicing in the Geosciences, Member

GS Lyon

Steven K. Williams, CEG
Senior Engineering Geologist

Education
M.S. Geology
University of Utah, 1993
B.S. Geology
University of Utah, 1989

Registration
Registered Geologist
Arizona 3759
California 6975
Certified Engineering Geologist
California 2261

Professional Experience

2000 – Present	Project Geologist GS Lyon Consultants, Inc.
1994 - 2000	Staff Geologist GS Lyon Consultants, Inc.
1994	Field Geologist Bureau of Land Management
1991 - 1992	Exploration Geologist Kennecott Corporation

Summary of Experience
Mr. Williams has performed geotechnical investigations in southern California and southwestern Arizona. His field experience includes logging of soil borings and exploratory trenches, collection and documentation of soil samples, collection of field geotechnical data, and monitoring pile driving operations. Mr. Williams is also responsible for preparing computer generated data and figures, drafting and subsequent writing of geotechnical reports for a variety of projects including road improvements, fault studies, liquefaction potential evaluation, foundation preparation, seepage studies, structural distress, and soil investigations. He has performed geotechnical, geologic, and environmental studies for a wide variety of projects including correctional facilities, water and wastewater facilities, schools, residential subdivisions, commercial developments, and landfills throughout southern California and southwestern Arizona.

Mr. Williams also performs Phase I Environmental Site Assessments throughout the Imperial and Coachella Valleys. The scope of work for these projects typically include a site reconnaissance, review of government records pertaining to previous site uses, and preparation of a report identifying potential environmental risks.

He also conducts investigations for the potential of asbestos-containing materials and lead-based paint in old building projects and potential for soil contamination by hydrocarbons, pesticides, and other hazardous materials.

Professional Affiliations
Geological Society of America, Member

Selected Project Experience
- **El Centro Seniors Apartments, El Centro, CA**

Performed Phase I and Phase II environmental site assessments for apartment complex at old school district office site with underground storage tanks.
- **Central Main Canal Seepage Study, Imperial, CA**

Conducted 6-month groundwater seepage study for Imperial Irrigation District to evaluate high groundwater levels in Sandalwood Glen Subdivision
- **Gateway to the Americas, Calexico, CA**

Conducted Phase I ESA, geologic hazards study and geotechnical investigation including liquefaction evaluation for 1,700 acre development associated with new Port of Entry east of Calexico
- **El Centro Magistrate Court, El Centro, CA**

Conducted geotechnical investigation and Phase I ESA for new Federal Magistrate Court building at site with soft soil conditions requiring foundation settlement analysis
- **El Centro Regional Medical Center, El Centro, CA**

Conducted Phase I ESA and geotechnical investigation for 50,000 sf, 2-story addition to the medical center's emergency room, operating rooms, and recovery rooms.
- **Brawley Union High School, Brawley, CA**

Conducted Phase II investigation for PCB and lead contamination of surficial soil and hydrocarbon contamination of subsurface soil of a property proposed for purchase.
- **EW Corporation Site, Westmorland, CA**

Conducted Phase II investigation for hydrocarbon contamination of subsurface soil of a service station site with leaking underground storage tanks prior to property purchase
- **Various Apartment Complexes, Imperial County, CA**

Conducted Phase I environmental investigation at numerous proposed apartment complex site within the Imperial Valley
- **Oasis Elementary School, Mecca, CA**

Conducted PEA environmental investigation for the new Oasis Elementary School prior to construction of school

Noise Impact Assessment
for the
VEGA SES 6 Solar and Battery Storage Project

County of Imperial, California

Prepared For:

ZGlobal/APEX Energy Solutions
750 W. Main Street
El Centro, CA 92243

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
2525 Warren Drive
Rocklin, California 95677

January 2023

CONTENTS

LIST OF TABLES

ATTACHMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

AC	Alternating Current
AF	Acre Feet
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
Aqueduct	Imperial Irrigation District Aqueduct
BESS	Battery Electric Storage System
BLM	Bureau of Land Management
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
County	Imperial County
CNEL	Community Noise Equivalent Level
CUP	Conditional Use Permit
dB	Decibel
dBA	Decibel is A-weighted
DC	Direct Current
FHWA	Federal Highway Administration
FICON	Federal Interagency Commission on Noise
FTA	Federal Transit Administration
HMMH	Harris Miller, Miller & Hanson Inc
HSAT	Horizontal Single Axis Tracker
Hz	Hertz
ICAPCD	Imperial County Air Pollution Control District
IID	Imperial Irrigation District
kV	Kilovolt
L_{eq}	Measure of ambient noise
L_{dn}	a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime
L_{max}	The maximum A-weighted noise level during the measurement period
L_{min}	The maximum and minimum A-weighted noise level during the measurement period
MWAC	Mega Watt Alternating Current
MWH	Mega Watts Per Hour
OPR	Office of Planning and Research
OSHA	Federal Occupational Safety and Health Administration
OSHPD	Office of State Health Planning and Development
PPA	Purchasing Power Agreement
PPV	Peak particle velocity
PV	Photovoltaic
Project	VEGA SES 6 Project
RE Overlay Zone	Renewable Energy and Transmission Overlay Zone
RMS	Root mean square
S-2	Open Space/Preservation
SR	State Route
STC	Sound Transmission Class

VdB	Vibration Velocity Level
WEAL	Western Electro-Acoustic Laboratory, Inc.

1.0 INTRODUCTION

This report documents the results of a Noise Impact Assessment completed for the VEGA SES 6 Solar and Battery Storage Project (Project) in Imperial County (County), California, which includes the construction of an 80 megawatt (MW) solar energy generation facility and a 160 MW battery energy storage system (BESS). The Project also proposes an electrical generator intertie (gen-tie) transmission line to connect to the Imperial Irrigation District's (IID) 161 kilovolt (kV) "L" Line. This report was prepared as a comparison of predicted Project noise levels to noise standards promulgated by the County of Imperial General Plan Noise Element. The purpose of this report is to estimate Project-generated noise and to determine the level of impact the Project would have on the environment.

1.1 Project Location

The Proposed Project Site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel Number (APN) 034-160-002) in the unincorporated Imperial County, California (Figure 1-1. *Project Location Map*). The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal (Figure 1-2. *Project Vicinity Map*). The proposed BESS would be located in the northwest portion of the Project Site. The proposed gen-tie transmission line would span approximately four miles to connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the Bureau of Land Management (BLM) within the California Desert Conservation Area planning area. The gen-tie route would begin at the northwest corner of the solar facility site, head west approximately 0.5 miles on BLM land, then north for approximately 1.0 mile, and then west for 2.5 miles along Garvey Road where it would connect to the IID 161 kV "L" Line.

The topography of the Project Site is relatively flat, with elevations ranging between -39 meters (-129 feet) and -6 meters (-21 feet). The solar energy facility site is bound by undeveloped Open Space/BLM land immediately to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

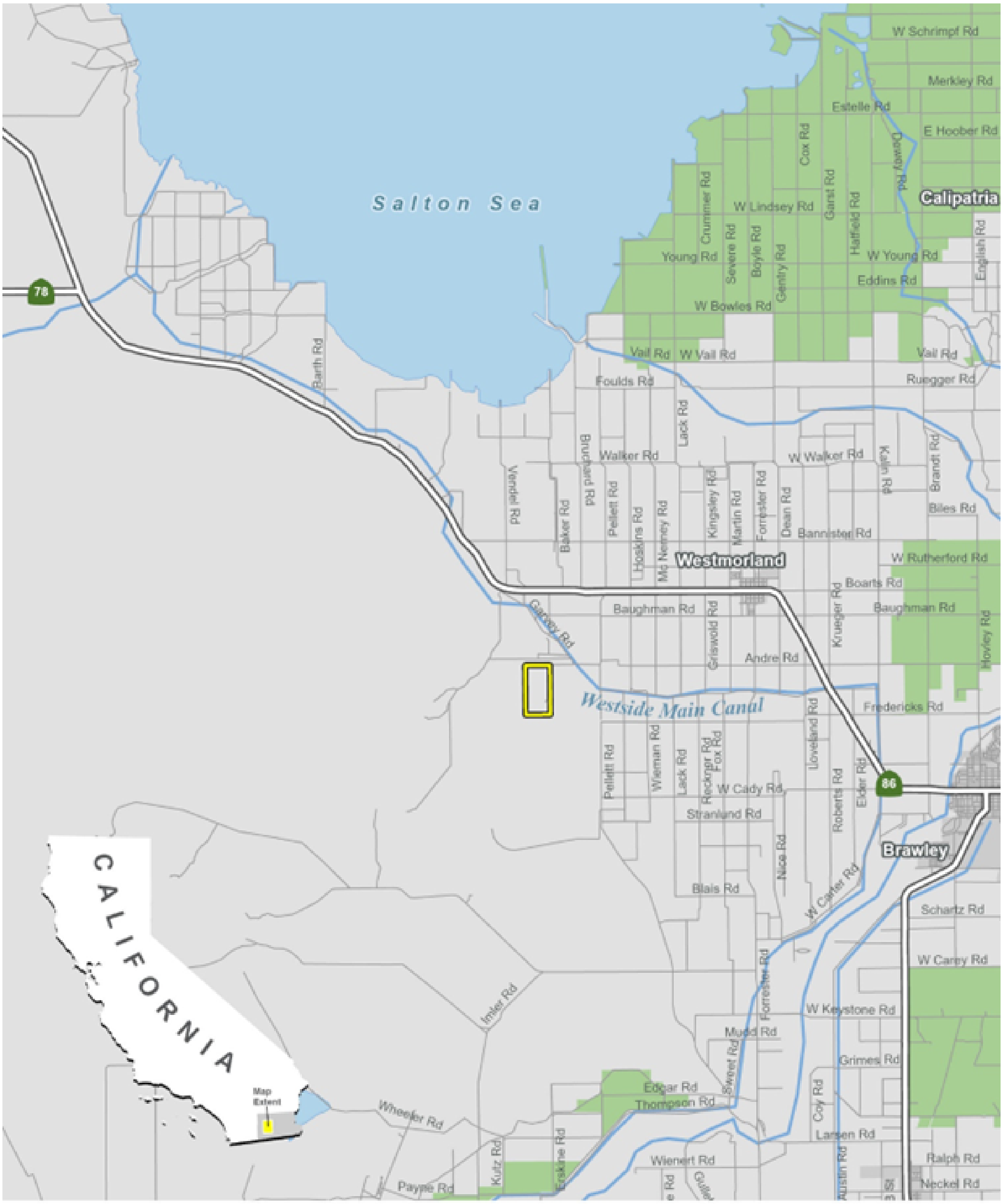

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Figure 1-1. Project Location Map

2020-144 VEGA 6 SES Solar & Battery Storage Project

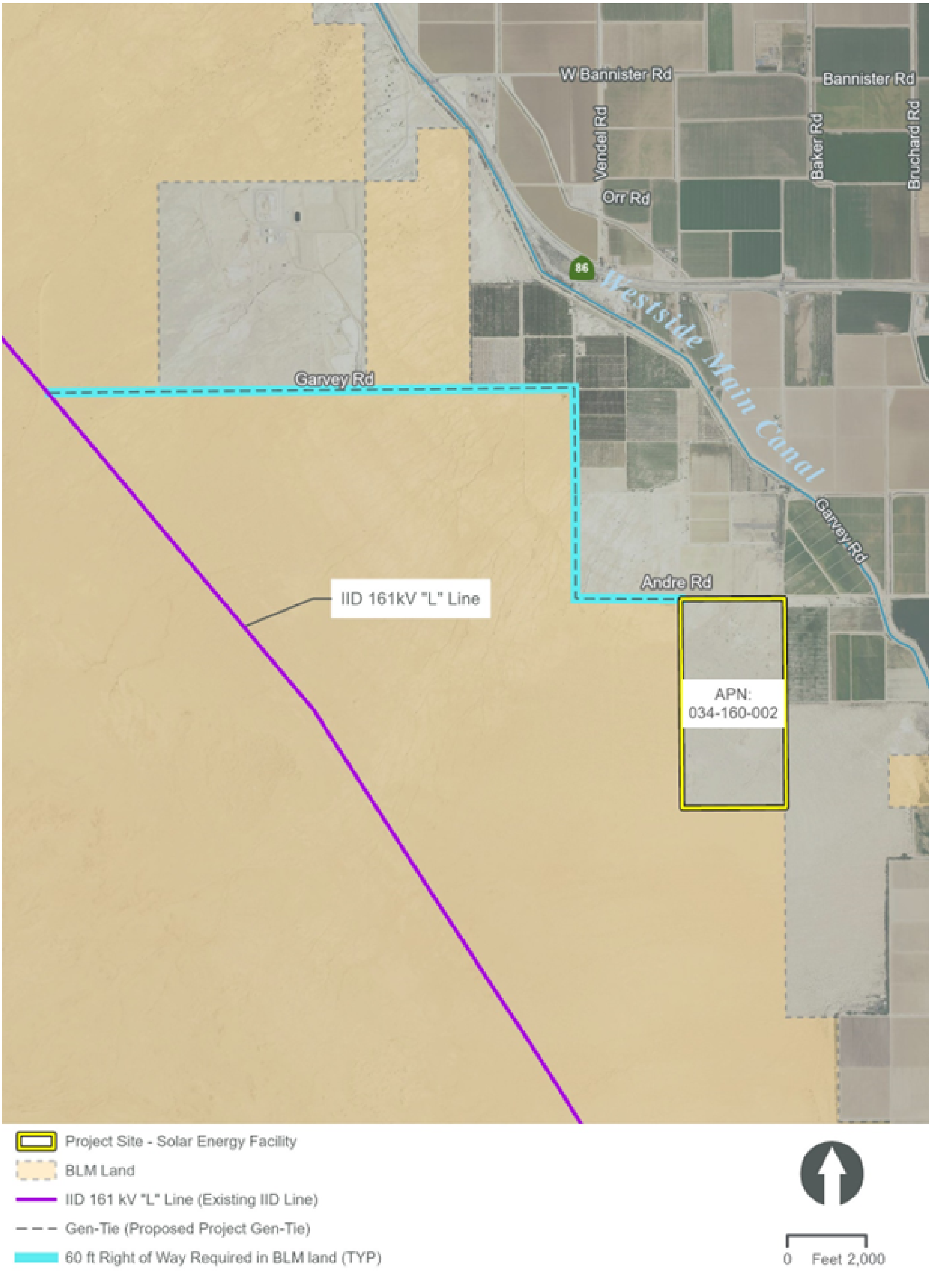

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Figure 1-2. Project Vicinity Map

2020-144 VEGA 6 SES Solar & Battery Storage Project

1.2 Project Overview

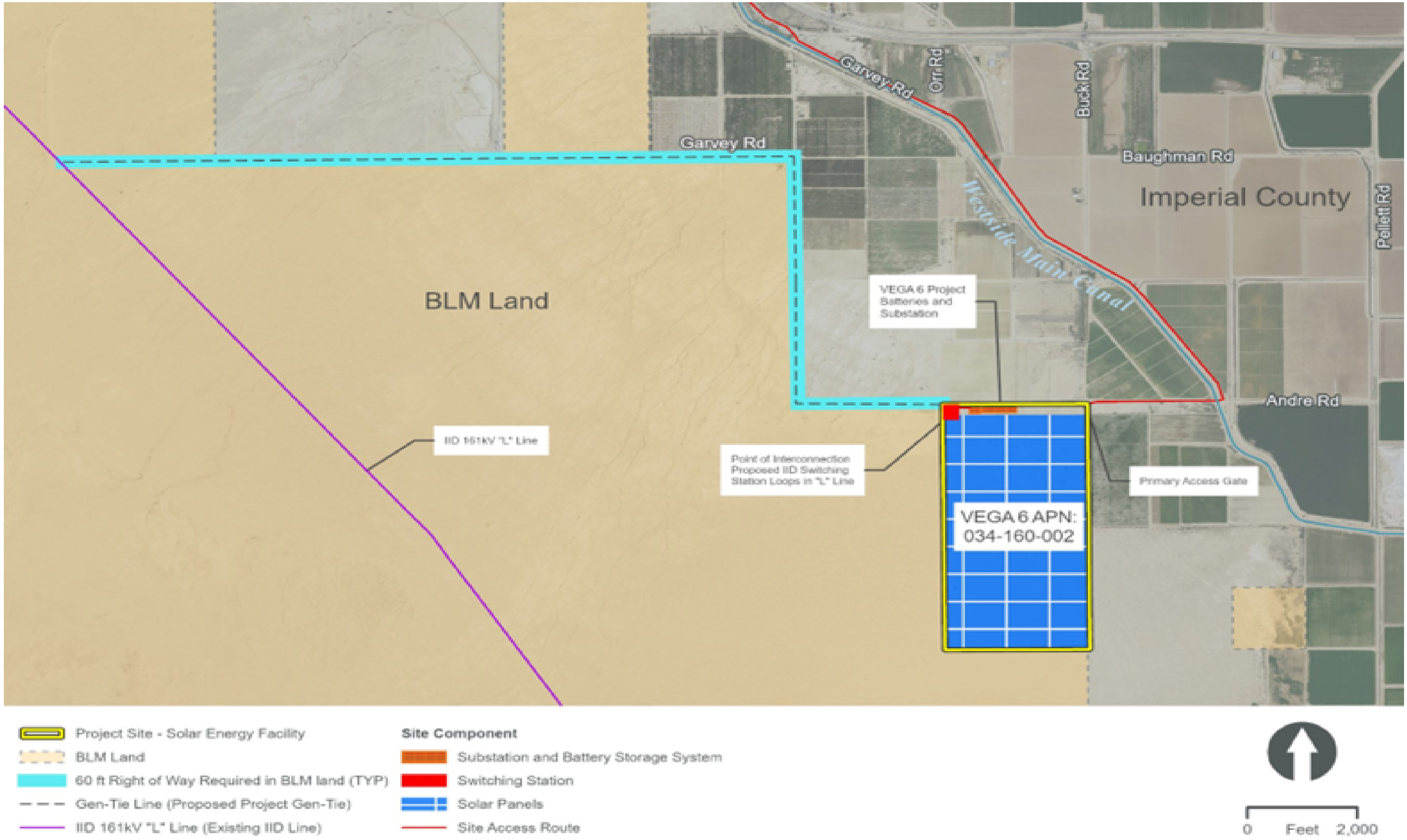
In 2016, the County adopted the Imperial County Renewable Energy and Transmission Element, which includes a Renewable Energy (RE) Zone (RE Overlay Map). This General Plan element was created as part of the California Energy Commission Renewable Energy Grant Program to amend and update the County's General 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 conditional use permit (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 1-1, the entire Project Site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify the Project Site (APN No. 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.

1.3 Project Description

As previously described, the Proposed Project involves the construction and operation of an 80 MW PV solar facility with an integrated 160 MW BESS on approximately 320 acres of privately-owned land. The Project would be comprised of solar PV arrays panels, an on-site substation, BESS, gen-tie line, inverters, transformers, underground electrical cables, and access roads. These Project components are described in detail below and depicted in Figure 1-3. *Site Plan*.



Map Date: *1/5/2023*
Photo (or Base) Source: *HDR 2022*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1-3. Project Site Plan

Photovoltaic Panels/Solar Arrays

The Project proposes to use either thin film or crystalline solar 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 fixed-frame racks would be secured at a fixed tilt of 20 to 30 degrees from horizontal facing a southerly direction. As proposed, individual PV modules would be mounted two high on a fixed frame, providing 12 to 24 inches of 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 six 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. Individual HSAT PV modules, each approximately two feet wide by four feet long (depending on the specific PV technology selected), would be mounted on a frame which is attached to an HSAT system. These HSAT arrays would be separated from each other and the perimeter security fence by up to 30-foot-wide roads, consistent with County emergency access requirements.

Battery Energy Storage System

The proposed BESS would be constructed adjacent to the Project's substation and would consist of either lithium ion or flow batteries. The batteries will either be housed in storage containers or buildings fitted with heating, ventilation, and air conditioning and fire suppression systems. Inside the housing, the batteries would 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 direct current (DC) power to alternating current (AC) power. The BESS would be capable of storing up to 160 MW.

Substation and Interconnection Switching Station

As shown in Figure 1-3, a new substation would be constructed in the northwest portion of the solar energy facility site. The inverters would be connected to pad-mounted transformers. This system collects the energy from all the inverters and then transmits it through a generator step-up transformer, which steps up the voltage level to the 161 kV of the existing IID "L" line.

A new interconnection switching station would be constructed in the northwest corner of the solar energy facility site, immediately adjacent to the substation. 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 equipped with two circuit breakers, allowing for looping in of the IID 161 kV "L" transmission line as well as connection to the Project's gen-tie line. The substation and

switching station would be connected via a single overhead 161 kV line. The switching station would be enclosed within its own fence.

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

Electrical Generator Intertie (Gen-Tie) Transmission Line

As previously stated, the Proposed Project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The 4-mile gen-tie line would include a total of 78 pole structures, with a combination of tangent double circuit wood pole structures, dead-end double circuit wood pole structures, and double circuit steel poles. At the interconnection point, three wood pole structures and dead-end wood structures would be used. The height of the proposed gen-tie transmission structures would be 75 feet. The electrical energy produced by the Project would be conducted through the project substation to the proposed 161 kV gen-tie line and delivered to the existing IID-approved point of interconnection at the IID 161 kV "L" line. Construction of the gen-tie line would result in approximately 24.5 acres of disturbed area.

Site Access

The solar energy facility site would include one primary access driveway, proposed via State Route (SR) 78 from the north and west, and across the Westside Main Canal, via county roadways (Garvey Road and Andre Road). This driveway would be provided with a minimum of 30-foot double swing gates with "Knox Box" for keyed entry. Internal to the solar energy facility site, up to 30-foot-wide roads would be provided between the PV arrays, as well as around the perimeter of the solar energy facility site yet inside the perimeter security fence to provide access to all areas of the site for maintenance and emergency vehicles.

Project Construction

Construction activities would primarily involve demolition and grubbing; grading of the Project Area to establish access roads and pads for electrical equipment (inverters and step–up transformers); trenching for underground electrical collection lines; the installation of solar equipment and security fencing; and the offsite infrastructure work required for the IID gen-tie transmission line route. Stormwater management facilities would be constructed internally within the Project Site and would consist of basins and infiltration areas. Construction is estimated to take 12 to 18 months and would begin in 2023. A temporary, portable construction supply container would be located at the Project Site at the beginning of construction and removed at the end of construction.

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). The Proposed Project would require approximately 550-acre feet (AF) of water for dust suppression and site grading during construction of the arrays, BESS area, and onsite substation. Water for construction (primarily dust control) would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. Water would be picked up from a nearby

lateral canal and delivered to the construction location by a water truck that would be capable of carrying approximately 4,000 gallons per load.

The number of on-site construction workers for the solar energy facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the BESS and the substation is not expected to exceed 100 workers at any one time.

Project Operations

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

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 Site would periodically (approximately every 3 months) be removed manually and/or treated with herbicides.

Periodic washing of the PV modules is not expected to be necessary but could be needed to remove dust to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at 10 AF per washing, with up to two washings per year, or a total of up to 20 AF per year. This water would be water purchased from the IID.

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

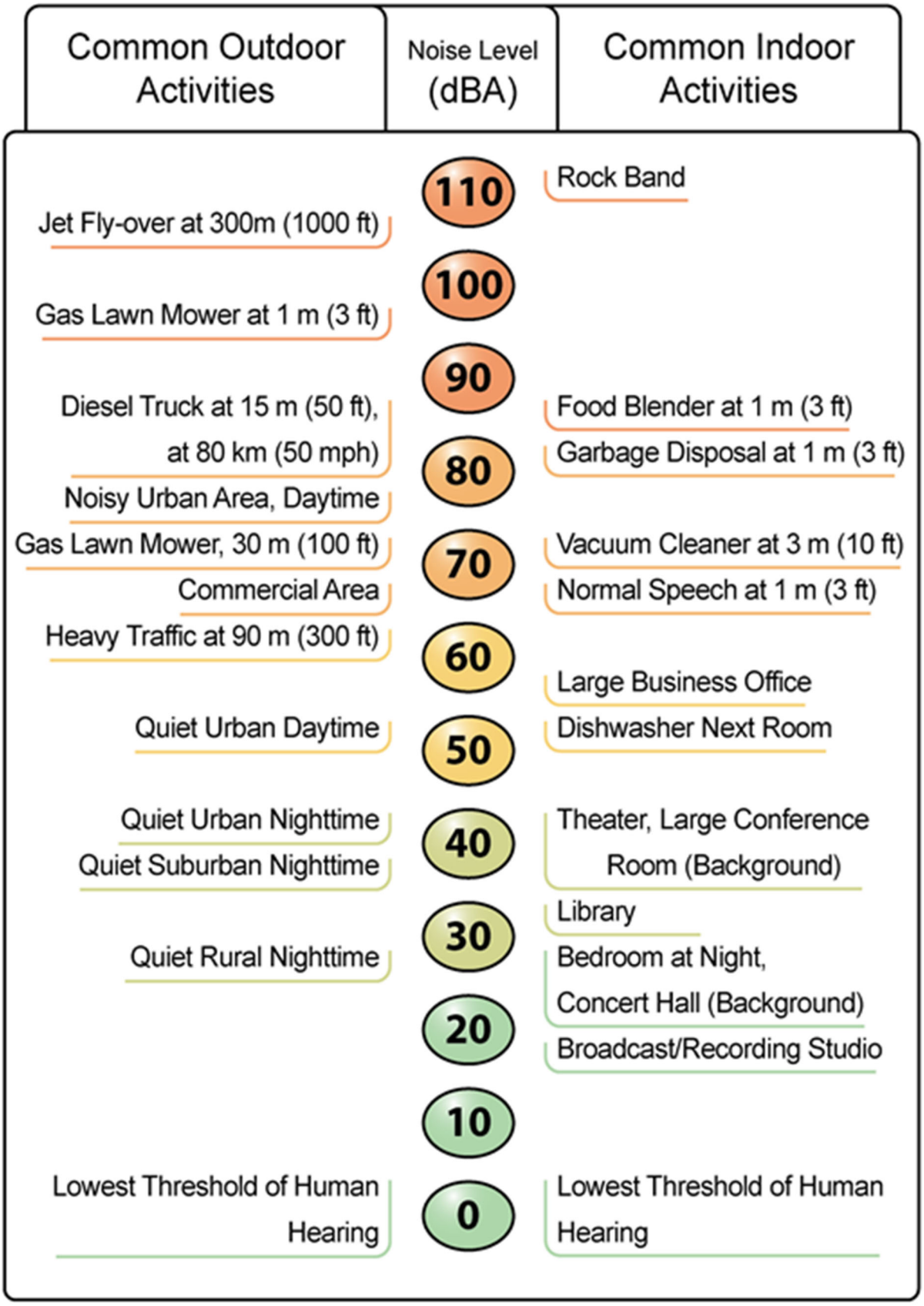
2.0 ENVIRONMENTAL NOISE AND GROUNDBORNE VIBRATION ANALYSIS

2.1 Fundamentals of Noise and Environmental Sound

2.1.1 Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), 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. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be three dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by three dB). Under the decibel scale, three sources of equal loudness together would produce an increase of five dB.

Typical noise levels associated with common noise sources are depicted in Figure 2-1. *Common Noise Levels*



Source: California Department of Transportation (Caltrans) 2020a

Figure 2-1. Common Noise Levels

2.1.2 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 (dBA) for each doubling of distance from a stationary or point source (FHWA 2017). 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 dBA for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2017). 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 dBA per doubling of distance is normally assumed. For line sources, an overall attenuation rate of three dB per doubling of distance is assumed (FHWA 2011).

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 five dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. [WEAL] 2000). 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. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver.

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 (Caltrans 2002). The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 2006). 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 typical 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. In the U.S., it is widely used to rate interior partitions, ceilings, floors, doors, windows, and exterior wall configurations). In exterior noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments less than 75 dBA CNEL with proper wall construction techniques following California Building Code methods, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

2.1.3 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 noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in L_{dn}/CNEL). The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level (L_{eq})** 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.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

Table 2-1 provides a list of other common acoustical descriptors.

Table 2-1. Common Acoustical Descriptors

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sounds are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	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.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	A 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.

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.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about ±1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about ±1 to 2 dBA.

2.1.4 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). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 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.

2.1.5 Effects of Noise on People

2.1.5.1 Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

2.1.5.2 Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources.

2.2 Fundamentals of Environmental Groundborne Vibration

2.2.1 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 (FTA 2018).

Table 2-2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. 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 2-2 is considered very unlikely to cause damage to buildings of any type. 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.

Table 2-2. 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	64–74	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: Caltrans 2020b

3.0 EXISTING ENVIRONMENTAL NOISE SETTING

3.1 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 Site is a single-family residence located 2,725 feet from the northeastern corner of Project Site. During construction occurring offsite along the gentie transmission line route to the IID electrical grid line, the nearest sensitive receptors would be 970 feet distant.

3.2 Existing Ambient Noise Environment

The Project Site consists of flat undeveloped land and is bound by agricultural land to the north and east, with various county roads and the IID aqueduct beyond; and vacant undisturbed land to the south and east. The gentie transmission line route connecting to the IID grid transmission line meanders through a mix of agricultural and undeveloped land. The most common noise in the Project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) traversing SR 78 and the various noises associated with agricultural equipment and vehicles traversing the various county paved and unpaved roadways. 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. Vehicular noise varies with the volume, speed and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars.

In order to quantify existing ambient noise levels in the Project area, ECORP Consulting, Inc. conducted four short-term noise measurements on July 14th, 2021. The noise measurement sites were representative of typical existing noise exposure within the Project vicinity during the daytime. The 15-minute measurements were taken between 10:00 a.m. and 11:40 a.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. As shown in Table 3-1, the existing noise levels (Baseline) in the Project vicinity ranges from 39.6 to 53.3 dBA L_{eq}.

Table 3-1. Existing (Baseline) Noise Measurements

Location Number	Location	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
1	Intersection of Garvey Road and Baughman Road	**53.3**	30.5	73.8	10:56 a.m. - 11:11 a.m.
2	North of Garvey Road and Orr Road Intersection	**39.6**	32.7	51.1	10:30 a.m. – 10:45 a.m.
3	Northwest Corner of Garvey Road and Buck Road Intersection	**50.1**	39.3	64.3	11:25 a.m. – 11:40 a.m.
4	West of Garvey Road on Shoulder, 0.5 Mile South of SR 78	**45.4**	30.6	58.4	10:00 a.m. – 10:15 a.m.

Source: Measurements were taken by ECORP with a Larson Davis LxT SE precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. See Attachment A for noise measurement outputs.

For the remainder of the Project vicinity, the American National Standards Institute (ANSI) Standard 12.9-2013/Part 3 "Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present" provides a table of approximate background sound levels in L_{dn}, daytime L_{eq}, and nighttime L_{eq}, based on land use and population density. The ANSI standard estimation divides land uses into six distinct categories. Descriptions of these land use categories, along with the typical daytime and nighttime levels, are provided in Table 3-2. At times, one could reasonably expect the occurrence of periods that are both louder and quieter than the levels listed in the table. ANSI notes, "*95% prediction interval [confidence interval] is on the order of +/- 10 dB*." The majority of the Project vicinity would be considered ambient noise Category 5 or 6.

Table 3-2. ANSI Standard 12.9-2013/Part 3 A-weighted Sound Levels Corresponding to Land Use and Population Density

Category	Land Use	Description	People per Square Mile	Typical L_{dn}	Daytime L_{eq}	Nighttime L_{eq}
1	Noisy Commercial & Industrial Areas and Very Noisy Residential Areas	Very heavy traffic conditions, such as in busy, downtown commercial areas; at intersections for mass transportation or other vehicles, including elevated trains, heavy motor trucks, and other heavy traffic; and at street corners where many motor buses and heavy trucks accelerate.	63,840	67 dBA	66 dBA	58 dBA
2	Moderate Commercial & Industrial Areas and Noisy Residential Areas	Heavy traffic areas with conditions similar to Category 1, but with somewhat less traffic; routes of relatively heavy or fast automobile traffic, but where heavy truck traffic is not extremely dense.	20,000	62 dBA	61 dBA	54 dBA
3	Quiet Commercial, Industrial Areas and Normal Urban & Noisy Suburban Residential Areas	Light traffic conditions where no mass-transportation vehicles and relatively few automobiles and trucks pass, and where these vehicles generally travel at moderate speeds; residential areas and commercial streets, and intersections, with little traffic, compose this category.	6,384	57 dBA	55 dBA	49 dBA
4	Quiet Urban & Normal Suburban Residential Areas	These areas are similar to Category 3, but for this group, the background is either distant traffic or is unidentifiable; typically, the population density is one-third the density of Category 3.	2,000	52 dBA	50 dBA	44 dBA
5	Quiet Residential Areas	These areas are isolated, far from significant sources of sound, and may be situated in shielded areas, such as a small wooded valley.	638	47 dBA	45 dBA	39 dBA
6	Very Quiet Sparse Suburban or rural Residential Areas	These areas are similar to Category 4 but are usually in sparse suburban or rural areas; and, for this group, there are few if any nearby sources of sound.	200	42 dBA	40 dBA	34 dBA

Source: The American National Standards Institute (ANSI) 2013

4.0 REGULATORY FRAMEWORK

4.1 Federal

4.1.1 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 decibels with A-weighting (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.

4.2.2 Federal Interagency Commission on Noise

The 2000 Federal Interagency Commission on Noise (FICON) findings provide guidance as to the significance of changes in ambient noise levels due to transportation noise sources. FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL.

4.2 State

4.2.1 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 (State of California 2003), 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.

4.2.2 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.

4.2.3 California Department of Transportation

In 2020, the California Department of Transportation (Caltrans) published the Transportation and Construction Vibration Manual (Caltrans 2020b). The manual provides general guidance on vibration issues associated with the construction and operation of projects concerning human perception and structural damage. Table 2-2 above presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

4.3 Local

4.3.1 Imperial County General Plan Noise Element

The County of Imperial General Plan Noise Element establishes maximum allowable average-hourly noise limits for various land use designations (refer to Table 4-1). These noise standards are to be applied at the property line of the noise-generating land use. In instances where the adjoining land use designations differ from that of the noise-generating land use, the more restrictive noise standard shall apply. Where the ambient noise level is equal to or exceeds the property line noise standard, the increase of the existing or proposed noise shall not exceed 3 dBA L_{eq}, which is a just-perceivable increase in noise. L_{eq} is defined as 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.

Table 4-1 County of Imperial Property Line Noise Standards		
Land Use Zone	**Time Period**	**Average-Hourly Noise Level (dBA L_{eq})**
Residential	7 a.m. - 10 p.m. 10 p.m. - 7 a.m.	50 45
Multi-residential	7 a.m. - 10 p.m. 10 p.m. - 7 a.m.	55 50
Commercial	7 a.m. -10 p.m. 10 p.m. - 7 a.m.	60 55
Light Industrial/Industrial Park	Any time	70
General Industrial	Any time	75

Source: Imperial County 2015.

Notes: When the noise-generating property and the receiving property have different uses, the more restrictive standard shall apply. When the ambient noise level is equal to or exceeds the Property Line noise standard, the increase of the existing or proposed noise shall not exceed 3 dBA L_{eq}.

4.3.1.1 Construction Noise Standards

Construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq}, when averaged over an 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 operations 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.

4.3.1.2 Significant Increase of Ambient Noise Levels

The increase of noise levels generally results in an adverse impact to the noise environment. The Noise/Land Use Compatibility Guidelines are not intended to allow the increase of ambient noise levels up to the maximum without consideration of feasible noise reduction measures. The following guidelines are established by the County of Imperial for the evaluation of significant noise impact.

- If the future noise level after a project is completed will be within the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, but will result in an increase of 5 dB CNEL or greater, the project will have a potentially significant noise impact and mitigation measures must be considered.

- If the future noise level after a project is completed will be greater than the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, a noise increase of 3 dB CNEL or greater shall be considered a potentially significant noise impact and mitigation measures must be considered.

4.3.1.3 Noise/Land use Compatibility

The Imperial County General Plan Noise Element Noise/Land Use Compatibility Standards defines the acceptability of a land use in a specified noise environment. Table 4-2 provides the County of Imperial Noise/Land Use Compatibility Guidelines. When an acoustical analysis is performed, conformance of the proposed project with the Noise/Land Use Compatibility Guidelines will be used to evaluate potential noise impact and will provide criteria for environmental impact findings and conditions for project approval.

Table 4-2. County of Imperial Noise/Land Use Compatibility Guidelines		
Land Use Category	**Community Noise Exposure L_{dn} or CNEL, dB**	**Acceptability**
Residential	< 60	Normally Acceptable
	60 - 70	Conditionally Acceptable
	70 - 75	Normally Unacceptable
	> 75	Clearly Unacceptable
Transient Lodging-Motels, Hotels	< 60	Normally Acceptable
	60 - 75	Conditionally Acceptable
	75 - 80	Normally Unacceptable
	> 80	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	< 60	Normally Acceptable
	60 - 70	Conditionally Acceptable
	70 - 80	Normally Unacceptable
	> 80	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	< 70	Conditionally Acceptable
	> 70	Clearly Unacceptable
Sports Arenas, Outdoor Spectator Sports	< 70	Conditionally Acceptable
	70 - 75	Normally Unacceptable
	> 75	Clearly Unacceptable
Playgrounds, Neighborhood Parks	< 70	Normally Acceptable
	70 - 75	Normally Unacceptable
	> 75	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	< 70	Normally Acceptable
	70 - 80	Normally Unacceptable
	> 80	Clearly Unacceptable
Office Buildings, Business Commercial and Professional	< 65	Normally Acceptable
	65 - 75	Conditionally Acceptable
	75 - 80	Normally Unacceptable
	> 80	Clearly Unacceptable
Industrial, Manufacturing Utilities, Agriculture	< 70	Normally Acceptable
	70 - 75	Conditionally Acceptable
	75 - 80	Normally Unacceptable
	> 80	Clearly Unacceptable

Source: Imperial County 2015.

Notes: Interpretation (For Land Use Planning Purposes):

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 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 requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development clearly should not be undertaken.

5.0 Impact Assessment

5.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act Guidelines Appendix G thresholds of significance. The Project would result in a significant noise-related impact if it would produce:

1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

2) Generation of excessive groundborne vibration or groundborne noise levels.

3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

In order to evaluate the potential health-related effects (physical damage to the ear and mental damage from lack of sleep or focus) from construction noise, such noise generated by the Project is compared against the construction-related noise level threshold established by the County. For purposes of this analysis, Project construction noise is compared to the County's construction noise standard of 75 dBA, when averaged over an eight-hour period and measured at the nearest sensitive receptor. The increase in transportation-related noise is compared to the FICON recommendation for evaluating the impact of increased traffic noise. Noise generated onsite is compared against the County's property line standards identified in Table 4-1.

5.2 Methodology

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 Noise Model (2006). Groundborne vibration levels associated with construction-related activities for the Project have been 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 Attachment C). 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.

5.3 Impact Analysis

5.3.1 Would the Project Result in Short-Term Construction-Generated Noise in Excess of County Standards?

Onsite Solar and Battery Storage Facilities Construction Noise

Construction noise associated with the Proposed Project 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, pile drivers, 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.

Nearby noise-sensitive land uses consist of a scattering of single-family residential units located within one mile of the Project Site boundary to the north; the closest being located 2,725 feet from the northeastern corner of the Project Site 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 eight-hour period, and measured at the nearest sensitive receptor. This standard, established by the County to prevent physical and mental damage consistent with exposure to excessive noise, assumes a construction period, relative to an individual sensitive receptor of days or weeks.

The anticipated short-term construction noise levels generated for the necessary construction equipment during the onsite solar and battery storage facility component of the Proposed Project are presented in Table 5-1.

Table 5-1. Construction Average (dBA) Noise Levels at Nearest Receptor – Solar/Battery Storage Facility Component			
Combined Equipment	**Estimated Exterior Construction Noise Level at Existing Residences (dBA L_{eq})**	**Construction Noise Standards (dBA L_{eq})**	**Exceeds Standards?**
Site Preparation	52.9	*75*	**No**
Grading	53.5	*75*	**No**
Construction	53.4	*75*	**No**
Paving	51.8	*75*	**No**

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment B for Model Data Outputs.

Notes: Construction equipment was provided by CalEEMod version 2020.4.0 default values. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters. The nearest residence is located approximately 2,725 feet from the Project 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 5-1, no individual or cumulative pieces of construction equipment would exceed the 75 dBA County construction noise standard during any phase of construction at the nearby noise-sensitive receptors.

Transmission Line Construction Noise

Construction noise associated with the Proposed Project gentie transmission line route 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 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., grading, pole erecting). Noise generated by construction equipment, including earth movers, material handlers, and air compressors, 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.

Nearby noise-sensitive land uses consist of a scattering of single-family residential units located north and east of the transmission line route, with the closest residence located along Garvey Road, approximately

970 feet north of the proposed path. As previously described, the County's General Plan Noise Element states construction equipment operation must 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, must not exceed 75 dB L_{eq}, when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor.

The anticipated short-term construction noise levels generated for the necessary construction equipment during the transmission line gentie route component of the Proposed Project are presented in Table 5-2.

Table 5-2. Construction Average (dBA) Noise Levels at Nearest Receptor – Gentie Transmission Line Component

Combined Equipment	Estimated Exterior Construction Noise Level at Existing Residences (970 feet)	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Grading	55.1	*75*	**No**
Construction	65.4	*75*	**No**

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment B for Model Data Outputs.

Notes: The nearest residence is located approximately 970 distant from the gentie transmission line route.

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 5-2, Project construction will not exceed the significance threshold of 75 dBA at the nearest sensitive receptors during the gentie transmission line route construction. It is noted that the noise levels shown in Table 5-2 are based on a worst-case scenario in which all pieces of construction equipment are operating at the same time, at the highest level of intensity.

5.3.2 Would the Project Result in a Substantial Permanent Increase in Ambient Noise Levels in Excess of County Standards During Operations?

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise.

Operational Offsite Traffic Noise

Project operations would result in minimal additional traffic on adjacent roadways. The only visitors to the site would be that of water deliveries, repair or maintenance workers, whose presence at the site would be

required infrequently and inconsistently. According to the California Department of Transportation (Caltrans) *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), 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 Proposed Project would not result in a doubling of traffic on vicinity roadways, and therefore its contribution to existing traffic noise would not be perceptible.

Project Land Use Compatibility

The County uses the land use compatibility standards presented in the General Plan Noise Element that provides the County with a tool to gauge the compatibility of new land uses relative to existing noise levels. This table, presented as Table 4-2, identifies acceptable noise levels for various land uses. In the case that the noise levels identified at the Proposed Project Site fall within the "acceptable" levels presented in the General Plan, the Project is considered compatible with the existing noise environment.

As previously stated, the Project Site is proposing to develop an 80 MW solar energy generation and storage facility, with a gentie transmission line route connecting to the IID electrical grid transmission line west of the Project Site. The Proposed Project Site is zoned S-2 (Open Space/Preservation) and bound by agricultural land to the north and east, with further agricultural land beyond. As shown in Table 4-2, a normally acceptable noise standard for agricultural land uses is 69 dBA L_{dn}/CNEL or under. In order to quantify existing ambient noise levels in the Project vicinity, ECORP Consulting, Inc. conducted four baseline noise measurements in the Project vicinity on July 14th, 2021. The noise measurement sites were representative of typical existing noise exposure in the vicinity and were considered representative of the noise levels throughout the day. The ambient noise levels recorded in the vicinity of the Site ranged from 39.6 L_{eq} dBA to 53.3 L_{eq} dBA. However, it is noted that the baseline measurements taken were short-term (15 minutes) and therefore measured in L_{eq}, defined as the average acoustic energy content of noise for a stated period of time, while the compatibility standard listed in Table 4-2 are in L_{dn}/CNEL. As previously described, L_{dn} and CNEL are community exposure noise metrics that are defined as 24-hour average L_{eq} noise measurements with weighting added during the certain nighttime hours to account for the increase noise sensitivity during nighttime. For a comparable representation of the ambient noise levels in the Project vicinity using a community exposure noise metric, the ANSI Standard 12.9-2013/Part 3 "Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present" provides a table of approximate background sound levels in L_{dn}, daytime L_{eq}, and nighttime L_{eq}, based on land use and population density (see Table 3-2 above). As previously discussed, the Project vicinity falls within either category 5 or 6 for the ANSI standards, with a typical noise level between 42 dBA and 47 dBA L_{dn}. As these noise levels fall below the noise standard of 69 dBA L_{dn}/CNEL, the Project Site is considered an appropriate noise environment to locate the proposed land use.

Operational Onsite Noise

As previously stated, noise sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise. The nearest existing noise-sensitive land use to the Project Site is a single-family residence located 2,725 feet from the northeastern corner of Project Site.

During construction occurring offsite along the gentie transmission line route to the IID electrical grid line, the nearest sensitive receptors would be 970 feet distant.

The Project proposed the construction of an 80 MW solar energy generation facility which would include a 160 MW BESS as well as an electrical gen-tie transmission line. The main stationary operational noise associated with the Project would be from the proposed transformers, inverters, substation, and transmission lines. The main stationary operational noise associated with the offsite gentie transmission lines would be Corona Discharge. Corona is the electrical breakdown of the air into charged particles, which may result in audible noise. During Corona activity, the transmission lines sometimes generate a small amount of sound energy. Audible noise generated by Corona discharge is typically described as a crackling or humming sound. Audible Corona noise levels for a typical 230-kV line are approximately 25 dBA at locations within approximately 25 feet of the power line corridor, or 51.1 dBA at the source (Imperial County 2014). 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. The results of this model can be found in Appendix D. Table 5-3 shows the predicted Project noise levels at the nearest noise-sensitive land uses in the Project vicinity, as predicted by SoundPLAN. Also see Figure 3 *SoundPLAN Noise Map*.

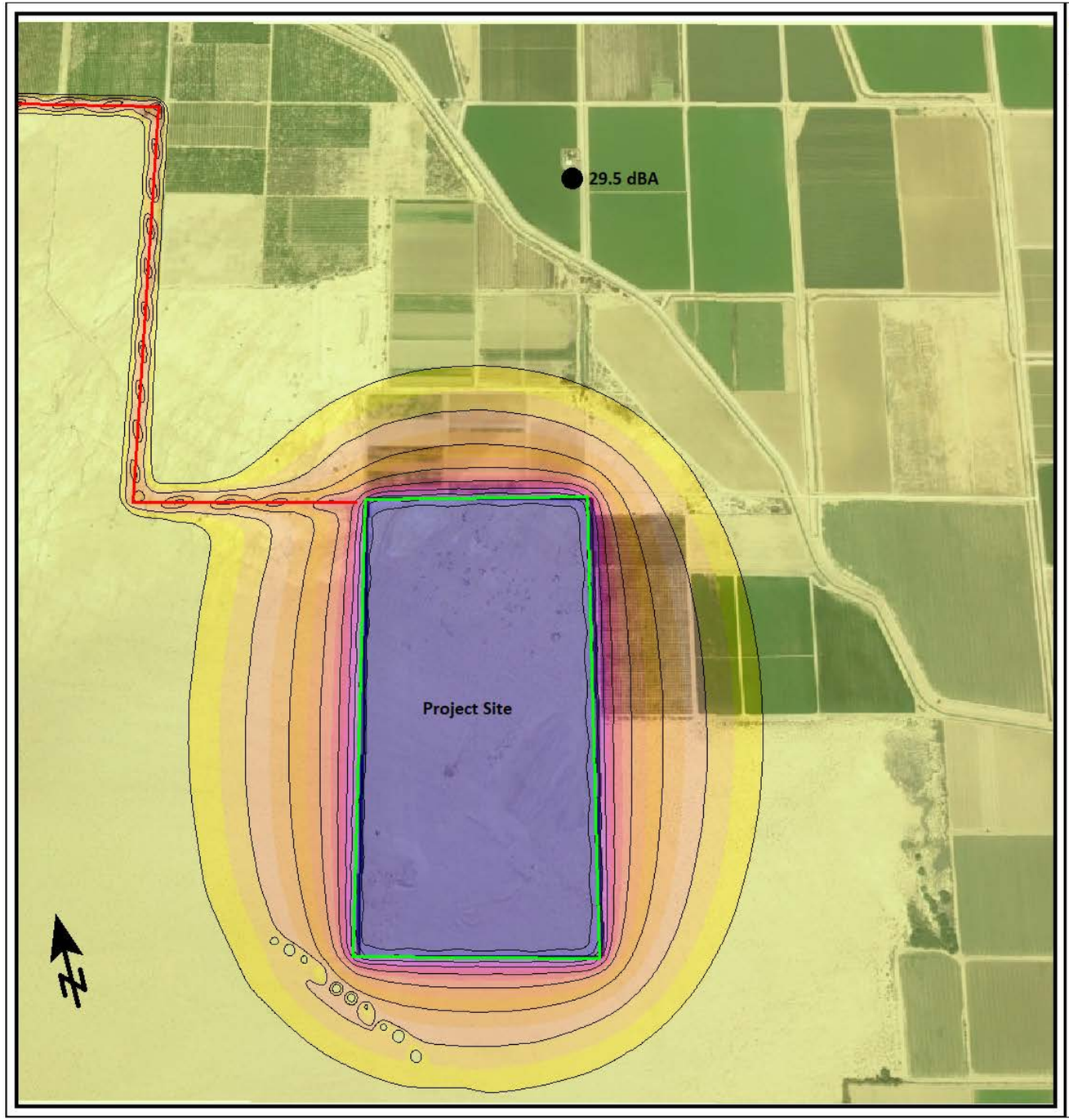
Table 5-3. Modeled Operational Noise Levels at Nearest Sensitive Receptor

Location	Modeled Operational Noise Attributed to Project (L_{eq} dBA)	County Daytime Standard (L_{eq} dB)	County Nighttime Standard (L_{eq} dB)	Exceed Standard?
1) Nearest Residence to Project Site off Buck Road	**29.5**	*50.0*	*45.0*	**No**

Source: Stationary source noise levels were modeled by ECORP using SoundPLAN 3D noise model. Refer to Appendix D for noise modeling assumptions and results.

Note: Reference noise measurement used to calculate Project onsite noise propagation identified at 47.1 dBA, per 30-minute measurements taken at a solar generation facility in Imperial County. Additionally, a reference measurement of 25 dBA at 25ft, was applied for Corona discharge.

As shown in Table 5-3, Project operational noise would not exceed County daytime or nighttime standards.



Vega SES Soalr Energy Storage Project

Noise Levels
in dB(A)

>=	51
49 -	51
47 -	49
45 -	47
43 -	45
41 -	43
39 -	41
37 -	39
35 -	37
<	35

Legend

- Transmission Line Route
- Project Site Noise

Map Date: 1/11/2023
Photo (or Base) Source: *SoundPLAN*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 5-1. Modeled Operational Noise Levels

2020-145

5.3.3 Would the Project Expose Structures to Substantial Groundborne Vibration During Construction?

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Construction on the Project Site 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.

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 be necessary during Project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project Site 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 5-4.

Table 5-4. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Pile Driver	0.170
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Vibratory Roller	0.210

Source: FTA 2018; Caltrans 2020b

The County of Imperial does not regulate vibrations associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020b) recommended standard of 0.2 inch per second PPV with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings. Consistent with FTA recommendations for calculating construction vibration, construction vibration was measured from the center of the Project Site (FTA 2018). The nearest structure of concern to the construction site, with regard to groundborne vibrations, is an abandoned building located 1,282 feet from the Proposed Project Site boundary.

Based on the representative vibration levels presented for various construction equipment types in Table 5-4 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential project construction vibration levels. The FTA provides the following equation:

$$[PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}]$$

Table 5-5 presents the expected Project related vibration levels at a distance of 1,282.

Table 5-5. Construction Vibration Levels at 1,282 Feet

Receiver PPV Levels (in/sec)[1]					Peak Vibration	Threshold	Exceed Threshold
Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jackhammer	Pile Driver	Vibratory Roller			
0.0002	0.0002	0.0001	0.0004	0.0006	**0.0006**	*0.2*	**No**

Notes: [1]Based on the Vibration Source Levels of Construction Equipment included on Table 5-3 (FTA 2018). Distance to the nearest structure of concern is approximately 1,282 feet measured from Project Site boundary.

As shown in Table 5-5, vibration as a result of construction activities would not exceed 0.2 PPV at the nearest structure. Thus, Project construction would not exceed the recommended threshold.

5.3.4 Would the Project Expose Structures to Substantial Groundborne Vibration During Operations?

Project operations would not include the use of any large-scale stationary equipment that would result in excessive vibration levels. Therefore, the project would not result groundborne vibration impacts during operations.

5.3.5 Would the Project Expose People Residing or Working in the Project area to Excessive Airport Noise?

The Project Site is located approximately 12 miles north of the El Centro Airport in El Centro; 10 miles northwest of the O'Connell Brothers Airport in Brawley; and 13 miles southwest of the Calipatria Municipal Airport in Calipatria. 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 (1996). As identified in the Imperial County Airport Land Use Compatibility Maps, the Proposed Project Site lays outside of the noise contours of all three airports. Thus, the Project would not expose Project workers to excessive airport noise

5.3.6 Cumulative Noise

Would the Project Contribute to Cumulatively Considerable Noise During Construction?

Construction activities associated with the Proposed Project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas adjacent to the construction site. Construction noise for the Project was determined to be less than significant following compliance with County noise standards. Cumulative development in the vicinity of the Project Site could result in elevated construction noise levels at sensitive receptors in the Project vicinity. However, each project would be required to comply with the applicable noise limitations on construction. Therefore, the Project would not contribute to cumulative impacts during construction.

Would the Project Contribute to Cumulatively Considerable Noise from Offsite Traffic?

As described previously, Project operations would result in extremely minimal additional traffic on adjacent roadways. The only visitors to the site would be that of water deliveries, repair or maintenance work that would be done infrequently. Thus, any cumulative noise impacts from project-related traffic would be minimal. Therefore, the Project's contribution to cumulative noise impacts from traffic would be less than significant.

Would the Project Contribute to Cumulatively Considerable Noise from Stationary Sources?

Cumulative noise impacts would primarily be associated with the transformers, inverters, substation, and transmission lines from the solar facility. Long-term noise sources associated with development at the Project, combined with other cumulative projects, could cause local noise-level increases. Noise levels associated with the Proposed Project and related cumulative projects together could result in higher noise levels than considered separately. However, noise increase as a result of the Project would not be perceivable and would not exceed County standards.

6.0 REFERENCES

California Department of Transportation (Caltrans). 2020a. IS/EA Annotated Outline. http://www.dot.ca.gov/ser/vol1/sec4/ch31ea/chap31ea.htm.

_____. 2020b. Transportation and Construction Vibration Guidance Manual.

_____. 2018. Traffic Census Program: 2017 Traffic Volumes. https://dot.ca.gov/programs/traffic-operations/census

_____. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol.

Federal Highway Administration (FHWA). 2017. Construction Noise Handbook. https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook02.cfm.

_____. 2011. Effective Noise Control During Nighttime Construction. Available online at: http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm.

_____. 2006. Roadway Construction Noise Model.

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment.

Harris Miller, Miller & Hanson Inc (HMMH). 2006. Transit Noise and Vibration Impact Assessment, Final Report.

Imperial, County of. 2015. General Plan Noise Element.

_____. 2008. General Plan Circulation and Scenic Highways Element.

_____. 1996. Imperial County Airport Land Use Compatibility Plan.

KOA Corporation. 2021. Scoping Memorandum for the Traffic Impact Study.

Office of Planning and Research (OPR). 2003. State of California General Plan Guidelines.

Western Electro-Acoustic Laboratory, Inc. (WEAL). 2000. Sound Transmission Sound Test Laboratory Report No. TL 96-186.

LIST OF ATTACHMENTS

ATTACHMENT A

Baseline Noise Measurements

Site Number: 1			
Recorded By: Lindsay Liegler			
Job Number: 2020-145 Vega SES 6			
Date: 07/14/21			
Time: 10:56 a.m. – 11:11 a.m.			
Location: Intersection of Garvey Road and Baughman Road			
Source of Peak Noise: Dog barking, birds, wind, jet far overhead around 11:03			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
53.3	30.5	73.8	103.6

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0006133**	**02/24/2020**	
	Microphone	**Larson Davis**	**377B02**	**315201**	**02/24/2020**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**069947**	**02/24/2020**	
	Calibrator	**Larson Davis**	**CAL200**	**17325**	**02/25/2020**	

Weather Data			
Est.	**Duration:** 15 minutes		**Sky:** Clear
	Note: dBA Offset = -0.16		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	10 mph	103	29.85

Photo of Measurement Location

Measurement Report

Report Summary

Meter's File Name	LxT_Data.381.s	Computer's File Name	LxTse_0005120-20210714 105656-LxT_Data.381.ldbin
Meter	LxT SE 0005120		
Firmware	2.404		
User		Location	
Job Description			
Note			
Start Time	2021-07-14 10:56:56	Duration	0:15:00.1
End Time	2021-07-14 11:11:56	Run Time	0:15:00.1
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	53.3 dB		
LAE	82.8 dB	SEA	--- dB
EA	21.4 µPa²h		
LZ_{peak}	103.6 dB	2021-07-14 11:09:22	
LAS_{max}	73.8 dB	2021-07-14 11:06:04	
LAS_{min}	30.5 dB	2021-07-14 11:02:52	
LA_{eq}	53.3 dB		
LC_{eq}	65.1 dB	LC_{eq} - LA_{eq}	11.8 dB
LAI_{eq}	55.5 dB	LAI_{eq} - LA_{eq}	2.2 dB

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	53.3 dB	53.3 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	53.3 dB	53.3 dB	--- dB	--- dB

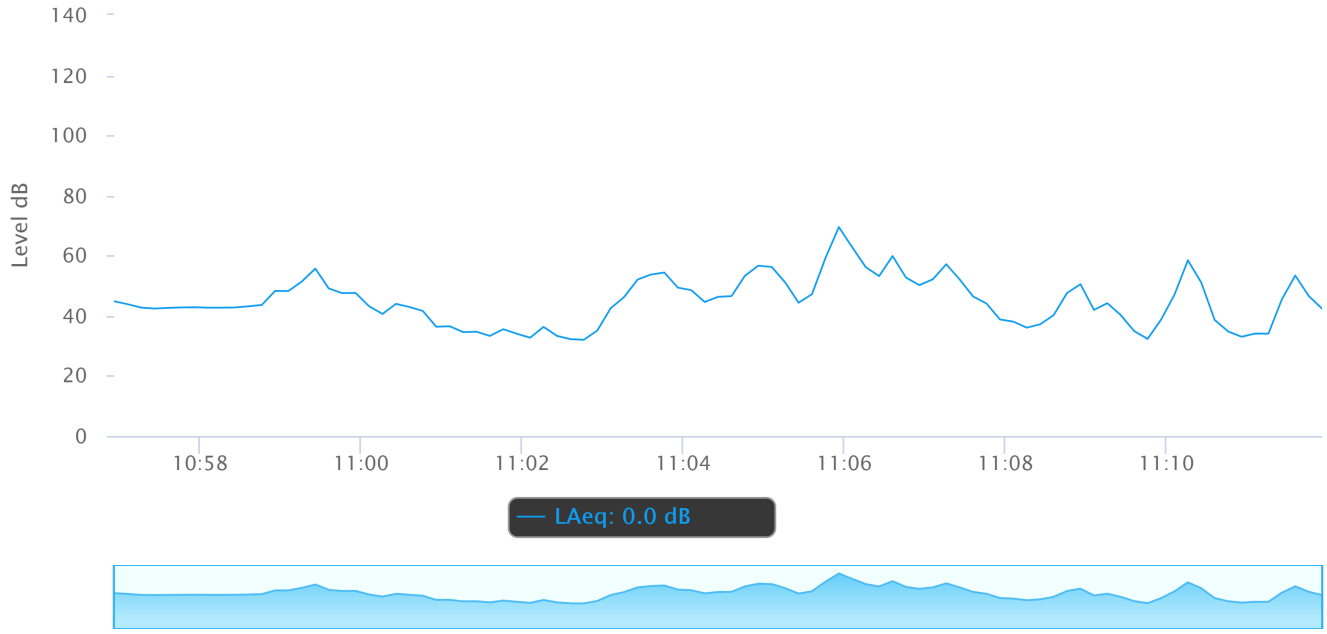
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	53.3 dB		65.1 dB		--- dB	
$Ls_{(max)}$	73.8 dB	2021-07-14 11:06:04	--- dB		--- dB	
$LS_{(min)}$	30.5 dB	2021-07-14 11:02:52	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		103.6 dB	2021-07-14 11:09:22

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	1	0:00:02.4

Statistics

LAS 5.0	58.0 dB
LAS 10.0	55.0 dB
LAS 33.3	47.7 dB
LAS 50.0	43.3 dB
LAS 66.6	41.1 dB
LAS 90.0	33.5 dB

Time History



Site Number: 2			
Recorded By: Lindsay Liegler			
Job Number: 2020-145 Vega SES 6			
Date: 07/14/21			
Time: 10:29 a.m. – 10:44 a.m.			
Location: North of Garvey Road/Orr Road intersection, West shoulder of Garvey Road			
Source of Peak Noise: Birds, insects, wind, jet flying overhead around 10:35			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
39.6	32.7	51.1	95.9

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0006133**	**02/24/2020**	
	Microphone	**Larson Davis**	**377B02**	**315201**	**02/24/2020**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**069947**	**02/24/2020**	
	Calibrator	**Larson Davis**	**CAL200**	**17325**	**02/25/2020**	

Weather Data			
Est.	**Duration:** 15 minutes		**Sky:** Clear
	Note: dBA Offset = -0.16		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	9 mph	103	29.85

Photo of Measurement Location

Measurement Report

Report Summary

Meter's File Name	LxT_Data.380.s	Computer's File Name	LxTse_0005120-20210714 102953-LxT_Data.380.ldbin
Meter	LxT SE 0005120		
Firmware	2.404		
User		Location	
Job Description			
Note			
Start Time	2021-07-14 10:29:53	Duration	0:16:09.1
End Time	2021-07-14 10:46:03	Run Time	0:16:09.1
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	39.6 dB		
LAE	69.5 dB	SEA	--- dB
EA	1.0 µPa²h		
LZ_{peak}	95.9 dB	2021-07-14 10:36:59	
LAS_{max}	51.1 dB	2021-07-14 10:29:53	
LAS_{min}	32.7 dB	2021-07-14 10:41:15	
LA_{eq}	39.6 dB		
LC_{eq}	54.0 dB	LC_{eq} - LA_{eq}	14.4 dB
LAI_{eq}	41.5 dB	LAI_{eq} - LA_{eq}	1.8 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
39.6 dB	39.6 dB	0.0 dB

LDEN	LDay	LEve	LNight
39.6 dB	39.6 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	39.6 dB		54.0 dB		--- dB	
$Ls_{(max)}$	51.1 dB	2021-07-14 10:29:53	--- dB		--- dB	
$LS_{(min)}$	32.7 dB	2021-07-14 10:41:15	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		95.9 dB	2021-07-14 10:36:59

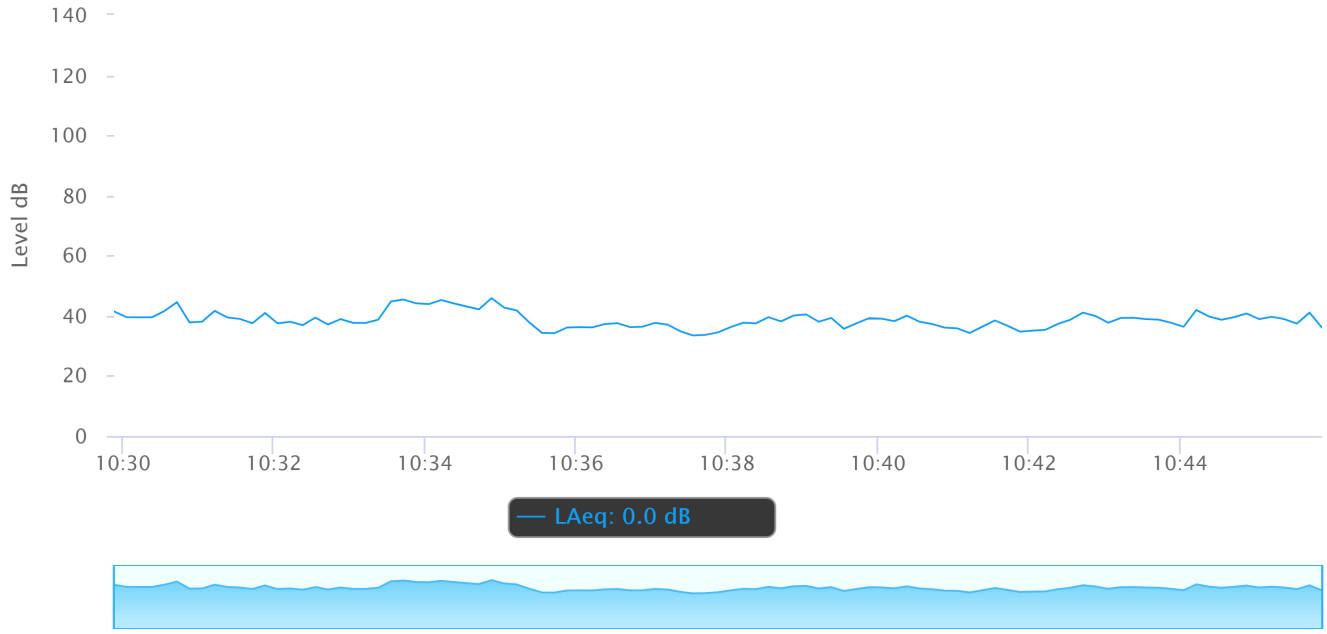
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	44.1 dB
LAS 10.0	42.9 dB
LAS 33.3	39.2 dB
LAS 50.0	38.2 dB
LAS 66.6	37.2 dB
LAS 90.0	35.1 dB

Time History



Site Number: 3			
Recorded By: Lindsay Liegler			
Job Number: 2020-145 Vega SES 6			
Date: 07/14/21			
Time: 11:24 a.m. – 11:39 a.m.			
Location: Northwest intersection of Garvey Road and Buck Road			
Source of Peak Noise: Wind, jet flying overhead			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
50.1	39.3	64.3	100.8

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0006133**	**02/24/2020**	
	Microphone	**Larson Davis**	**377B02**	**315201**	**02/24/2020**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**069947**	**02/24/2020**	
	Calibrator	**Larson Davis**	**CAL200**	**17325**	**02/25/2020**	

Weather Data			
Est.	**Duration:** 15 minutes		**Sky:** Clear
	Note: dBA Offset = -0.16		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	10 mph	103	29.85

Photo of Measurement Location

Measurement Report

Report Summary

Meter's File Name	LxT_Data.382.s	Computer's File Name	LxTse_0005120-20210714 112506-LxT_Data.382.ldbin
Meter	LxT SE 0005120		
Firmware	2.404		
User		Location	
Job Description			
Note			
Start Time	2021-07-14 11:25:06	Duration	0:15:06.3
End Time	2021-07-14 11:40:13	Run Time	0:15:06.3
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	50.1 dB		
LAE	79.7 dB	SEA	--- dB
EA	10.3 µPa²h		
LZ_{peak}	100.8 dB	2021-07-14 11:38:46	
LAS_{max}	64.3 dB	2021-07-14 11:30:54	
LAS_{min}	39.3 dB	2021-07-14 11:32:20	
LA_{eq}	50.1 dB		
LC_{eq}	67.2 dB	LC_{eq} - LA_{eq}	17.1 dB
LAI_{eq}	52.7 dB	LAI_{eq} - LA_{eq}	2.6 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
50.1 dB	50.1 dB	0.0 dB

LDEN	LDay	LEve	LNight
50.1 dB	50.1 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	50.1 dB		67.2 dB		--- dB	
$Ls_{(max)}$	64.3 dB	2021-07-14 11:30:54	--- dB		--- dB	
$LS_{(min)}$	39.3 dB	2021-07-14 11:32:20	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		100.8 dB	2021-07-14 11:38:46

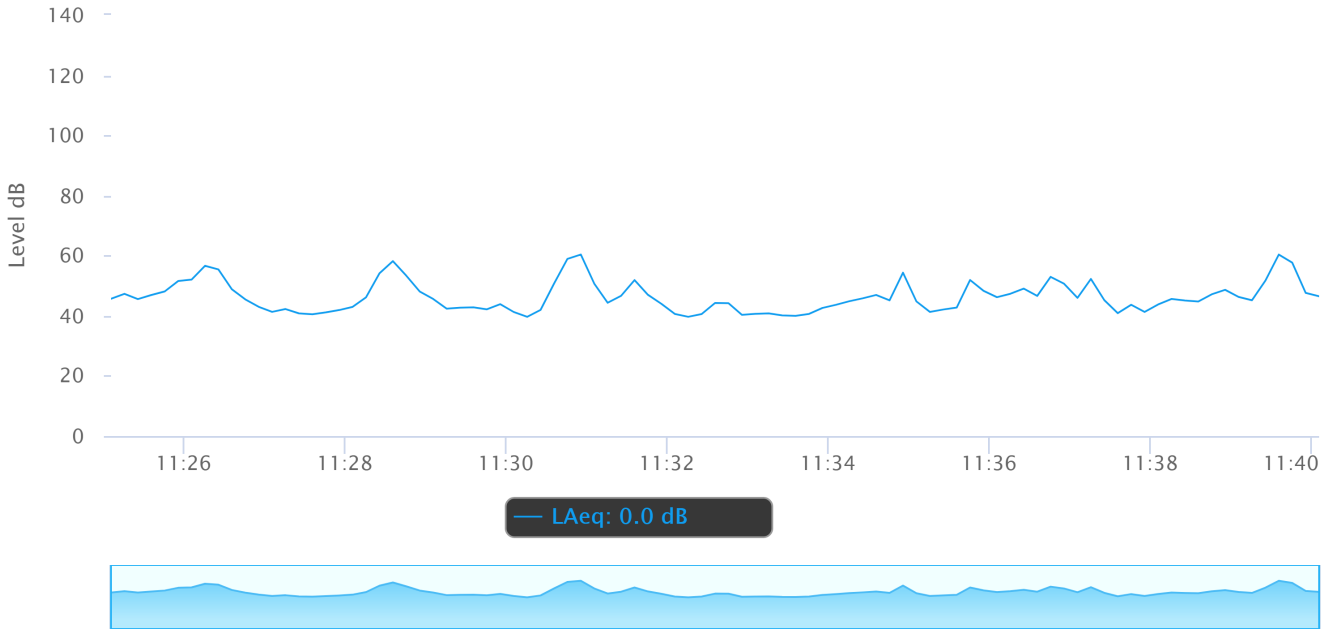
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	3	0:00:06.2

Statistics

LAS 5.0	57.1 dB
LAS 10.0	53.8 dB
LAS 33.3	46.9 dB
LAS 50.0	44.8 dB
LAS 66.6	42.7 dB
LAS 90.0	40.5 dB

Time History



Site Number: 4			
Recorded By: Lindsay Liegler			
Job Number: 2020-145 Vega SES 6			
Date: 07/14/21			
Time: 10:01 a.m. – 10:16 a.m.			
Location: West of Garvey Road on shoulder; 0.5 miles south of SR 78/86			
Source of Peak Noise: Birds, insects, farm workers talking in distance			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
45.4	30.6	58.4	91.4

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0006133**	**02/24/2020**	
	Microphone	**Larson Davis**	**377B02**	**315201**	**02/24/2020**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**069947**	**02/24/2020**	
	Calibrator	**Larson Davis**	**CAL200**	**17325**	**02/25/2020**	

Weather Data			
Est.	**Duration:** 15 minutes		**Sky:** Clear
	Note: dBA Offset = -0.16		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	9 mph	103	29.85

Photo of Measurement Location

Measurement Report

Report Summary

Meter's File Name	LxT_Data.379.s	Computer's File Name	LxTse_0005120-20210714 100012-LxT_Data.379.ldbin
Meter	LxT SE 0005120		
Firmware	2.404		
User		Location	
Job Description			
Note			
Start Time	2021-07-14 10:00:12	Duration	0:15:00.4
End Time	2021-07-14 10:15:13	Run Time	0:15:00.4
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	45.4 dB		
LAE	75.0 dB	SEA	--- dB
EA	3.5 µPa²h		
LZ_{peak}	91.4 dB	2021-07-14 10:14:05	
LAS_{max}	58.4 dB	2021-07-14 10:07:17	
LAS_{min}	30.6 dB	2021-07-14 10:03:04	
LA_{eq}	45.4 dB		
LC_{eq}	55.5 dB	LC_{eq} - LA_{eq}	10.1 dB
LAI_{eq}	48.6 dB	LAI_{eq} - LA_{eq}	3.2 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
45.4 dB	45.4 dB	0.0 dB

LDEN	LDay	LEve	LNight
45.4 dB	45.4 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	45.4 dB		55.5 dB		--- dB	
$Ls_{(max)}$	58.4 dB	2021-07-14 10:07:17	--- dB		--- dB	
$LS_{(min)}$	30.6 dB	2021-07-14 10:03:04	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		91.4 dB	2021-07-14 10:14:05

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	52.1 dB
LAS 10.0	51.3 dB
LAS 33.3	40.3 dB
LAS 50.0	37.7 dB
LAS 66.6	35.7 dB
LAS 90.0	33.9 dB

ATTACHMENT B

Federal Highway Administration Roadway Construction Noise Model Outputs – Project Construction Noise

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/12/2023
Case Description: VEGA SES 6 - Site Prep

Description	**Land Use**
Residential	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Dozer	No	40		81.7	2725
Dozer	No	40		81.7	2725
Dozer	No	40		81.7	2725
Tractor	No	40	84		2725
Tractor	No	40	84		2725
Tractor	No	40	84		2725
Tractor	No	40	84		2725

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Dozer		46.9	43
Dozer		46.9	43
Dozer		46.9	43
Tractor		49.3	45.3
Tractor		49.3	45.3
Tractor		49.3	45.3
Tractor		49.3	45.3
	Total	**49.3**	**52.9**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/12/2023
Case Description: VEGA SES 6 - Grading

Description	**Land Use**
Project Site Grading	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Excavator	No	40		80.7	2725
Excavator	No	40		80.7	2725
Grader	No	40	85		2725
Dozer	No	40		81.7	2725
Tractor	No	40	84		2725
Tractor	No	40	84		2725
Scraper	No	40		83.6	2725
Scraper	No	40		83.6	2725

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Excavator		46	42
Excavator		46	42
Grader		50.3	46.3
Dozer		46.9	43
Tractor		49.3	45.3
Tractor		49.3	45.3
Scraper		48.9	44.9
Scraper		48.9	44.9
	Total	**50.3**	**53.5**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/12/2023
Case Description: VEGA SES 6 - Building Construction

Description	**Land Use**
Project Site Building Construction	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Crane	No	16		80.6	2725
Gradall	No	40		83.4	2725
Gradall	No	40		83.4	2725
Gradall	No	40		83.4	2725
Generator	No	50		80.6	2725
Tractor	No	40	84		2725
Tractor	No	40	84		2725
Tractor	No	40	84		2725
Welder / Torch	No	40		74	2725

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Crane		45.8	37.9
Gradall		48.7	44.7
Gradall		48.7	44.7
Gradall		48.7	44.7
Generator		45.9	42.9
Tractor		49.3	45.3
Tractor		49.3	45.3
Tractor		49.3	45.3
Welder / Torch		39.3	35.3
	Total	**49.3**	**53.4**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/12/2023
Case Description: VEGA SES 6 - Paving

Description	**Land Use**
Residential	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Paver	No	50		77.2	2725
Paver	No	50		77.2	2725
Pavement Scarafier	No	20		89.5	2725
Pavement Scarafier	No	20		89.5	2725
Roller	No	20		80	2725
Roller	No	20		80	2725

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Paver	42.5	39.5
Paver	42.5	39.5
Pavement Scarafier	54.8	47.8
Pavement Scarafier	54.8	47.8
Roller	45.3	38.3
Roller	45.3	38.3
Total	**54.8**	**51.8**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/30/2022
Case Description: Vega SES 6 - Gentie Grading

Description	**Land Use**
Grading	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Drill Rig Truck	No	20		79.1	970
Crane	No	16		80.6	970
Front End Loader	No	40		79.1	970
Front End Loader	No	40		79.1	970

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Flat Bed Truck		48.5	44.5
Flat Bed Truck		48.5	44.5
Drill Rig Truck		53.4	46.4
Crane		54.8	46.8
Front End Loader		53.4	49.4
Front End Loader		53.4	49.4
	Total	**54.8**	**55.1**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/30/2022
Case Description: Vega SES 6 - Gentie Construction

Description	**Land Use**
Construction	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Compressor (air)	No	40		77.7	970
Compressor (air)	No	40		77.7	970
Drill Rig Truck	No	20		79.1	970
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Flat Bed Truck	No	40		74.3	970
Crane	No	16		80.6	970
All Other Equipment > 5 HP	No	50	85		970
All Other Equipment > 5 HP	No	50	85		970
All Other Equipment > 5 HP	No	50	85		970
All Other Equipment > 5 HP	No	50	85		970
Gradall	No	40		83.4	970
Front End Loader	No	40		79.1	970
Tractor	No	40	84		970
Tractor	No	40	84		970

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Compressor (air)	51.9	47.9
Compressor (air)	51.9	47.9
Drill Rig Truck	53.4	46.4
Flat Bed Truck	48.5	44.5
Flat Bed Truck	48.5	44.5
Flat Bed Truck	48.5	44.5
Flat Bed Truck	48.5	44.5
Flat Bed Truck	48.5	44.5

Flat Bed Truck	48.5	44.5
Flat Bed Truck	48.5	44.5
Flat Bed Truck	48.5	44.5
Flat Bed Truck	48.5	44.5
Crane	54.8	46.8
All Other Equipment > 5 HP	59.2	56.2
All Other Equipment > 5 HP	59.2	56.2
All Other Equipment > 5 HP	59.2	56.2
All Other Equipment > 5 HP	59.2	56.2
Gradall	57.6	53.7
Front End Loader	53.4	49.4
Tractor	58.2	54.3
Tractor	58.2	54.3
Total	**59.2**	**65.4**

*Calculated Lmax is the Loudest value.

ATTACHMENT C

SoundPLAN 3-D Model Outputs – Onsite Project Noise

SoundPLAN
Output Source Information

Project Operational Noise levels

Number	Reciever Name	Floor	Level at Receiver
1	Nearest Residence to Project Site off Buck Road	Ground Floor	29.5 dBA

Number	Noise Source Information	Citation	Level at Source
1	Project Site Solar Facility	ECORP reference noise measurement	47.1
2	Corona Discharge	Seville Solar Farm Complex Draft Environmental Impact Report	25 dBA @ 25ft distant

Vega SES 6 Solar Energy Storage Project

TRAFFIC IMPACT STUDY
IMPERIAL COUNTY, CALIFORNIA

Prepared By:

January, 2022

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APPENDICES

1.0 Introduction

This traffic impact analysis (TIA) has been prepared to identify the potential traffic impacts associated with developing the Vega SES 6 Solar Energy Storage (Project) in Imperial County. The study was completed following the guidelines described in 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").

KOA has coordinated with the County's Engineering Department on the scope of the traffic analysis, including the study area and future year analysis assumptions. As necessary, if required, projects will be identified to offset or reduce significant impacts. Based on discussions with County staff, current and future traffic conditions at select intersections in close proximity to the proposed project have been evaluated for the purposes of this TIA.

This report describes the existing roadway network in the vicinity of the project site. It includes a review of the existing and proposed traffic activities for weekday peak AM and PM periods and daily traffic conditions.

Project Location

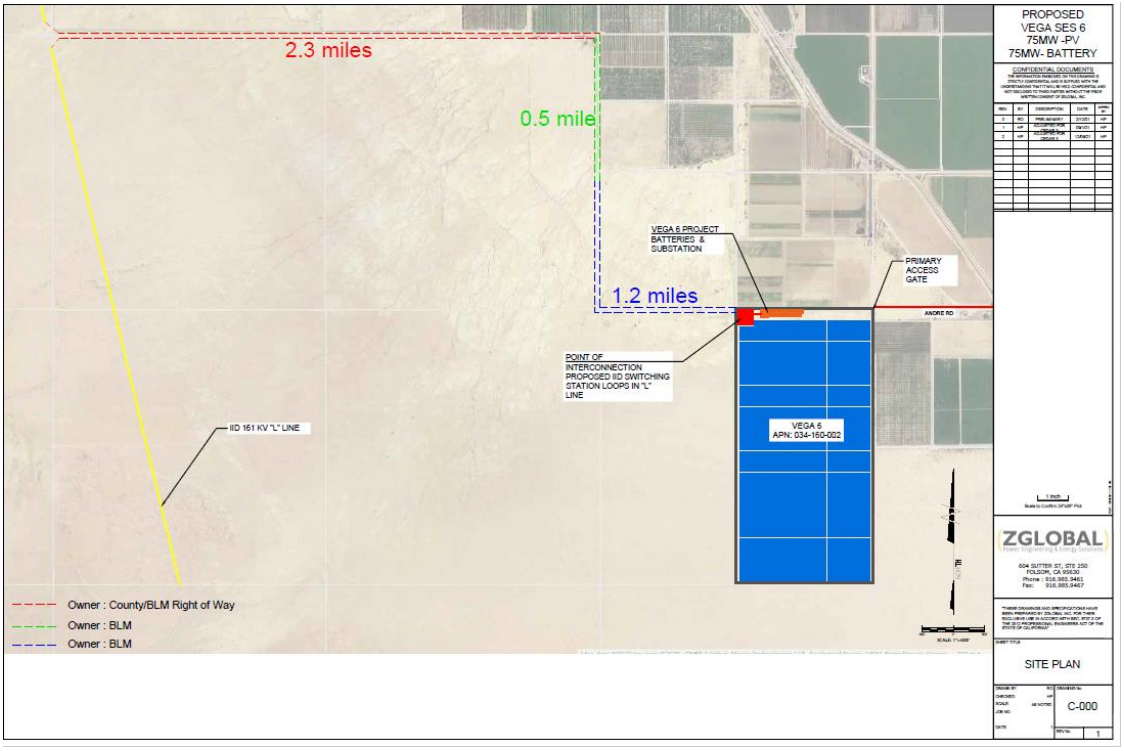
The project location is shown in Figure 1.1.

Figure 1.1 Study Area

Project Description

Vega SES 6 LLC. is proposing to develop the Vega SES 6 Solar Energy Storage Project. The project is an alternating current (MWAC) solar photovoltaic (PV) energy generation project with an integrated battery storage project in the County of Imperial, California. The Project would be located approximately six miles west of Westmorland. The construction of the site is estimated to take 12 months and would begin in 2022. The project opening is anticipated to be 2023. The project site plan is shown in Figure 1.2.

Figure 1.2 Site Plan



Construction Activities

The construction of the site to include site preparation and construction is estimated to take 12 months and would begin in 2022. The number of on–site construction workers for the solar project facilities is not expected to exceed 100 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 50 workers at any one time. Construction of the Projects will include the following activities:

- Site preparation
- Grading and earthwork
- Concrete foundations
- Structural steel work
- Electrical/instrumentation work
- Collector line installation
- Architecture and landscaping

2.0 Capacity Analysis Methodologies

This section presents a brief overview of traffic analysis methodologies and concepts used in this study. Street system operating conditions are typically described in terms of "level of service (LOS)" to compare without project and with project alternatives. LOS is a report-card scale used to indicate the quality of traffic flow on roadway segments and at intersections. The levels of service range from Level A (free flow, little congestion) to Level F (forced flow, higher congestion).

Study Area Criteria

The 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"). "Any project that has the potential to degrade an existing road section, an existing signalized intersection, or an existing unsignalized intersection to below the existing level of service or to cause it to be lower than a level of service (LOS) "C" during any peak hour, using the HCM Methods of analysis on any individual, existing traffic movement." Traffic Study and Report Policy, 4-5.

The study area for this project includes those locations that likely will be affected by this project. The project study area was determined based on similar solar projects. The specific study area intersections are those that would have 50 peak hour trips, and consist of the following:

1. Buck Road and SR/78/86 (located west of Westmorland)
2. Martin Road and SR-78/86 (located on the west edge of Westmorland)
3. Center Street and SR-78/86 (located midway in Westmorland)
4. Boarts Road (CR-26) and SR-78/86 (located on the eastside of Westmorland)
5. SR-86 and SR-78 (Brawley Bypass)

The study area also includes the following study segments:

1. SR-78/86 from SR-78/86 from the Buck Road to the north
2. SR-78/86 from Buck Road to Martin Road
3. SR-78/86 from Martin Road to Center Street
4. SR-78/86 SR-7 from Center Street to Boarts Road (CR-26)
5. SR-78/86 SR-7 from Boarts Road (CR-26) to Brawley Bypass
6. Center Street from Baughman Road to SR 78/86

Scenario Criteria

The proposed project's traffic impacts were analyzed in three scenarios as listed below. The traffic analysis included intersections and roadway segments within Imperial County and Caltrans District 11 in the following scenarios to determine the potential impacts.

- Existing Year (2020) Conditions
- Construction Year (2023) Baseline Conditions
- Construction Year (2023) + Project Construction Conditions

Peak Hour Intersection Level of Service Standards

Traffic conditions on most roadway facilities are analyzed using the principles of the specific analysis methods contained in the latest version (2010) of the *Highway Capacity Manual* (*HCM*), a publication of the Transportation Research Board, a research agency affiliated with the Federal Government. Chapter 18 of the *HCM 2010* is devoted to analysis of signalized intersections. The methodology in the *HCM 2010* for signalized intersections is based upon measurements or forecasts of control delay for traffic utilizing all approaches to the intersection.

Unsignalized intersections, including two-way and all-way stop controlled intersections were analyzed using the 2010 Highway Capacity Manual unsignalized intersection analysis methodology. The LOS for a two-way stop controlled (TWSC) intersection is determined by the computed or measured control delay and is defined for each minor movement. The analysis of peak hour intersection conditions was conducted using the Synchro 10 software program developed by Trafficware. Results are displayed in terms of control delay (seconds per vehicle) and an equivalent LOS as shown in Table 2.1.

Table 2.1: HCM Level of Service Definitions for Intersections

LOS	Signalized Intersection Delay (Seconds per Vehicle)	Unsignalized Intersection Average Stop Delay (Seconds)
A	<10	<10
B	>10 and <20	>10 and <15
C	>20 and <35	>15 and <25
D	>35 and <55	>25 and <35
E	>55 and <80	>35 and <50
F	>80	>50

Source: Highway Capacity Manual, 2010.

Roadway Segment Level of Service Standards

Roadway segment LOS standards and thresholds provide the basis for analysis of roadway segment performance. The analysis of roadway segment LOS is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes.

The County of Imperial level of service analysis was performed by utilizing the *Circulation and Scenic Highways Element, January 2008*. The thresholds for each facility type are presented in Table 2.2.

Table 2.2 County of Imperial ADT Level of Service Volumes by Roadway Type

Road		Level of Service (LOS)				
Class	X-Section	A	B	C	D	E
Expressway	154/210	30,000	42,000	60,000	70,000	80,000
Prime Arterial	106/136	22,200	37,000	44,600	50,000	57,000
Minor Arterial	82/102	14,800	24,700	29,600	33,400	37,000
Major Collector	64/84	13,700	22,800	27,400	30,800	34,200
Minor (Local) Collector	40/70	1,900	4,100	7,100	10,900	16,200

* Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.
Source: *Imperial County Circulation and Scenic Highways Element 2008 and Imperial County Long Range Transportation Plan 2013 Update*

Analysis of Significance

Imperial County

The significance criteria for traffic impacts are based on the Imperial County Planning & Development Services Department LOS standard as outlined in the "Circulation Element". The County's goal for an acceptable traffic service standard on an Average Daily Traffic (ADT) basis and during AM and PM peak periods for all County-Maintained Roads shall be LOS C for all street segment links and intersections.

- Strive to maintain LOS "C" or better on arterial and collector streets, at all intersections, and on principal arterials during the hour of highest volume during the AM hours and also during the PM hours. Imperial County has established LOS "C" as the general threshold for acceptable overall traffic operations for both signalized and un-signalized intersections.

- Accept LOS "D" after finding that there is no practical and feasible way to mitigate to LOS "C;" and the development causing the lower level of service provides a clear, overall public benefit.

- For segments that operate at LOS D or lower, an incremental increase in v /c of greater than 0.02 is considered to be a significant impact. For intersections that operate at LOS D or lower, an incremental increase in vehicle delay of 2.0 seconds or greater is considered to be a significant impact.

Caltrans

- For segments that operate at LOS D or lower, an incremental increase in v /c of greater than 0.02 is considered to be a significant impact. For intersections that operate at LOS D or

lower, an incremental increase in vehicle delay of 2.0 seconds or greater is considered to be a significant impact.

- For freeway segments that operate at LOS D or lower, an incremental increase in v /c of greater than 0.01 is considered to be a significant impact.

3.0 Existing Conditions

This section documents the Existing Year conditions in the study area. The Existing Year is taken to be 2020 for analysis purposes based on existing traffic counts taken in December, 2020. The discussion presented here is limited to segments and intersections in the project's vicinity.

Existing Roadways

Each of the key roadways, as well as associated study intersections within the study area, are discussed below.

Roadway Facilities

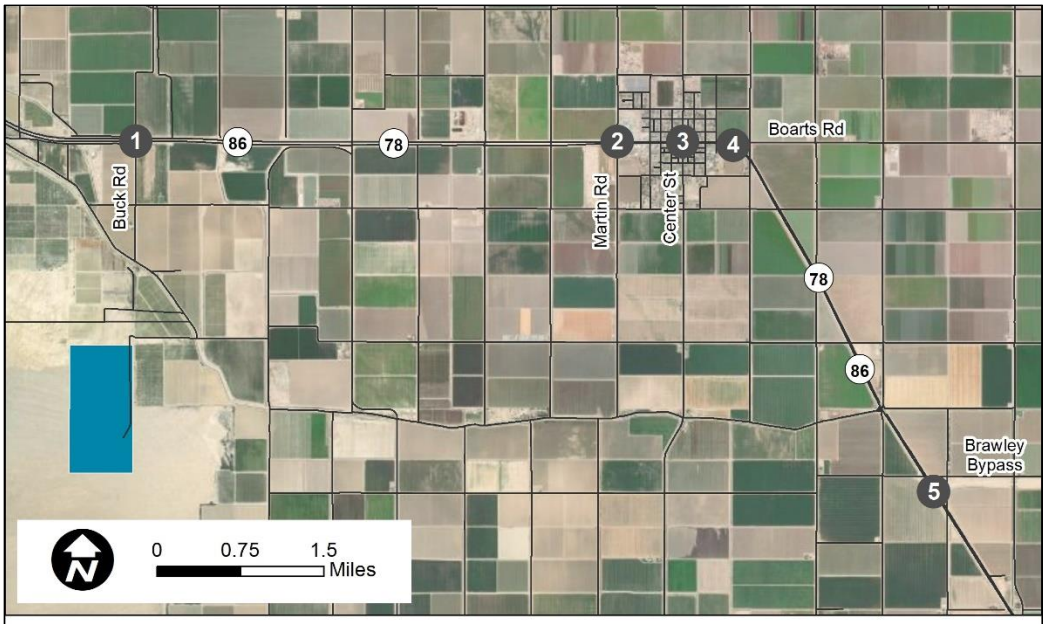
State Route 78/86 south of Westmoreland is a four lane divided highway. It has recently be widened to provide two lanes in each direction with left turn bays provided. Within the City of Westmoreland, the route transitions to a four lane roadway (named Main Street) with a center two-way left turn lane provided. The intersection of Main Street and Center Street is signalized. West of Martin Road, SR 78/86 transitions back to a four-lane divided highway.

Center Street is a two-lane street in the City of Westmoreland. Diagonal parking is provided on the two blocks south of Main Street. Outside the City, this roadway is Forrester Road a two lane rural county highway.

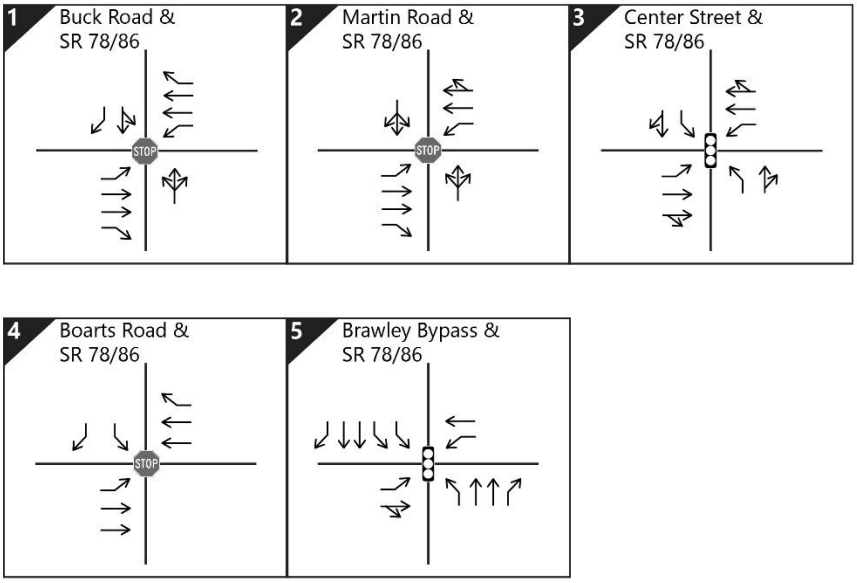
Baughman Road/Martin Road are two lane roads that are partly in the County and partly in the City of Westmoreland. These roads are paved and they are used by heavy vehicles and other vehicles connecting between SR 78/86 and Forrester Road.

Figure 3.1 displays the existing intersection geometrics for study area intersections.

Figure 3.1. Intersection Geometrics



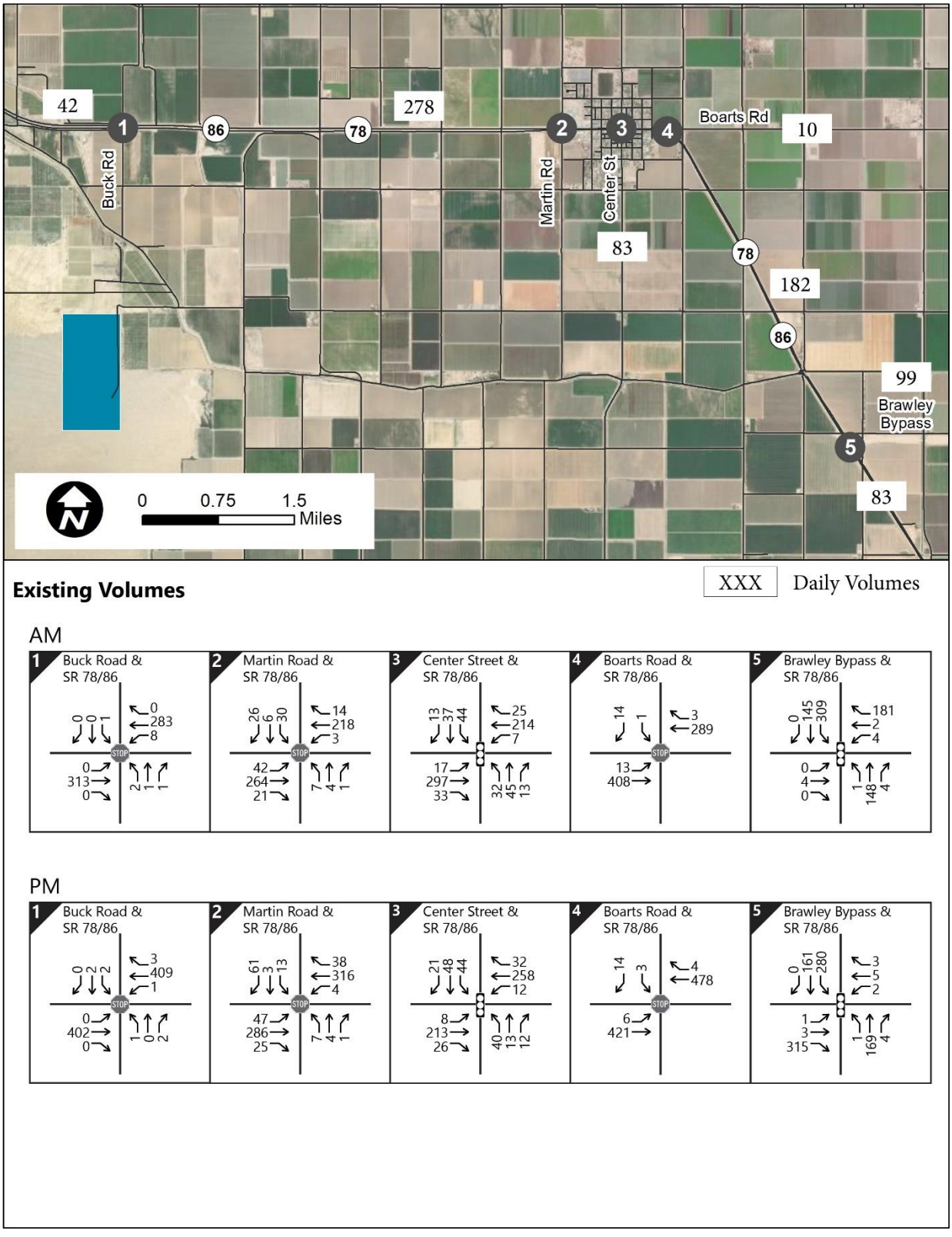
Intersection Geometry



Traffic Volumes

Existing turning movement counts at the study intersections were conducted on Tuesday, December 20, 2021. The existing condition reflects those land uses that were built and occupied at the time of the traffic counts and represent a typical weekday commute period. Intersection turning movement counts are provided in Appendix A. Existing average daily traffic (ADT) segment counts were obtained from the Caltrans for the year 2019. The ADT and weekday a.m. and p.m. peak hour traffic volumes are shown on Figure 3.2.

Figure 3.2. Existing Volumes



Existing Year Conditions

This section documents the existing traffic conditions of study area segments and intersections.

Segments

Roadway segment analysis was conducted for the study area's specified segments. Using average daily traffic (ADT) counts, KOA was able to determine the existing level of service for the designated roadway segments. Table 3.1 displays these levels of service.

Table 3.1 Existing Year Conditions Roadway Segment Analysis

Roadway Segment	From/ To	Lanes/ Class	LOS E Capacity	Existing		
				ADT	V/C	LOS
SR-78/86	Buck Road to the north	Principal Arterial 4 Lane	57,000	12,400	0.22	A
SR-78/86	Buck Road to Martin Road	Principal Arterial 4 Lane	57,000	12,800	0.22	A
SR-78/86	Martin Road to Center Street	Principal Arterial 4 Lane	57,000	15,300	0.27	B
SR-78/86	Center St. to Boarts Road (CR-26)	Principal Arterial 4 Lane	57,000	16,400	0.29	B
SR-78/86	Boarts Road (CR-26) to Brawley Bypass	Principal Arterial 4 Lane	57,000	8,700	0.15	A
Center Street	Baughman Road to SR 78/86	Minor Collector 2	16,200	2,330	0.14	A

Intersections

An intersection LOS analysis was prepared for the existing condition and is summarized in Table 3.2 which indicates that there are two study area intersections. The total LOS is shown for signalized intersections. Individual conflicting turning movements impacted by the project are shown for stop controlled intersections. All of the intersections and intersection movements operate at LOS C or better. Detailed LOS worksheets are included in Appendix B.

Table 3.2: Existing Year Conditions Peak Hour Intersection Analysis

Signals:

#	Intersection	Existing Conditions				
		Control	Movement	Peak Hour	Delay	LOS
3	SR 78/86 & Center Street	Signal	All	AM	9.4	A
				PM	9.3	A
5	SR 86 and Brawley Bypass (SR 78)	Signal	All	AM	9.8	A
				PM	11	B

Stop Control:

Intersection	Peak Hour	NBL	LOS	WBL	LOS
SR 78/86 and Buck Road	AM	12.6	B	8	A
	PM	11.6	B	8.2	A
		NBL		**WBL**	
SR 78/86 and Martin Road	AM	13.8	B	7.9	A
	PM	15.9	C	8	A
		EBL		**SWL**	
SR 78/86 & Boarts Road	AM	7.9	B	13	B
	PM	8.5	C	15.7	C

Delay is in seconds/vehicle. LOS = Level of Service, NBL=Northbound Left Turn, WBL+ Westbound Left Turn, SWLT=Southwest Left Turn

4.0 Trip Generation/Trip Distribution

Project Trip Generation

The project trip generation consists of a construction phase and operations phase. Once constructed, the site will not require personnel to be present on-site and will not result in daily trip generation. For this reason, only the trip generation for the construction phase was analyzed.

The construction of the site is estimated to take 12-18 months and would begin in 2022. The number of on–site construction workers for the solar project facilities is not expected to exceed 100 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 50 workers at any one time. The trip generation was estimated if the construction phases were to overlap, so both are included. 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.

Work hours will be between the hours of 8:00 a.m. and 5:00 p.m. Monday through Saturday. The trips generated during the construction phase of construction are shown in Table 4.1.

Table 4.1 Construction Trip Generation – Construction Phase

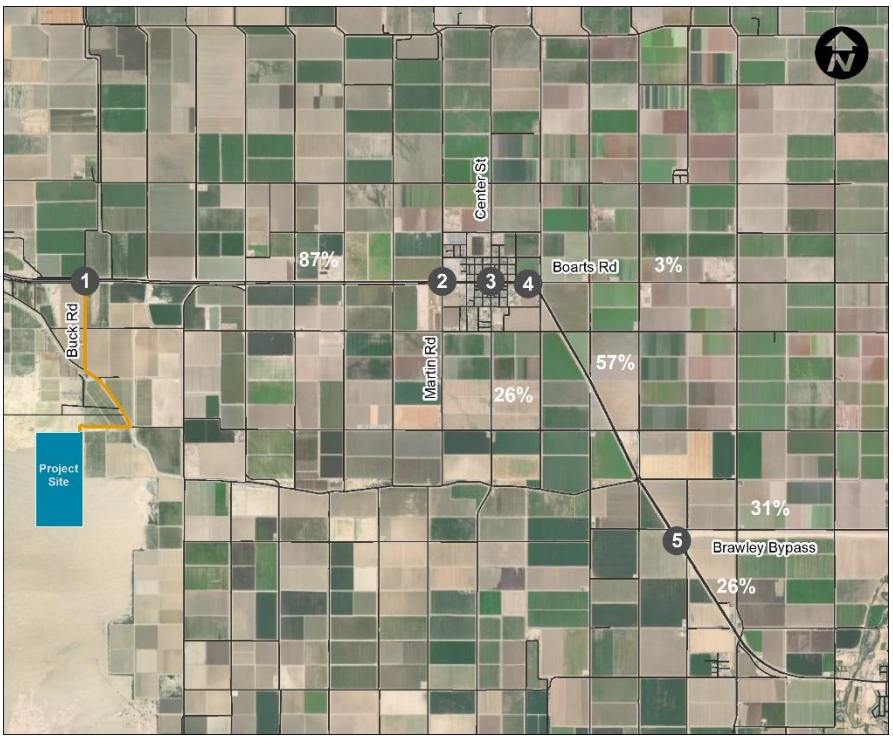
	Intensity	Unit	Daily Rate (1)	Daily Trips		AM Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out
Solar Construction Workers	100.0	Employee	2	200	Rate	1.00	100%	0%	1.00	0%	100%
					Trips	100	100	0	100	0	100
Battery Storage Workers	50.0	Employee	2	100	Rate	1.00	100%	0%	1.00	0%	100%
					Trips	50	50	0	50	0	50
Equipment Deliveries and Construction Truck Trips (PCE)	8.0	trucks	2.5	20	Rate	0.13	75%	25%	0.13	25%	75%
					Trips	3	2	1	3	1	2
Total				320	Trips	153	152	1	153	1	152

(1) 8 total truck trips per day with PCE of 2.5

Trip Distribution and Assignment

Trip distribution and assignment is the process of identifying the probable destinations, directions and traffic routes that project related traffic will likely affect. Trip distribution and assignment information can be estimated from observed traffic patterns, experience or through use of a computerized travel forecast model. Once the proposed developments trips have been estimated, they are assigned to the study area street network. The trip distribution was estimated based on using logical travel paths between the project and local origins. The trip distribution for the project-related trips is shown in Figure 4.1.

Figure 4.1 Trip Distribution

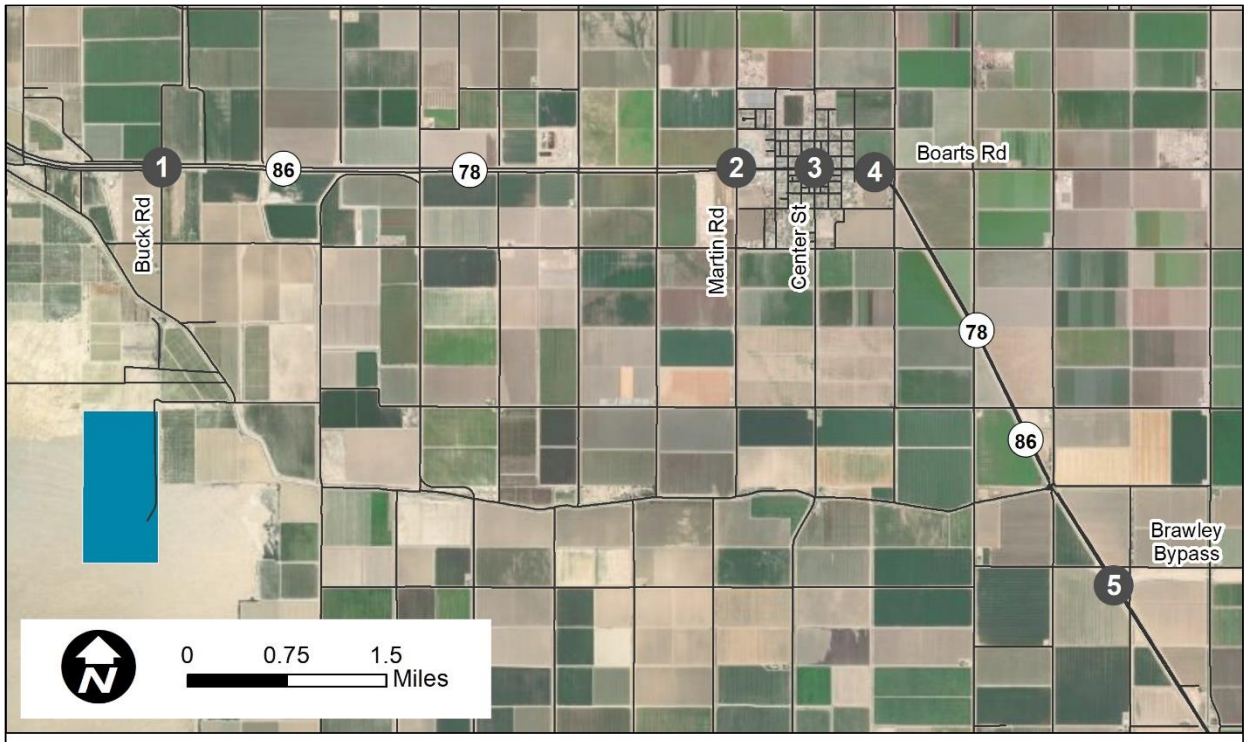


5.0 Construction Year Conditions

This section documents the analysis for the Project Completion Year conditions. This scenario considers the traffic conditions at the time that the proposed development is constructed by increasing the existing traffic counts by an ambient growth rate to reflect cumulative projects. Projected project only volumes are then added to create the 2023 Baseline with Project Scenario. An annual ambient growth of 1.8% was utilized to account for traffic growth between 2020 and 2023.

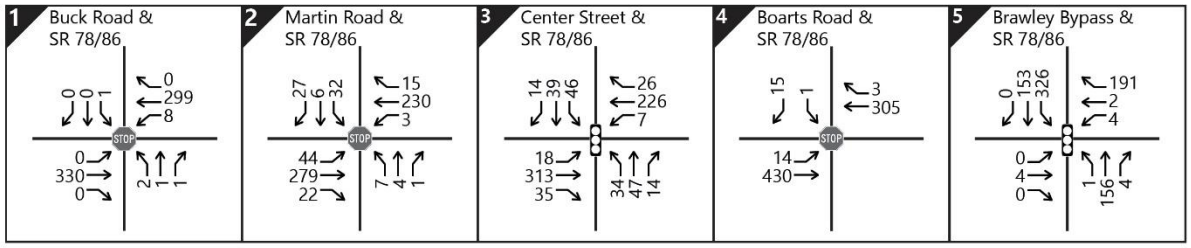
The growth rate is based on the California Economic Forecast *California County-Level Economic Forecast 2017-2050*, dated September 2017 documents an average annual growth factor of 1.8 percent from 2020 to 2025 for Imperial County. Year 2021 traffic data was obtained by factoring the 2019 traffic counts by the application of the 1.8 percent annual growth (5.4 percent for 2020-23). Figure 5.1 illustrates the Project Construction Year background volumes. Figure 5.2 shows the *Construction Year with Project* traffic volumes in the study area.

Figure 5.1 Construction Year Volumes



Near Term Volumes

AM



PM

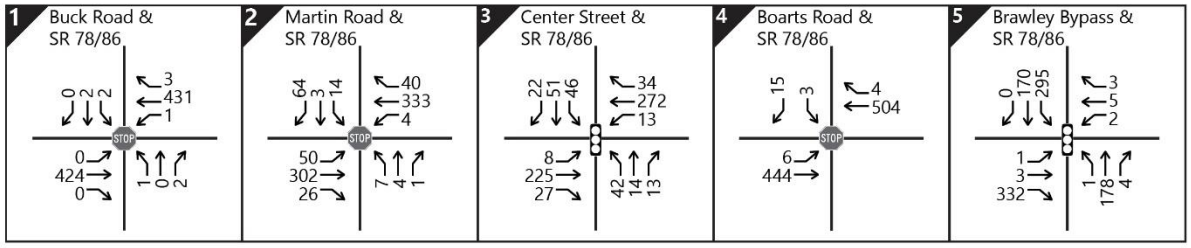
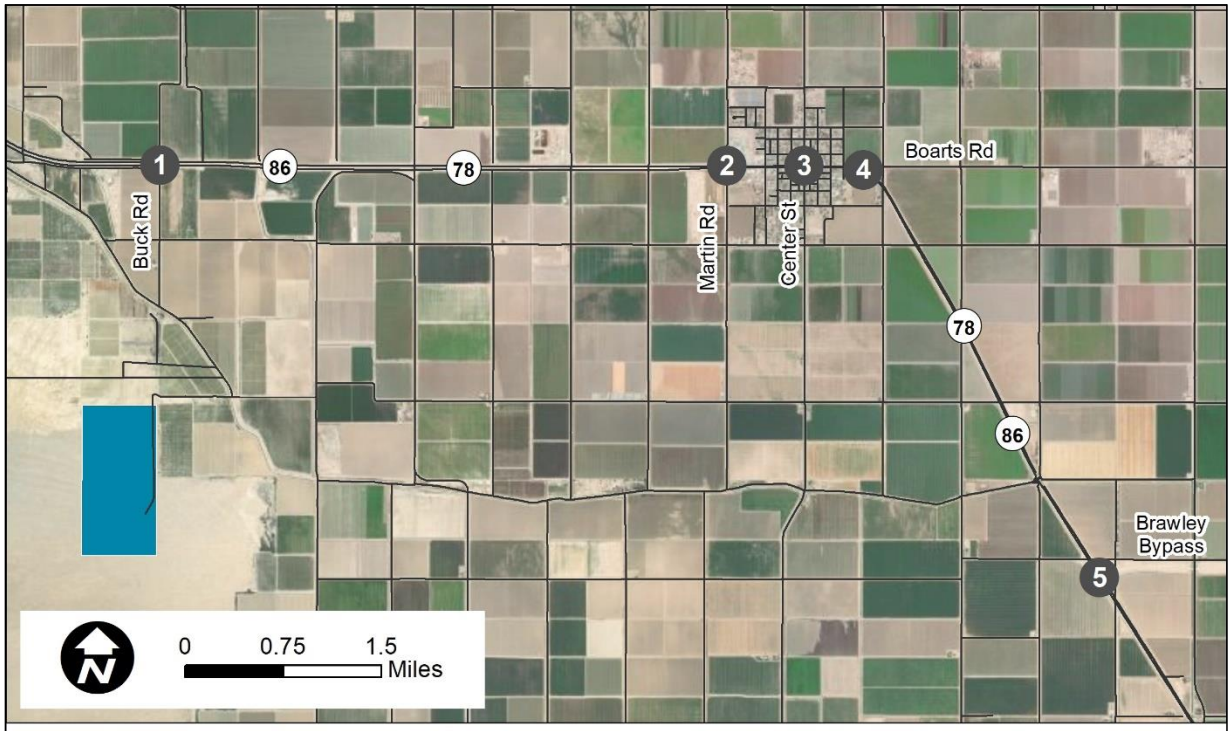
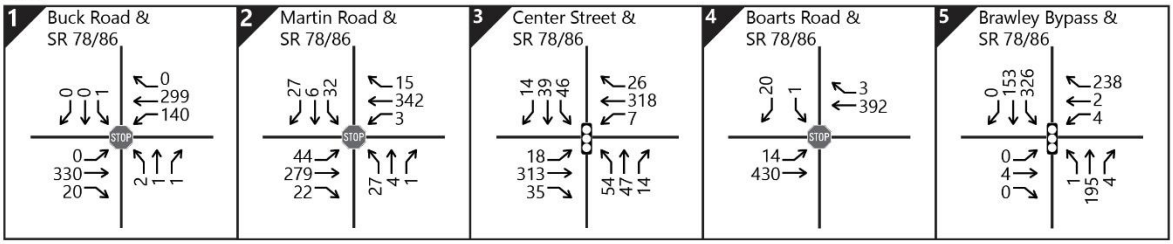


Figure 5.2 Construction Year Plus Project Year Volumes

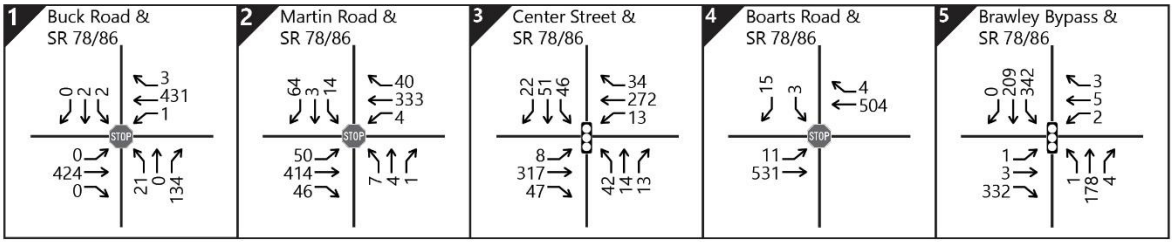


Near Term Plus Project Volumes

AM



PM



The following documents the construction year traffic conditions of study area segments and intersections with and without the project.

Segments

Roadway segment analysis was conducted for the study area's specified segments. Using average daily traffic (ADT) counts, KOA determined the opening year level of service for the designated roadway segments.

Summarized in Table 5.1 are Construction Year and Construction Year plus Project roadway segment average daily traffic volumes and their associated LOS on route segments without and with the project under the near term condition. All roadway segments would operate at LOS B or better with and without the project. Therefore, the project would not result in any significant impacts to any segments within the project study area under the construction year condition.

Table 5.1 Construction Year Roadway Segment Analysis

No.	Road Segment	Roadway Classification	LOS E Capacity	Project Volume	Existing Conditions			Existing + Project Conditions		
					ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS
SR 78										
1	Buck Road to north	Principal Art 4	57,000	42	12,400	0.22	A	12,442	0.22	A
2	Buck Road to Martin Road	Principal Art 4	57,000	278	12,800	0.22	A	13,078	0.23	A
3	Martin Road to Center Street	Principal Art 4	57,000	224	15,300	0.27	A	15,524	0.27	A
4	Center Street to Boarts Road	Principal Art 4	57,000	192	16,400	0.29	A	16,592	0.29	A
5	Boarts Road to Brawley Bypass	Principal Art 4	57,000	182	8,700	0.15	A	8,882	0.16	A
Center St	Baughman Road to SR 78/86	Minor Collector 2	16,200	42	2,330	0.14	A	2,372	0.15	A

Intersections

Table 5.2 summarizes the LOS at each intersection during the AM and PM peak hours under the construction year condition in 2022, without and with the project volumes. The estimated change in project delay associated with the project is also reported. All intersections would operate at a LOS C or better during both AM and PM peak hours with and without the project. Therefore, the project would not result in any significant impacts to any intersections within the project study area under the construction year condition. Detailed LOS worksheets are for the Construction Year are included in Appendix C and for the Construction Year plus Project in Appendix D.

Table 5.2 Construction Year Peak Hour Intersection Analysis

Signals:

#	Intersection	Control	Movement	Near Term Year Conditions			Near Term + Project Conditions				
				Peak Hour	Delay	LOS	Peak Hour	Delay	LOS	Change	Significant
1	SR 78/86 and Buck Road	SSS	WB	AM	13.3	B	AM	19.8	C	6.5	No
				PM	17.5	C	PM	18.9	C	1.4	No
2	SR 78/86 and Martin Road	All Stop	All	AM	14.3	B	AM	16.2	C	1.9	No
				PM	16.7	C	PM	19.2	C	2.5	No
3	SR 78/86 & Center Street	SSS	EB	AM	9.5	A	AM	9.7	A	0.2	No
				PM	9.4	A	PM	9.7	A	0.3	No
4	SR 78/86 & Boarts Road	Signal	All	AM	9.6	A	AM	9.9	A	0.3	No
				PM	11.2	B	PM	11.3	B	0.1	No
5	SR 86 and Brawley Bypass (SR 78)	Signal	All	AM	9.9	A	AM	10.1	B	0.2	No
				PM	11.3	B	PM	11.4	B	0.1	No

Stop Control:

Intersection	Peak Hour	Near Term Year				Near Term + Project			
		NBL	LOS	WBL	LOS	NBL	LOS	WBL	LOS
SR 78/86 and Buck Road	AM	12.9	B	8	A	18.1	C	8.5	A
	PM	11.8	B	8.3	A	12.5	B	8.3	A
		NBL		**WBL**		**NBL**		**WBL**	
SR 78/86 and Martin Road	AM	14.3	B	7.9	A	16.2	C	7.9	A
	PM	16.7	C	8	A	19.2	C	8.4	A
		EBL		**SWL**		**EBL**		**SWL**	
SR 78/86 & Boarts Road	AM	8	A	9.3	A	7.9	A	9.3	A
	PM	8.6	A	10.1	B	8.5	A	10	B

Delay is in seconds/vehicle. LOS = Level of Service, NBL=Northbound Left Turn, WBL+ Westbound Left Turn, SWLT=Southwest Left Turn

6.0 Circulation

The following section discusses the proposed project's access and circulation characteristics.

Project Access and Circulation

Access to and from the site will be provided from the intersection of SR-78/86 at Buck Road. The access route will include Buck Road between SR 78/86 and Garvey Road, and Garvey Road between Buck Road to Andres Road. Vehicles will cross over the canal on Andre Road. The volumes associated with the development are such that peak hour volumes do not warrant the need for additional storage lanes or storage length for entrances along SR 78/86. Vehicle storage for vehicles exiting the property will accommodated on Buck Road.

Access Route to Site

Parking

The existing parking demand for up to 150 vehicles and for construction equipment will be provided on site.

7.0 Impacts and Mitigation

This traffic impact analysis (TIA) has been prepared to identify the potential traffic impacts associated with constructing a solar photovoltaic (PV) energy generation project and utility-scale battery energy storage system (BESS).

The construction of the project is estimated to take 12 months and would begin in 2022. During the construction phase, at peak construction, for the time when both the PV and BESS project phases are being constructed as the same time, the project is anticipated to generate a maximum of 320 trip ends per day with 153 AM peak hour trips and 153 PM peak hour trips. Following construction, the project will not generate additional daily or peak hour trips beyond occasional maintenance. The project opening is anticipated to be 2023.

The project is not expected to create significant impacts at study intersections or study segments, therefore no mitigation measures are required. All study intersections and segments were found to operate at LOS C or better for all of the traffic scenarios analyzed.

APPENDIX A: TRAFFIC COUNT DATA

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Imperial
N/S: Buck Road
E/W: SR-78 & SR-86
Weather: Clear

File Name : 01_CIM_Buck_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021

Groups Printed- Total Volume

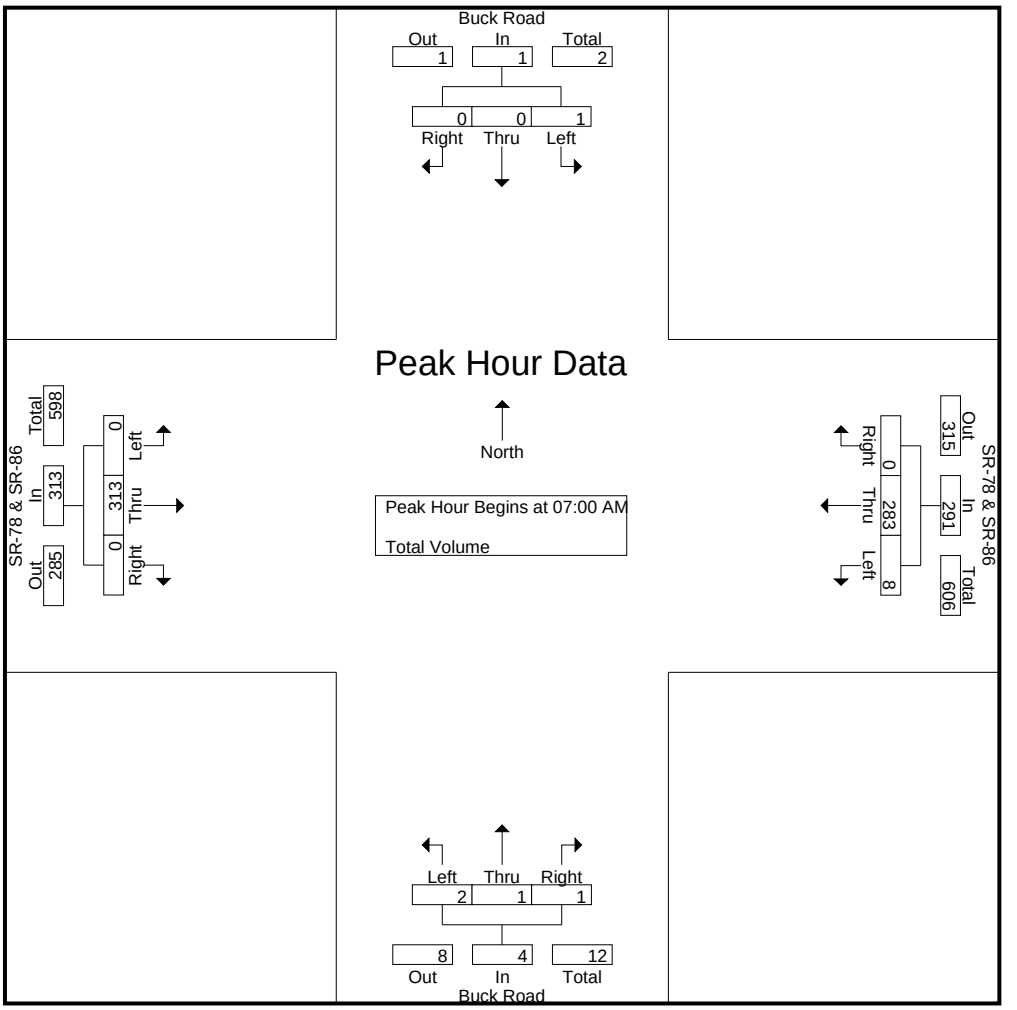
	Buck Road Southbound				SR-78 & SR-86 Westbound				Buck Road Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	5	67	0	72	1	0	1	2	0	72	0	72	146
07:15 AM	0	0	0	0	0	76	0	76	1	0	0	1	0	79	0	79	156
07:30 AM	1	0	0	1	1	71	0	72	0	0	0	0	0	79	0	79	152
07:45 AM	0	0	0	0	2	69	0	71	0	1	0	1	0	83	0	83	155
Total	1	0	0	1	8	283	0	291	2	1	1	4	0	313	0	313	609
08:00 AM	1	0	0	1	0	56	1	57	0	0	0	0	0	78	0	78	136
08:15 AM	1	0	0	1	1	67	0	68	0	0	1	1	0	86	0	86	156
08:30 AM	0	0	0	0	0	61	0	61	0	0	1	1	0	82	2	84	146
08:45 AM	0	1	0	1	1	77	2	80	0	0	0	0	0	87	0	87	168
Total	2	1	0	3	2	261	3	266	0	0	2	2	0	333	2	335	606
Grand Total	3	1	0	4	10	544	3	557	2	1	3	6	0	646	2	648	1215
Apprch %	75	25	0		1.8	97.7	0.5		33.3	16.7	50		0	99.7	0.3		
Total %	0.2	0.1	0	0.3	0.8	44.8	0.2	45.8	0.2	0.1	0.2	0.5	0	53.2	0.2	53.3	

	Buck Road Southbound				SR-78 & SR-86 Westbound				Buck Road Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	**5**	67	0	72	**1**	0	**1**	**2**	0	72	0	72	146
07:15 AM	0	0	0	0	0	**76**	0	**76**	1	0	0	1	0	79	0	79	**156**
07:30 AM	**1**	0	0	**1**	1	71	0	72	0	0	0	0	0	79	0	79	152
07:45 AM	0	0	0	0	2	69	0	71	0	**1**	0	1	0	**83**	0	**83**	155
Total Volume	1	0	0	1	8	283	0	291	2	1	1	4	0	313	0	313	609
% App. Total	100	0	0		2.7	97.3	0		50	25	25		0	100	0		
PHF	.250	.000	.000	.250	.400	.931	.000	.957	.500	.250	.250	.500	.000	.943	.000	.943	.976

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Imperial
N/S: Buck Road
E/W: SR-78 & SR-86
Weather: Clear

File Name : 01_CIM_Buck_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	**1**	0	0	**1**	**5**	67	0	72	**1**	0	**1**	**2**	0	78	0	78
+15 mins.	0	0	0	0	0	**76**	0	**76**	1	0	0	1	0	86	0	86
+30 mins.	1	0	0	1	1	71	0	72	0	0	0	0	0	82	**2**	84
+45 mins.	1	0	0	1	2	69	0	71	0	**1**	0	1	0	**87**	0	**87**
Total Volume	3	0	0	3	8	283	0	291	2	1	1	4	0	333	2	335
% App. Total	100	0	0		2.7	97.3	0		50	25	25		0	99.4	0.6	
PHF	.750	.000	.000	.750	.400	.931	.000	.957	.500	.250	.250	.500	.000	.957	.250	.963

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Imperial
N/S: Buck Road
E/W: SR-78 & SR-86
Weather: Clear

File Name : 01_CIM_Buck_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021

Groups Printed- Total Volume

	Buck Road Southbound				SR-78 & SR-86 Westbound				Buck Road Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	0	1	1	80	0	81	0	0	1	1	0	110	0	110	193
04:15 PM	1	0	0	1	0	120	1	121	0	0	0	0	0	96	0	96	218
04:30 PM	0	0	0	0	0	89	1	90	1	0	1	2	0	91	0	91	183
04:45 PM	0	2	0	2	0	120	1	121	0	0	0	0	0	105	0	105	228
Total	2	2	0	4	1	409	3	413	1	0	2	3	0	402	0	402	822
05:00 PM	0	0	0	0	0	97	0	97	0	0	0	0	0	91	0	91	188
05:15 PM	0	0	0	0	1	77	1	79	0	0	1	1	0	99	1	100	180
05:30 PM	0	1	0	1	0	90	0	90	0	0	5	5	0	84	0	84	180
05:45 PM	0	1	0	1	0	77	0	77	0	0	3	3	0	70	0	70	151
Total	0	2	0	2	1	341	1	343	0	0	9	9	0	344	1	345	699
Grand Total	2	4	0	6	2	750	4	756	1	0	11	12	0	746	1	747	1521
Apprch %	33.3	66.7	0		0.3	99.2	0.5		8.3	0	91.7		0	99.9	0.1		
Total %	0.1	0.3	0	0.4	0.1	49.3	0.3	49.7	0.1	0	0.7	0.8	0	49	0.1	49.1	

	Buck Road Southbound				SR-78 & SR-86 Westbound				Buck Road Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**1**	0	0	1	**1**	80	0	81	0	0	**1**	1	0	**110**	0	**110**	193
04:15 PM	1	0	0	1	0	**120**	**1**	**121**	0	0	0	0	0	96	0	96	218
04:30 PM	0	0	0	0	0	89	1	90	**1**	0	1	**2**	0	91	0	91	183
04:45 PM	0	**2**	0	**2**	0	120	1	121	0	0	0	0	0	105	0	105	**228**
Total Volume	2	2	0	4	1	409	3	413	1	0	2	3	0	402	0	402	822
% App. Total	50	50	0		0.2	99	0.7		33.3	0	66.7		0	100	0		
PHF	.500	.250	.000	.500	.250	.852	.750	.853	.250	.000	.500	.375	.000	.914	.000	.914	.901

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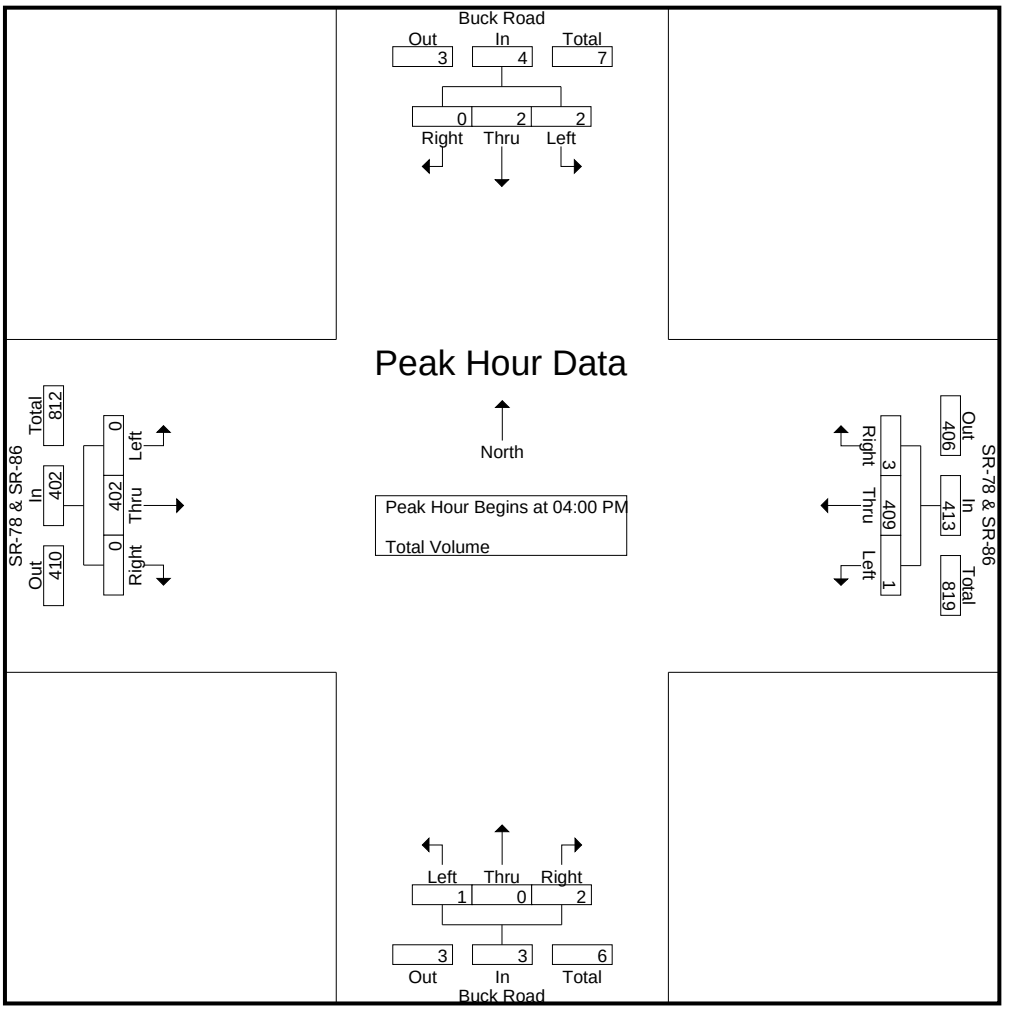
County of Imperial
N/S: Buck Road
E/W: SR-78 & SR-86
Weather: Clear

File Name : 01_CIM_Buck_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				05:00 PM				04:00 PM			
+0 mins.	**1**	0	0	1	0	**120**	**1**	**121**	0	0	0	0	0	**110**	0	**110**
+15 mins.	1	0	0	1	0	89	1	90	0	0	1	1	0	96	0	96
+30 mins.	0	0	0	0	0	120	1	121	0	0	**5**	**5**	0	91	0	91
+45 mins.	0	**2**	0	**2**	0	97	0	97	0	0	3	3	0	105	0	105
Total Volume	2	2	0	4	0	426	3	429	0	0	9	9	0	402	0	402
% App. Total	50	50	0		0	99.3	0.7		0	0	100		0	100	0	
PHF	.500	.250	.000	.500	.000	.888	.750	.886	.000	.000	.450	.450	.000	.914	.000	.914

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County of Imperial
N/S: Martin Road
E/W: SR-78 & SR-86
Weather: Clear

File Name : 02_CIM_Martin_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Total Volume

	Martin Road Southbound				SR-78 & SR-86 Westbound				Martin Road Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	2	7	13	1	46	7	54	3	2	0	5	5	58	1	64	136
07:15 AM	6	2	13	21	0	50	1	51	1	0	0	1	9	66	1	76	149
07:30 AM	14	4	10	28	0	58	2	60	2	1	1	4	11	63	7	81	173
07:45 AM	5	2	6	13	1	51	2	54	3	3	1	7	4	68	2	74	148
Total	29	10	36	75	2	205	12	219	9	6	2	17	29	255	11	295	606
08:00 AM	5	1	1	7	0	38	1	39	1	2	0	3	9	59	5	73	122
08:15 AM	4	4	9	17	1	61	3	65	1	2	1	4	13	70	5	88	174
08:30 AM	13	1	9	23	2	46	2	50	2	0	0	2	9	61	7	77	152
08:45 AM	8	0	7	15	0	73	8	81	3	0	0	3	11	74	4	89	188
Total	30	6	26	62	3	218	14	235	7	4	1	12	42	264	21	327	636
Grand Total	59	16	62	137	5	423	26	454	16	10	3	29	71	519	32	622	1242
Apprch %	43.1	11.7	45.3		1.1	93.2	5.7		55.2	34.5	10.3		11.4	83.4	5.1		
Total %	4.8	1.3	5	11	0.4	34.1	2.1	36.6	1.3	0.8	0.2	2.3	5.7	41.8	2.6	50.1	

	Martin Road Southbound				SR-78 & SR-86 Westbound				Martin Road Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	5	1	1	7	0	38	1	39	1	**2**	0	3	9	59	5	73	122
08:15 AM	4	**4**	**9**	17	1	61	3	65	1	2	**1**	**4**	**13**	70	5	88	174
08:30 AM	**13**	1	9	**23**	**2**	46	2	50	2	0	0	2	9	61	**7**	77	152
08:45 AM	8	0	7	15	0	**73**	**8**	**81**	**3**	0	0	3	11	**74**	4	**89**	**188**
Total Volume	30	6	26	62	3	218	14	235	7	4	1	12	42	264	21	327	636
% App. Total	48.4	9.7	41.9		1.3	92.8	6		58.3	33.3	8.3		12.8	80.7	6.4		
PHF	.577	.375	.722	.674	.375	.747	.438	.725	.583	.500	.250	.750	.808	.892	.750	.919	.846

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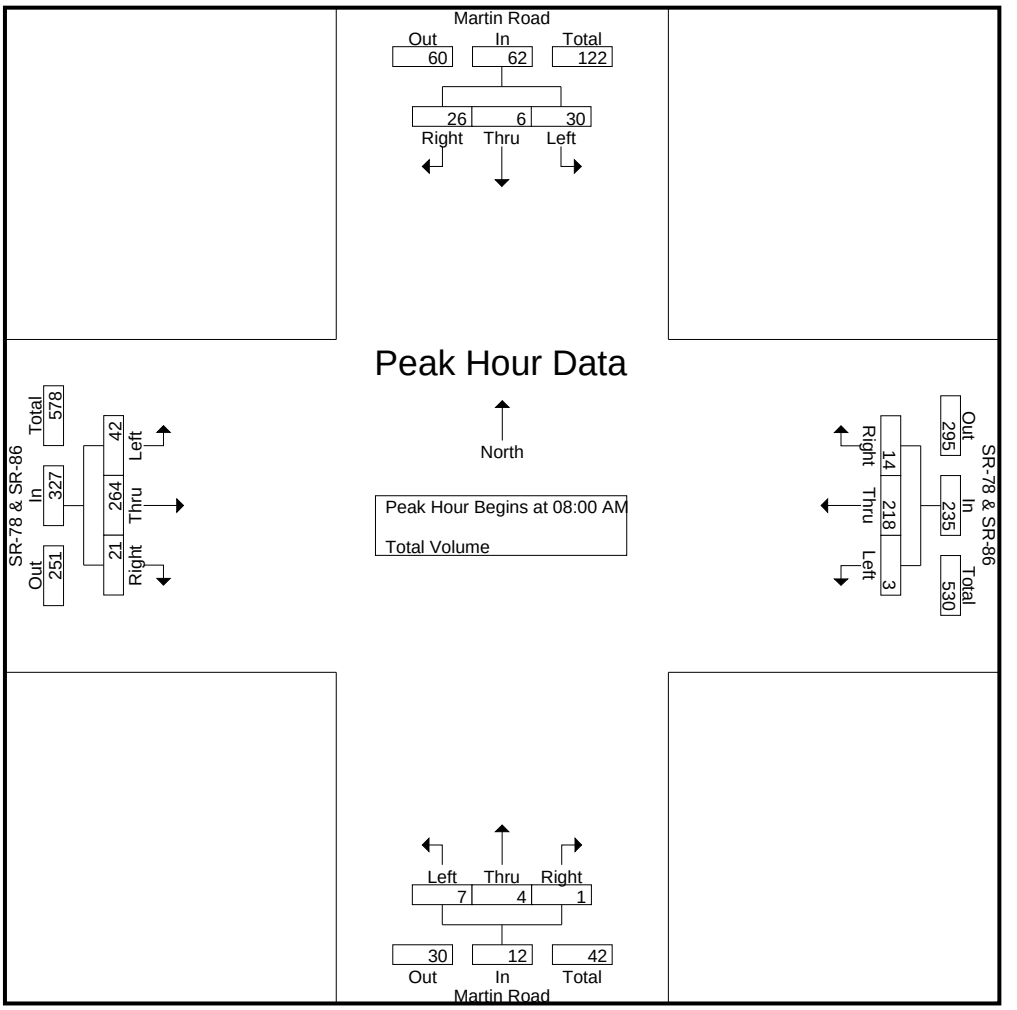
County of Imperial
N/S: Martin Road
E/W: SR-78 & SR-86
Weather: Clear

File Name : 02_CIM_Martin_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:30 AM				08:00 AM			
+0 mins.	4	2	7	13	0	38	1	39	2	1	**1**	4	9	59	5	73
+15 mins.	6	2	**13**	21	1	61	3	65	**3**	**3**	1	**7**	**13**	70	5	88
+30 mins.	**14**	**4**	10	**28**	**2**	46	2	50	1	2	0	3	9	61	**7**	77
+45 mins.	5	2	6	13	0	**73**	**8**	**81**	1	2	1	4	11	**74**	4	**89**
Total Volume	29	10	36	75	3	218	14	235	7	8	3	18	42	264	21	327
% App. Total	38.7	13.3	48		1.3	92.8	6		38.9	44.4	16.7		12.8	80.7	6.4	
PHF	.518	.625	.692	.670	.375	.747	.438	.725	.583	.667	.750	.643	.808	.892	.750	.919

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County of Imperial
N/S: Martin Road
E/W: SR-78 & SR-86
Weather: Clear

File Name : 02_CIM_Martin_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Total Volume

	Martin Road Southbound				SR-78 & SR-86 Westbound				Martin Road Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	0	12	16	1	59	7	67	1	1	0	2	5	89	4	98	183
04:15 PM	3	0	16	19	2	82	12	96	2	0	0	2	10	69	8	87	204
04:30 PM	4	2	11	17	1	78	9	88	2	1	0	3	12	71	6	89	197
04:45 PM	3	1	22	26	1	82	9	92	2	2	0	4	17	69	4	90	212
Total	14	3	61	78	5	301	37	343	7	4	0	11	44	298	22	364	796
05:00 PM	3	0	12	15	0	74	8	82	1	1	1	3	8	77	7	92	192
05:15 PM	6	0	17	23	1	59	12	72	1	1	0	2	6	76	5	87	184
05:30 PM	4	1	12	17	0	67	4	71	5	1	0	6	6	77	2	85	179
05:45 PM	6	0	14	20	2	79	7	88	2	0	0	2	12	59	6	77	187
Total	19	1	55	75	3	279	31	313	9	3	1	13	32	289	20	341	742
Grand Total	33	4	116	153	8	580	68	656	16	7	1	24	76	587	42	705	1538
Apprch %	21.6	2.6	75.8		1.2	88.4	10.4		66.7	29.2	4.2		10.8	83.3	6		
Total %	2.1	0.3	7.5	9.9	0.5	37.7	4.4	42.7	1	0.5	0.1	1.6	4.9	38.2	2.7	45.8	

	Martin Road Southbound				SR-78 & SR-86 Westbound				Martin Road Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	3	0	16	19	**2**	**82**	**12**	**96**	**2**	0	0	2	10	69	**8**	87	204
04:30 PM	**4**	**2**	11	17	1	78	9	88	2	1	0	3	12	71	6	89	197
04:45 PM	3	1	**22**	**26**	1	82	9	92	2	**2**	0	**4**	**17**	69	4	90	**212**
05:00 PM	3	0	12	15	0	74	8	82	1	1	**1**	3	8	**77**	7	**92**	192
Total Volume	13	3	61	77	4	316	38	358	7	4	1	12	47	286	25	358	805
% App. Total	16.9	3.9	79.2		1.1	88.3	10.6		58.3	33.3	8.3		13.1	79.9	7		
PHF	.813	.375	.693	.740	.500	.963	.792	.932	.875	.500	.250	.750	.691	.929	.781	.973	.949

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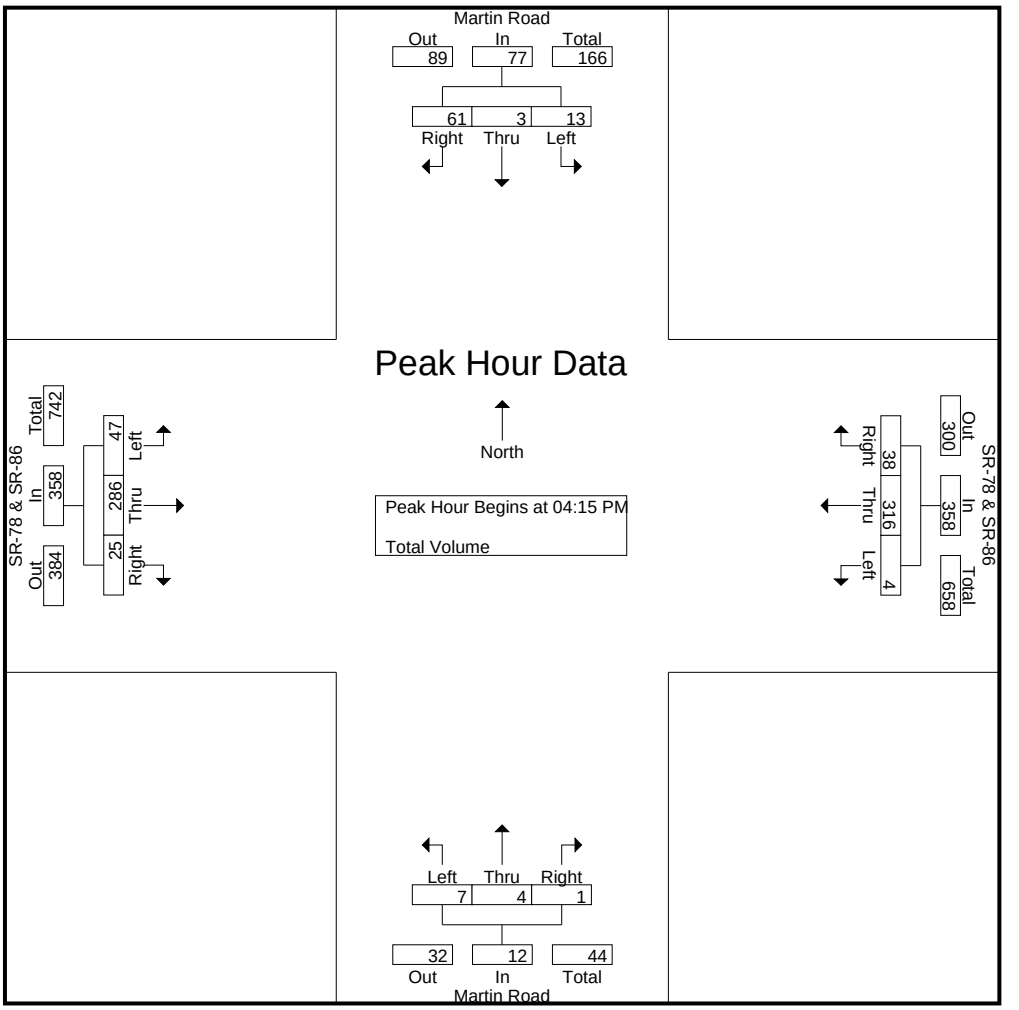
County of Imperial
N/S: Martin Road
E/W: SR-78 & SR-86
Weather: Clear

File Name : 02_CIM_Martin_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				04:45 PM				04:00 PM			
+0 mins.	4	**2**	11	17	**2**	**82**	**12**	**96**	2	**2**	0	4	5	**89**	4	**98**
+15 mins.	3	1	**22**	**26**	1	78	9	88	1	1	**1**	3	10	69	**8**	87
+30 mins.	3	0	12	15	1	82	9	92	1	1	0	2	12	71	6	89
+45 mins.	**6**	0	17	23	0	74	8	82	**5**	1	0	**6**	**17**	69	4	90
Total Volume	16	3	62	81	4	316	38	358	9	5	1	15	44	298	22	364
% App. Total	19.8	3.7	76.5		1.1	88.3	10.6		60	33.3	6.7		12.1	81.9	6	
PHF	.667	.375	.705	.779	.500	.963	.792	.932	.450	.625	.250	.625	.647	.837	.688	.929

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	9	2	4	15	0	41	8	49	10	9	1	20	4	63	5	72	156
07:15 AM	4	4	2	10	0	56	6	62	4	16	2	22	5	76	7	88	182
07:30 AM	13	9	8	30	2	56	8	66	10	3	5	18	5	76	11	92	206
07:45 AM	18	16	2	36	1	52	4	57	8	14	4	26	4	79	10	93	212
Total	44	31	16	91	3	205	26	234	32	42	12	86	18	294	33	345	756
08:00 AM	9	8	1	18	4	50	7	61	10	12	2	24	3	66	5	74	177
08:15 AM	4	5	6	15	6	58	5	69	6	2	6	14	0	78	4	82	180
08:30 AM	5	5	2	12	0	66	3	69	9	7	4	20	4	71	7	82	183
08:45 AM	7	6	7	20	3	68	4	75	14	6	1	21	4	75	1	80	196
Total	25	24	16	65	13	242	19	274	39	27	13	79	11	290	17	318	736
Grand Total	69	55	32	156	16	447	45	508	71	69	25	165	29	584	50	663	1492
Apprch %	44.2	35.3	20.5		3.1	88	8.9		43	41.8	15.2		4.4	88.1	7.5		
Total %	4.6	3.7	2.1	10.5	1.1	30	3	34	4.8	4.6	1.7	11.1	1.9	39.1	3.4	44.4	
Passenger Vehicles	67	55	32	154	15	299	36	350	50	65	22	137	25	376	33	434	1075
% Passenger Vehicles	97.1	100	100	98.7	93.8	66.9	80	68.9	70.4	94.2	88	83	86.2	64.4	66	65.5	72.1
Large 2 Axle Vehicles	1	0	0	1	0	25	6	31	5	2	0	7	1	16	2	19	58
% Large 2 Axle Vehicles	1.4	0	0	0.6	0	5.6	13.3	6.1	7	2.9	0	4.2	3.4	2.7	4	2.9	3.9
3 Axle Vehicles	0	0	0	0	0	7	2	9	0	2	1	3	0	3	0	3	15
% 3 Axle Vehicles	0	0	0	0	0	1.6	4.4	1.8	0	2.9	4	1.8	0	0.5	0	0.5	1
4+ Axle Trucks	1	0	0	1	1	116	1	118	16	0	2	18	3	189	15	207	344
% 4+ Axle Trucks	1.4	0	0	0.6	6.2	26	2.2	23.2	22.5	0	8	10.9	10.3	32.4	30	31.2	23.1

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	4	2	10	0	**56**	6	62	4	**16**	2	22	**5**	76	7	88	182
07:30 AM	13	9	**8**	30	2	56	**8**	**66**	**10**	3	**5**	18	5	76	**11**	92	206
07:45 AM	**18**	**16**	2	**36**	1	52	4	57	8	14	4	**26**	4	**79**	10	**93**	**212**
08:00 AM	9	8	1	18	**4**	50	7	61	10	12	2	24	3	66	5	74	177
Total Volume	44	37	13	94	7	214	25	246	32	45	13	90	17	297	33	347	777
% App. Total	46.8	39.4	13.8		2.8	87	10.2		35.6	50	14.4		4.9	85.6	9.5		
PHF	.611	.578	.406	.653	.438	.955	.781	.932	.800	.703	.650	.865	.850	.940	.750	.933	.916

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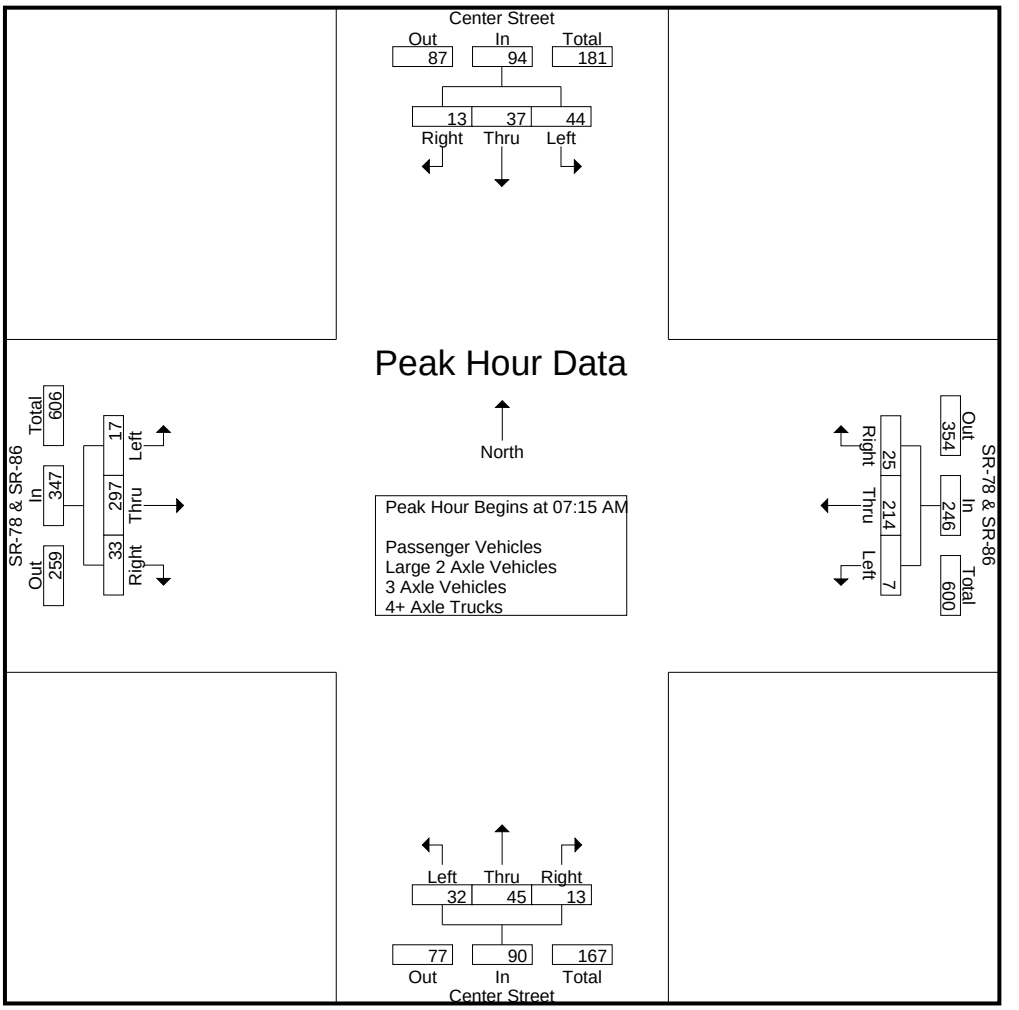
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:15 AM				07:15 AM			
+0 mins.	13	9	**8**	30	4	50	**7**	61	4	**16**	2	22	**5**	76	7	88
+15 mins.	**18**	**16**	2	**36**	**6**	58	5	69	**10**	3	**5**	18	5	76	**11**	92
+30 mins.	9	8	1	18	0	66	3	69	8	14	4	**26**	4	**79**	10	**93**
+45 mins.	4	5	6	15	3	**68**	4	**75**	10	12	2	24	3	66	5	74
Total Volume	44	38	17	99	13	242	19	274	32	45	13	90	17	297	33	347
% App. Total	44.4	38.4	17.2		4.7	88.3	6.9		35.6	50	14.4		4.9	85.6	9.5	
PHF	.611	.594	.531	.688	.542	.890	.679	.913	.800	.703	.650	.865	.850	.940	.750	.933

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	9	2	4	15	0	26	6	32	4	9	0	13	3	33	0	36	96
07:15 AM	4	4	2	10	0	37	5	42	4	15	1	20	5	41	5	51	123
07:30 AM	12	9	8	29	2	33	5	40	8	3	5	16	3	54	9	66	151
07:45 AM	17	16	2	35	1	42	3	46	5	13	3	21	3	51	8	62	164
Total	42	31	16	89	3	138	19	160	21	40	9	70	14	179	22	215	534
08:00 AM	9	8	1	18	4	35	6	45	8	12	2	22	3	41	2	46	131
08:15 AM	4	5	6	15	5	40	5	50	3	2	6	11	0	50	4	54	130
08:30 AM	5	5	2	12	0	38	2	40	7	5	4	16	4	51	5	60	128
08:45 AM	7	6	7	20	3	48	4	55	11	6	1	18	4	55	0	59	152
Total	25	24	16	65	12	161	17	190	29	25	13	67	11	197	11	219	541
Grand Total	67	55	32	154	15	299	36	350	50	65	22	137	25	376	33	434	1075
Apprch %	43.5	35.7	20.8		4.3	85.4	10.3		36.5	47.4	16.1		5.8	86.6	7.6		
Total %	6.2	5.1	3	14.3	1.4	27.8	3.3	32.6	4.7	6	2	12.7	2.3	35	3.1	40.4	

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	4	2	10	0	37	5	42	4	**15**	1	20	**5**	41	5	51	123
07:30 AM	12	9	**8**	29	2	33	5	40	**8**	3	**5**	16	3	**54**	**9**	**66**	151
07:45 AM	**17**	**16**	2	**35**	1	**42**	3	**46**	5	13	3	21	3	51	8	62	**164**
08:00 AM	9	8	1	18	**4**	35	**6**	45	8	12	2	**22**	3	41	2	46	131
Total Volume	42	37	13	92	7	147	19	173	25	43	11	79	14	187	24	225	569
% App. Total	45.7	40.2	14.1		4	85	11		31.6	54.4	13.9		6.2	83.1	10.7		
PHF	.618	.578	.406	.657	.438	.875	.792	.940	.781	.717	.550	.898	.700	.866	.667	.852	.867

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
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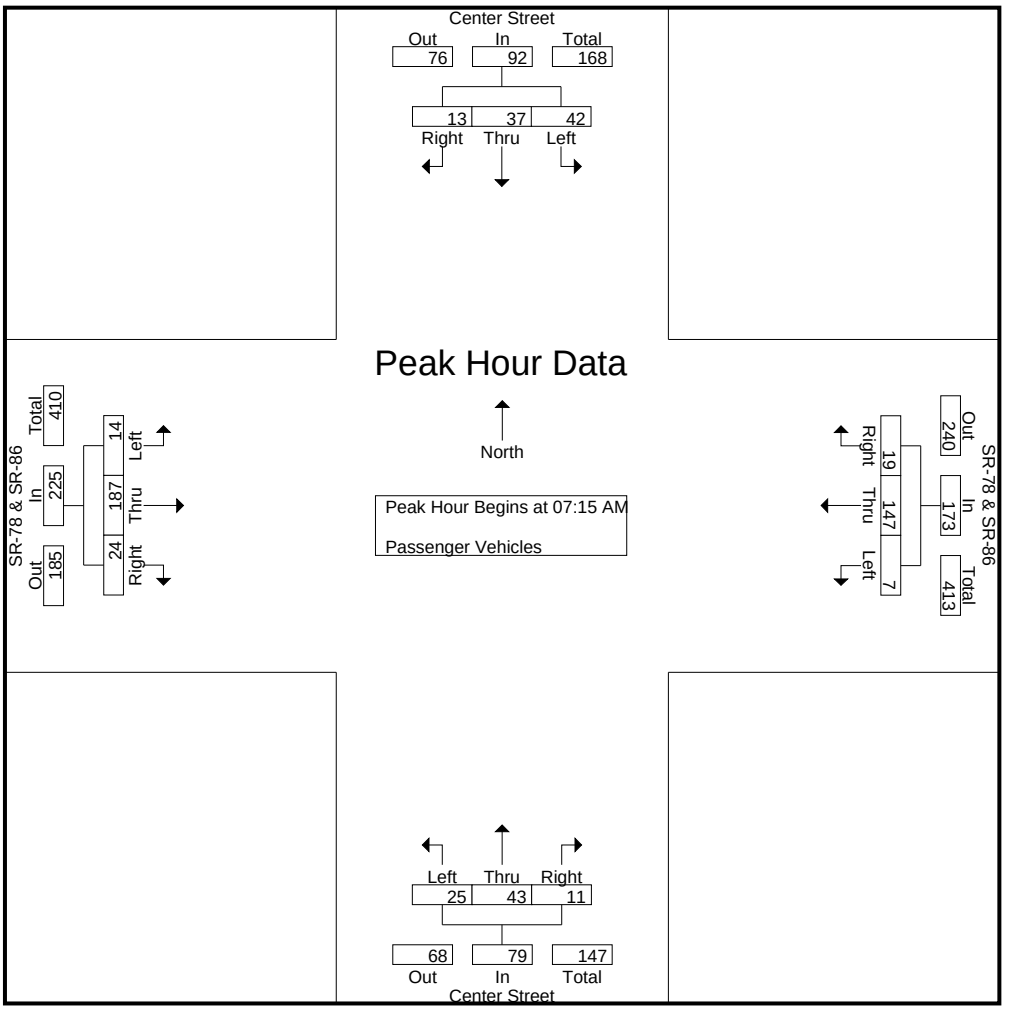

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	4	4	2	10	0	37	5	42	4	**15**	1	20	**5**	41	5	51
+15 mins.	12	9	**8**	29	2	33	5	40	**8**	3	**5**	16	3	**54**	**9**	**66**
+30 mins.	**17**	**16**	2	**35**	1	**42**	3	**46**	5	13	3	21	3	51	8	62
+45 mins.	9	8	1	18	**4**	35	**6**	45	8	12	2	**22**	3	41	2	46
Total Volume	42	37	13	92	7	147	19	173	25	43	11	79	14	187	24	225
% App. Total	45.7	40.2	14.1		4	85	11		31.6	54.4	13.9		6.2	83.1	10.7	
PHF	.618	.578	.406	.657	.438	.875	.792	.940	.781	.717	.550	.898	.700	.866	.667	.852

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	2	6	2	0	0	2	0	2	1	3	11
07:15 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
07:30 AM	0	0	0	0	0	4	2	6	1	0	0	1	0	0	0	0	7
07:45 AM	1	0	0	1	0	3	1	4	1	1	0	2	1	2	0	3	10
Total	1	0	0	1	0	16	5	21	4	1	0	5	1	6	1	8	35
08:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	2	0	2	5
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	4	0	4	5
08:30 AM	0	0	0	0	0	7	0	7	0	1	0	1	0	2	0	2	10
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3
Total	0	0	0	0	0	9	1	10	1	1	0	2	0	10	1	11	23
Grand Total	1	0	0	1	0	25	6	31	5	2	0	7	1	16	2	19	58
Apprch %	100	0	0		0	80.6	19.4		71.4	28.6	0		5.3	84.2	10.5		
Total %	1.7	0	0	1.7	0	43.1	10.3	53.4	8.6	3.4	0	12.1	1.7	27.6	3.4	32.8	

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**5**	0	5	0	0	0	0	0	**2**	0	2	7
07:30 AM	0	0	0	0	0	4	**2**	**6**	**1**	0	0	1	0	0	0	0	7
07:45 AM	**1**	0	0	**1**	0	3	1	4	1	**1**	0	**2**	**1**	2	0	**3**	**10**
08:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	2	0	2	5
Total Volume	1	0	0	1	0	14	4	18	2	1	0	3	1	6	0	7	29
% App. Total	100	0	0		0	77.8	22.2		66.7	33.3	0		14.3	85.7	0		
PHF	.250	.000	.000	.250	.000	.700	.500	.750	.500	.250	.000	.375	.250	.750	.000	.583	.725

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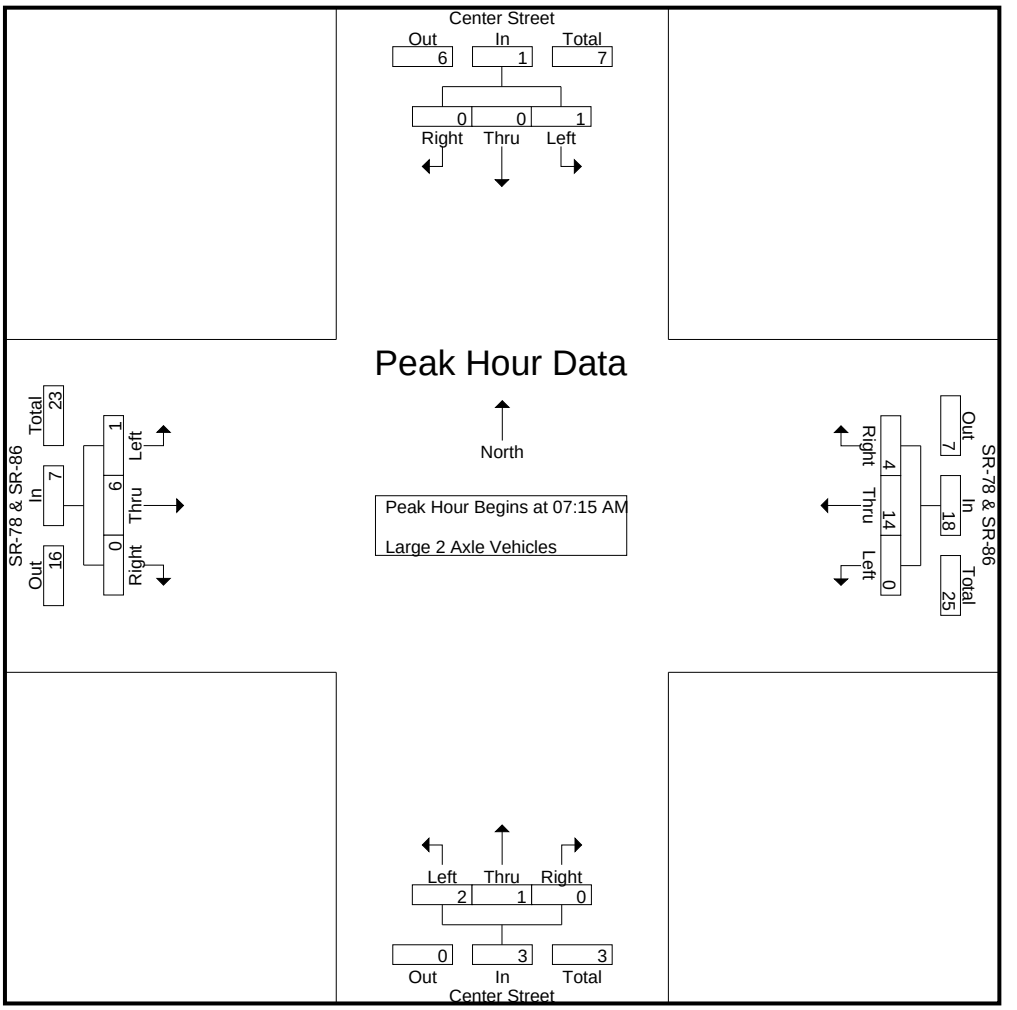
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**5**	0	5	0	0	0	0	0	**2**	0	2
+15 mins.	0	0	0	0	0	4	**2**	**6**	**1**	0	0	1	0	0	0	0
+30 mins.	**1**	0	0	**1**	0	3	1	4	1	**1**	0	**2**	**1**	2	0	**3**
+45 mins.	0	0	0	0	0	2	1	3	0	0	0	0	0	2	0	2
Total Volume	1	0	0	1	0	14	4	18	2	1	0	3	1	6	0	7
% App. Total	100	0	0		0	77.8	22.2		66.7	33.3	0		14.3	85.7	0	
PHF	.250	.000	.000	.250	.000	.700	.500	.750	.500	.250	.000	.375	.250	.750	.000	.583

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	2	0	2	4
07:30 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	4	2	6	0	1	1	2	0	2	0	2	10
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	3	0	3	0	1	0	1	0	1	0	1	5
Grand Total	0	0	0	0	0	7	2	9	0	2	1	3	0	3	0	3	15
Apprch %	0	0	0		0	77.8	22.2		0	66.7	33.3		0	100	0		
Total %	0	0	0	0	0	46.7	13.3	60	0	13.3	6.7	20	0	20	0	20	

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	**1**	1	0	**1**	0	**1**	0	**2**	0	**2**	**4**
07:30 AM	0	0	0	0	0	1	1	**2**	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	**2**	0	2	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	4	2	6	0	1	0	1	0	3	0	3	10
% App. Total	0	0	0		0	66.7	33.3		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.500	.750	.000	.250	.000	.250	.000	.375	.000	.375	.625

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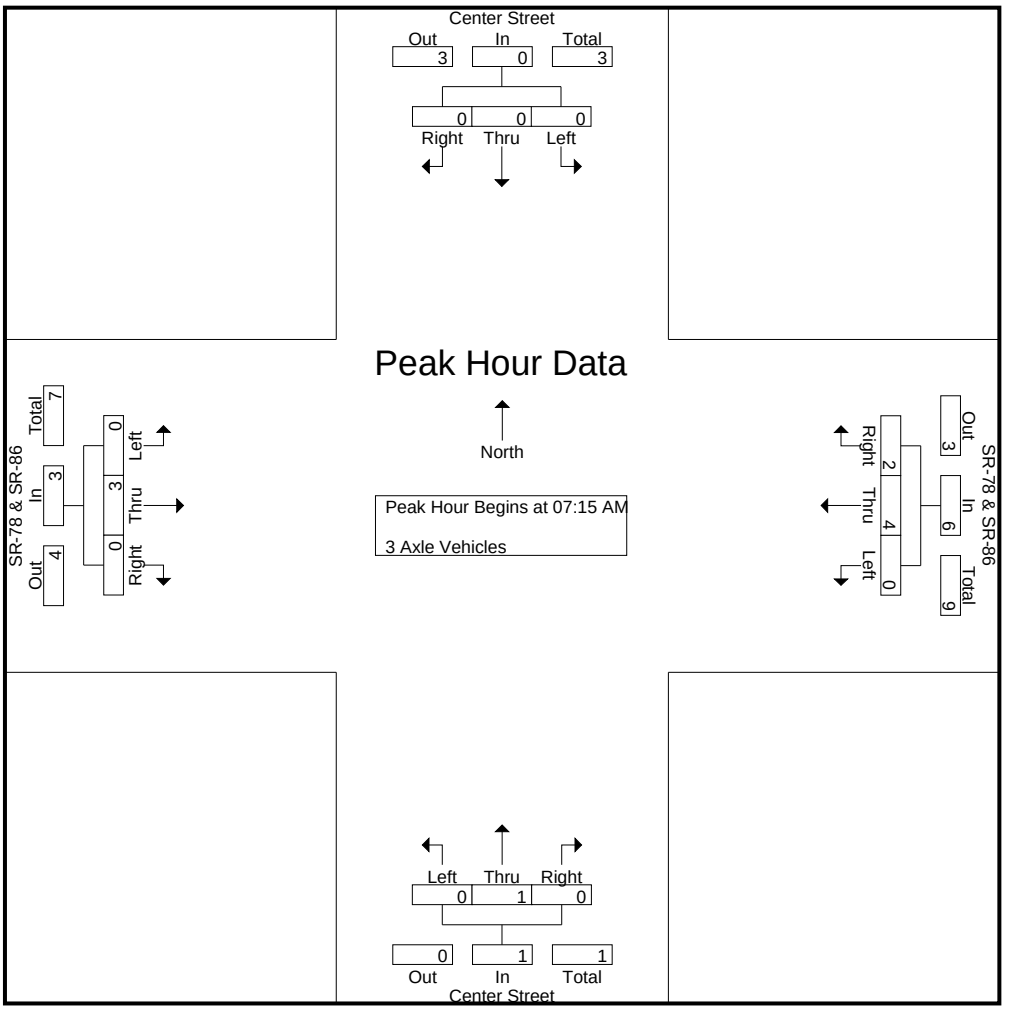
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	**1**	1	0	**1**	0	**1**	0	**2**	0	**2**
+15 mins.	0	0	0	0	0	1	1	**2**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	**2**	0	2	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	4	2	6	0	1	0	1	0	3	0	3
% App. Total	0	0	0		0	66.7	33.3		0	100	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.500	.500	.750	.000	.250	.000	.250	.000	.375	.000	.375

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	10	0	10	4	0	0	4	1	28	4	33	47
07:15 AM	0	0	0	0	0	14	0	14	0	0	1	1	0	31	2	33	48
07:30 AM	1	0	0	1	0	18	0	18	1	0	0	1	2	22	2	26	46
07:45 AM	0	0	0	0	0	5	0	5	2	0	1	3	0	26	2	28	36
Total	1	0	0	1	0	47	0	47	7	0	2	9	3	107	10	120	177
08:00 AM	0	0	0	0	0	12	0	12	2	0	0	2	0	22	3	25	39
08:15 AM	0	0	0	0	1	18	0	19	2	0	0	2	0	24	0	24	45
08:30 AM	0	0	0	0	0	21	1	22	2	0	0	2	0	18	2	20	44
08:45 AM	0	0	0	0	0	18	0	18	3	0	0	3	0	18	0	18	39
Total	0	0	0	0	1	69	1	71	9	0	0	9	0	82	5	87	167
Grand Total	1	0	0	1	1	116	1	118	16	0	2	18	3	189	15	207	344
Apprch %	100	0	0		0.8	98.3	0.8		88.9	0	11.1		1.4	91.3	7.2		
Total %	0.3	0	0	0.3	0.3	33.7	0.3	34.3	4.7	0	0.6	5.2	0.9	54.9	4.4	60.2	

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	14	0	14	0	0	**1**	1	0	**31**	2	**33**	**48**
07:30 AM	**1**	0	0	**1**	0	**18**	0	**18**	1	0	0	1	**2**	22	2	26	46
07:45 AM	0	0	0	0	0	5	0	5	**2**	0	1	**3**	0	26	2	28	36
08:00 AM	0	0	0	0	0	12	0	12	2	0	0	2	0	22	**3**	25	39
Total Volume	1	0	0	1	0	49	0	49	5	0	2	7	2	101	9	112	169
% App. Total	100	0	0		0	100	0		71.4	0	28.6		1.8	90.2	8		
PHF	.250	.000	.000	.250	.000	.681	.000	.681	.625	.000	.500	.583	.250	.815	.750	.848	.880

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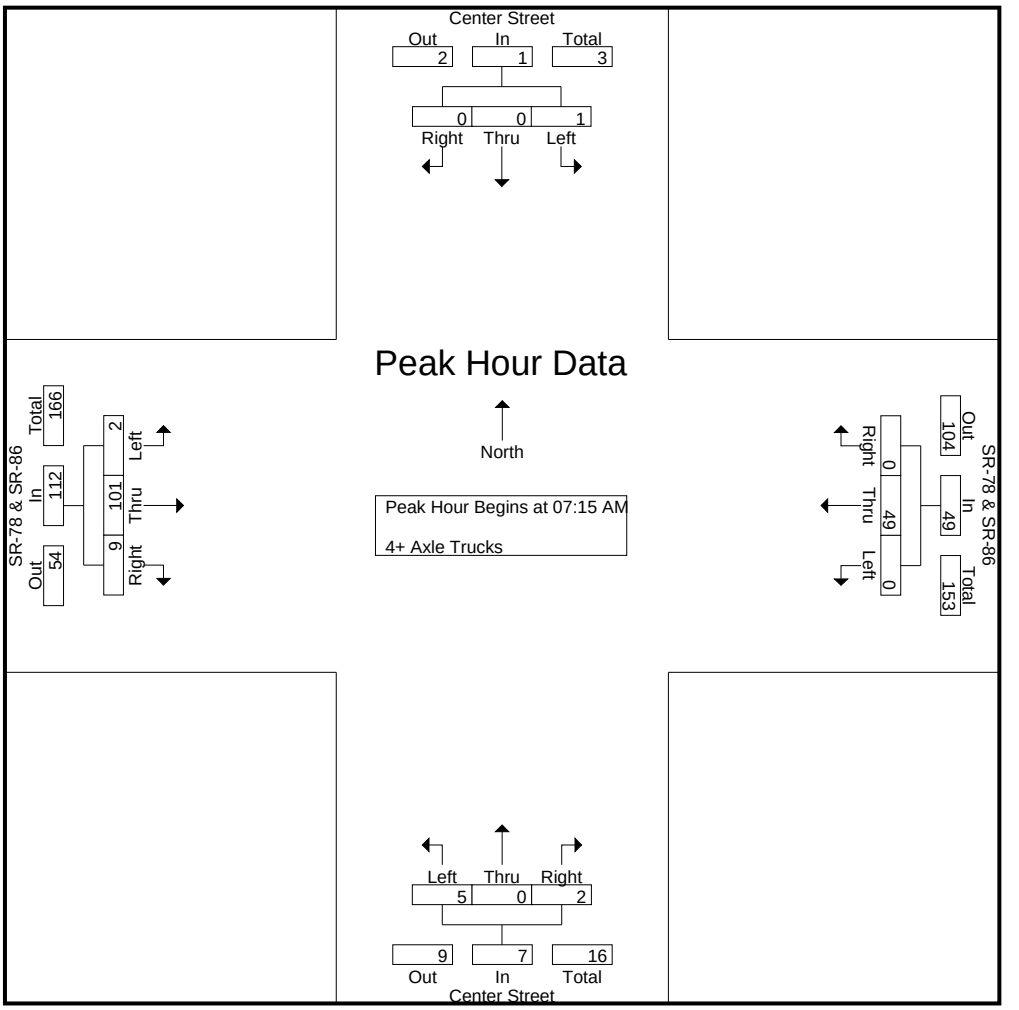
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	14	0	14	0	0	**1**	1	0	**31**	2	**33**
+15 mins.	**1**	0	0	**1**	0	**18**	0	**18**	1	0	0	1	**2**	22	2	26
+30 mins.	0	0	0	0	0	5	0	5	**2**	0	1	**3**	0	26	2	28
+45 mins.	0	0	0	0	0	12	0	12	2	0	0	2	0	22	**3**	25
Total Volume	1	0	0	1	0	49	0	49	5	0	2	7	2	101	9	112
% App. Total	100	0	0		0	100	0		71.4	0	28.6		1.8	90.2	8	
PHF	.250	.000	.000	.250	.000	.681	.000	.681	.625	.000	.500	.583	.250	.815	.750	.848

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	15	10	29	4	73	7	84	17	7	0	24	1	84	6	91	228
04:15 PM	16	14	11	41	3	92	8	103	15	6	3	24	2	86	8	96	264
04:30 PM	11	12	4	27	3	98	8	109	9	6	1	16	3	73	10	86	238
04:45 PM	11	13	6	30	4	102	11	117	16	2	4	22	1	89	6	96	265
Total	42	54	31	127	14	365	34	413	57	21	8	86	7	332	30	369	995
05:00 PM	10	11	4	25	2	94	8	104	15	2	4	21	2	79	6	87	237
05:15 PM	16	6	5	27	5	72	6	83	11	6	3	20	1	88	9	98	228
05:30 PM	7	3	10	20	2	79	6	87	12	7	1	20	4	86	7	97	224
05:45 PM	11	6	8	25	4	81	2	87	7	4	3	14	4	70	4	78	204
Total	44	26	27	97	13	326	22	361	45	19	11	75	11	323	26	360	893
Grand Total	86	80	58	224	27	691	56	774	102	40	19	161	18	655	56	729	1888
Apprch %	38.4	35.7	25.9		3.5	89.3	7.2		63.4	24.8	11.8		2.5	89.8	7.7		
Total %	4.6	4.2	3.1	11.9	1.4	36.6	3	41	5.4	2.1	1	8.5	1	34.7	3	38.6	
Passenger Vehicles	81	76	54	211	27	461	51	539	65	36	19	120	18	448	45	511	1381
% Passenger Vehicles	94.2	95	93.1	94.2	100	66.7	91.1	69.6	63.7	90	100	74.5	100	68.4	80.4	70.1	73.1
Large 2 Axle Vehicles	4	0	3	7	0	14	4	18	1	0	0	1	0	9	0	9	35
% Large 2 Axle Vehicles	4.7	0	5.2	3.1	0	2	7.1	2.3	1	0	0	0.6	0	1.4	0	1.2	1.9
3 Axle Vehicles	0	3	0	3	0	5	1	6	1	0	0	1	0	6	0	6	16
% 3 Axle Vehicles	0	3.8	0	1.3	0	0.7	1.8	0.8	1	0	0	0.6	0	0.9	0	0.8	0.8
4+ Axle Trucks	1	1	1	3	0	211	0	211	35	4	0	39	0	192	11	203	456
% 4+ Axle Trucks	1.2	1.2	1.7	1.3	0	30.5	0	27.3	34.3	10	0	24.2	0	29.3	19.6	27.8	24.2

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**16**	**14**	**11**	**41**	3	92	8	103	15	**6**	3	**24**	2	86	8	**96**	264
04:30 PM	11	12	4	27	3	98	8	109	9	6	1	16	**3**	73	**10**	86	238
04:45 PM	11	13	6	30	**4**	**102**	**11**	**117**	**16**	2	**4**	22	1	**89**	6	96	**265**
05:00 PM	10	11	4	25	2	94	8	104	15	2	4	21	2	79	6	87	237
Total Volume	48	50	25	123	12	386	35	433	55	16	12	83	8	327	30	365	1004
% App. Total	39	40.7	20.3		2.8	89.1	8.1		66.3	19.3	14.5		2.2	89.6	8.2		
PHF	.750	.893	.568	.750	.750	.946	.795	.925	.859	.667	.750	.865	.667	.919	.750	.951	.947

Counts Unlimited, Inc.
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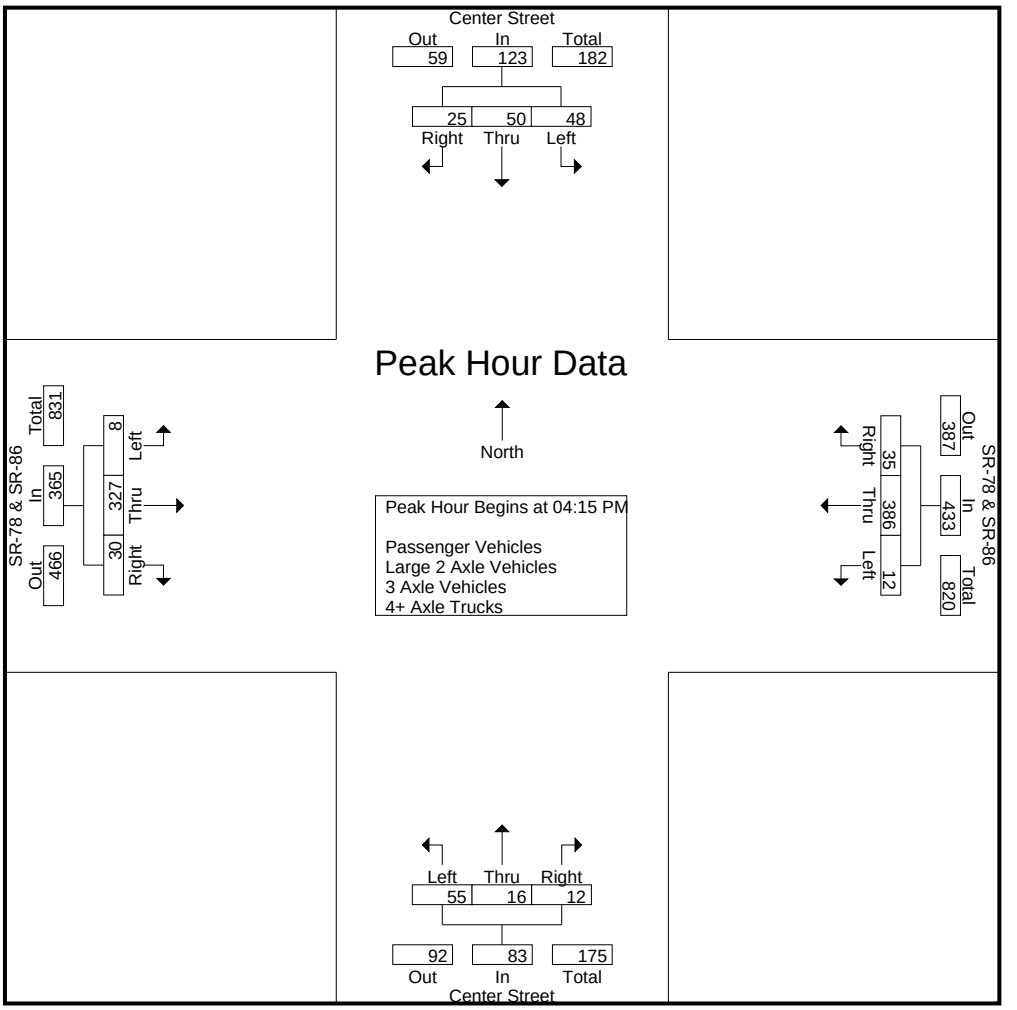
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:45 PM			
+0 mins.	4	**15**	10	29	3	92	8	103	**17**	**7**	0	**24**	1	**89**	6	96
+15 mins.	**16**	14	**11**	**41**	3	98	8	109	15	6	3	24	2	79	6	87
+30 mins.	11	12	4	27	**4**	**102**	**11**	**117**	9	6	1	16	1	88	**9**	**98**
+45 mins.	11	13	6	30	2	94	8	104	16	2	**4**	22	**4**	86	7	97
Total Volume	42	54	31	127	12	386	35	433	57	21	8	86	8	342	28	378
% App. Total	33.1	42.5	24.4		2.8	89.1	8.1		66.3	24.4	9.3		2.1	90.5	7.4	
PHF	.656	.900	.705	.774	.750	.946	.795	.925	.838	.750	.500	.896	.500	.961	.778	.964

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Corona, CA 92878
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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	15	10	29	4	48	7	59	8	6	0	14	1	56	6	63	165
04:15 PM	15	13	7	35	3	61	7	71	10	6	3	19	2	63	7	72	197
04:30 PM	10	12	4	26	3	68	7	78	8	4	1	13	3	43	8	54	171
04:45 PM	10	13	6	29	4	64	11	79	12	2	4	18	1	57	6	64	190
Total	39	53	27	119	14	241	32	287	38	18	8	64	7	219	27	253	723
05:00 PM	9	10	4	23	2	65	7	74	10	1	4	15	2	50	5	57	169
05:15 PM	16	4	5	25	5	47	4	56	5	6	3	14	1	64	5	70	165
05:30 PM	6	3	10	19	2	56	6	64	9	7	1	17	4	63	5	72	172
05:45 PM	11	6	8	25	4	52	2	58	3	4	3	10	4	52	3	59	152
Total	42	23	27	92	13	220	19	252	27	18	11	56	11	229	18	258	658
Grand Total	81	76	54	211	27	461	51	539	65	36	19	120	18	448	45	511	1381
Apprch %	38.4	36	25.6		5	85.5	9.5		54.2	30	15.8		3.5	87.7	8.8		
Total %	5.9	5.5	3.9	15.3	2	33.4	3.7	39	4.7	2.6	1.4	8.7	1.3	32.4	3.3	37	

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**15**	**13**	**7**	**35**	3	61	7	71	10	**6**	3	**19**	2	**63**	7	**72**	**197**
04:30 PM	10	12	4	26	3	**68**	7	78	8	4	1	13	**3**	43	**8**	54	171
04:45 PM	10	13	6	29	**4**	64	**11**	**79**	**12**	2	**4**	18	1	57	6	64	190
05:00 PM	9	10	4	23	2	65	7	74	10	1	4	15	2	50	5	57	169
Total Volume	44	48	21	113	12	258	32	302	40	13	12	65	8	213	26	247	727
% App. Total	38.9	42.5	18.6		4	85.4	10.6		61.5	20	18.5		3.2	86.2	10.5		
PHF	.733	.923	.750	.807	.750	.949	.727	.956	.833	.542	.750	.855	.667	.845	.813	.858	.923

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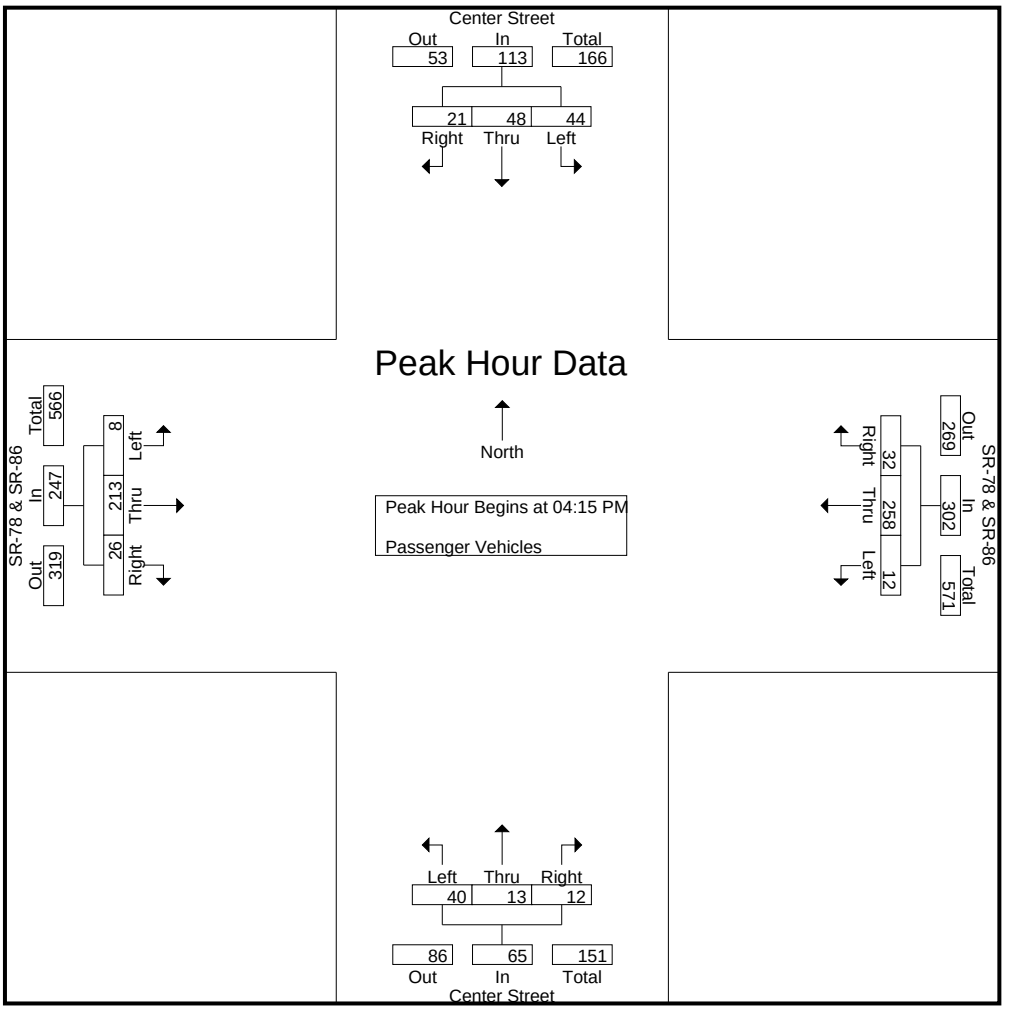
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	**15**	**13**	**7**	**35**	3	61	7	71	10	**6**	3	**19**	2	**63**	7	**72**
+15 mins.	10	12	4	26	3	**68**	7	78	8	4	1	13	**3**	43	**8**	54
+30 mins.	10	13	6	29	**4**	64	**11**	**79**	**12**	2	**4**	18	1	57	6	64
+45 mins.	9	10	4	23	2	65	7	74	10	1	4	15	2	50	5	57
Total Volume	44	48	21	113	12	258	32	302	40	13	12	65	8	213	26	247
% App. Total	38.9	42.5	18.6		4	85.4	10.6		61.5	20	18.5		3.2	86.2	10.5	
PHF	.733	.923	.750	.807	.750	.949	.727	.956	.833	.542	.750	.855	.667	.845	.813	.858

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
04:15 PM	1	0	3	4	0	4	0	4	1	0	0	1	0	1	0	1	10
04:30 PM	1	0	0	1	0	3	1	4	0	0	0	0	0	2	0	2	7
04:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	3	0	3	6	0	11	1	12	1	0	0	1	0	6	0	6	25
05:00 PM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
05:15 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	1	0	1	3
05:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	3	3	6	0	0	0	0	0	3	0	3	10
Grand Total	4	0	3	7	0	14	4	18	1	0	0	1	0	9	0	9	35
Apprch %	57.1	0	42.9		0	77.8	22.2		100	0	0		0	100	0		
Total %	11.4	0	8.6	20	0	40	11.4	51.4	2.9	0	0	2.9	0	25.7	0	25.7	

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**1**	0	**3**	**4**	0	**4**	0	**4**	**1**	0	0	**1**	0	1	0	1	**10**
04:30 PM	1	0	0	1	0	3	**1**	4	0	0	0	0	0	**2**	0	**2**	7
04:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:00 PM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
Total Volume	3	0	3	6	0	10	2	12	1	0	0	1	0	5	0	5	24
% App. Total	50	0	50		0	83.3	16.7		100	0	0		0	100	0		
PHF	.750	.000	.250	.375	.000	.625	.500	.750	.250	.000	.000	.250	.000	.625	.000	.625	.600

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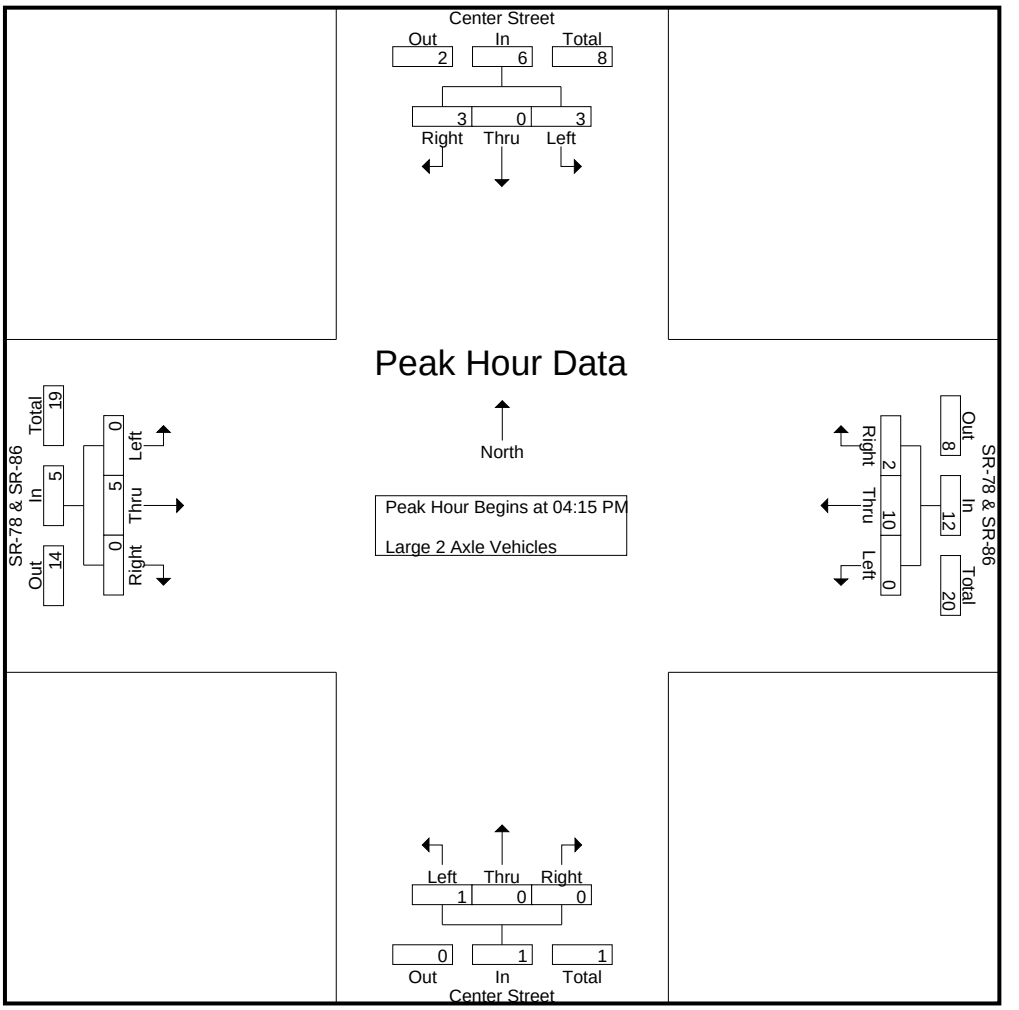
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	**1**	0	**3**	**4**	0	**4**	0	**4**	**1**	0	0	**1**	0	1	0	1
+15 mins.	1	0	0	1	0	3	**1**	4	0	0	0	0	0	**2**	0	**2**
+30 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1
Total Volume	3	0	3	6	0	10	2	12	1	0	0	1	0	5	0	5
% App. Total	50	0	50		0	83.3	16.7		100	0	0		0	100	0	
PHF	.750	.000	.250	.375	.000	.625	.500	.750	.250	.000	.000	.250	.000	.625	.000	.625

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	3	1	4	1	0	0	1	0	0	0	0	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	1	0	1	0	4	1	5	1	0	0	1	0	1	0	1	8
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	2	0	2	0	1	0	1	0	0	0	0	0	5	0	5	8
Grand Total	0	3	0	3	0	5	1	6	1	0	0	1	0	6	0	6	16
Apprch %	0	100	0		0	83.3	16.7		100	0	0		0	100	0		
Total %	0	18.8	0	18.8	0	31.2	6.2	37.5	6.2	0	0	6.2	0	37.5	0	37.5	

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**1**	0	**1**	0	**3**	**1**	**4**	**1**	0	0	**1**	0	0	0	0	**6**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	2	0	2	0	4	1	5	1	0	0	1	0	2	0	2	10
% App. Total	0	100	0		0	80	20		100	0	0		0	100	0		
PHF	.000	.500	.000	.500	.000	.333	.250	.313	.250	.000	.000	.250	.000	.500	.000	.500	.417

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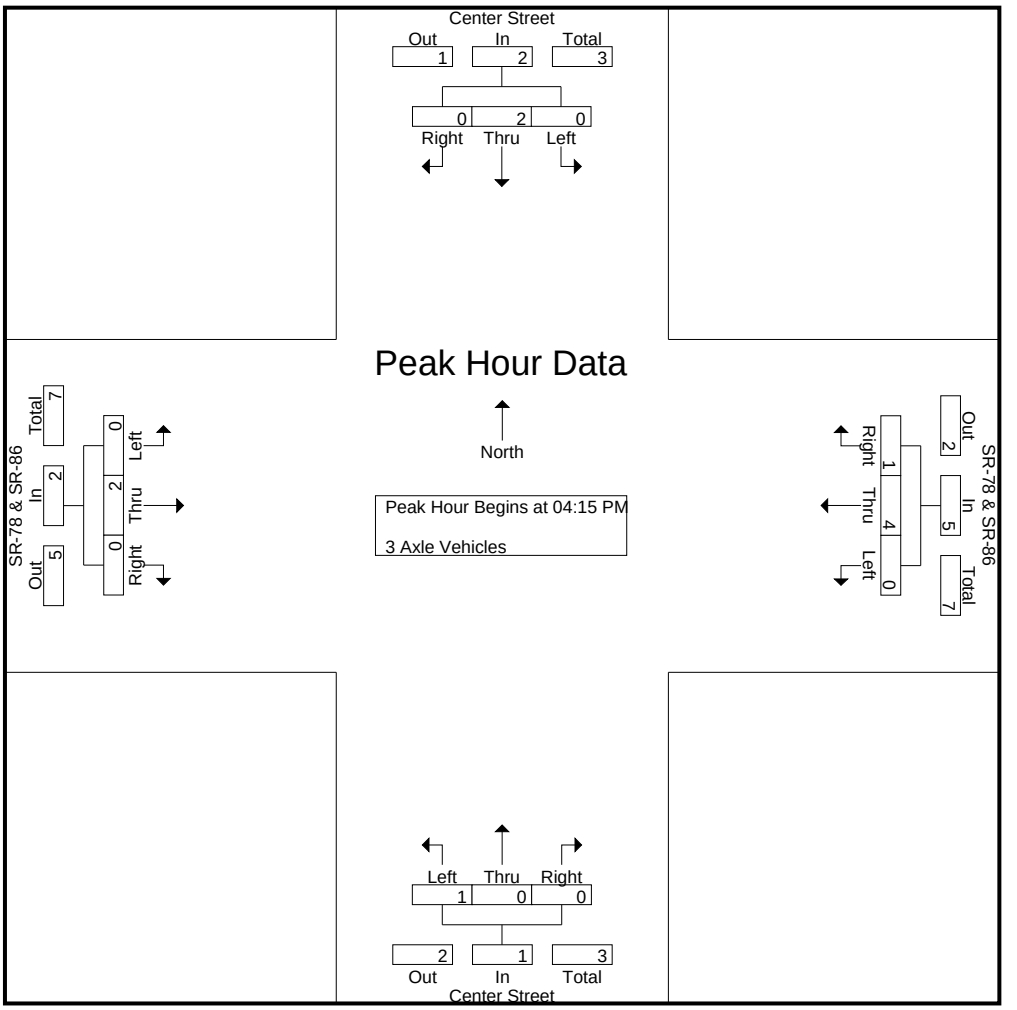
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	**1**	0	**1**	0	**3**	**1**	**4**	**1**	0	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	2	0	2	0	4	1	5	1	0	0	1	0	2	0	2
% App. Total	0	100	0		0	80	20		100	0	0		0	100	0	
PHF	.000	.500	.000	.500	.000	.333	.250	.313	.250	.000	.000	.250	.000	.500	.000	.500

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County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	22	0	22	9	1	0	10	0	26	0	26	58
04:15 PM	0	0	1	1	0	24	0	24	3	0	0	3	0	22	1	23	51
04:30 PM	0	0	0	0	0	27	0	27	1	2	0	3	0	28	2	30	60
04:45 PM	0	0	0	0	0	36	0	36	4	0	0	4	0	30	0	30	70
Total	0	0	1	1	0	109	0	109	17	3	0	20	0	106	3	109	239
05:00 PM	1	0	0	1	0	27	0	27	5	1	0	6	0	27	1	28	62
05:15 PM	0	1	0	1	0	24	0	24	6	0	0	6	0	23	4	27	58
05:30 PM	0	0	0	0	0	22	0	22	3	0	0	3	0	19	2	21	46
05:45 PM	0	0	0	0	0	29	0	29	4	0	0	4	0	17	1	18	51
Total	1	1	0	2	0	102	0	102	18	1	0	19	0	86	8	94	217
Grand Total	1	1	1	3	0	211	0	211	35	4	0	39	0	192	11	203	456
Apprch %	33.3	33.3	33.3		0	100	0		89.7	10.3	0		0	94.6	5.4		
Total %	0.2	0.2	0.2	0.7	0	46.3	0	46.3	7.7	0.9	0	8.6	0	42.1	2.4	44.5	

	Center Street Southbound				SR-78 & SR-86 Westbound				Center Street Northbound				SR-78 & SR-86 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	**1**	**1**	0	24	0	24	3	0	0	3	0	22	1	23	51
04:30 PM	0	0	0	0	0	27	0	27	1	**2**	0	3	0	28	**2**	**30**	60
04:45 PM	0	0	0	0	0	**36**	0	**36**	4	0	0	4	0	**30**	0	30	**70**
05:00 PM	**1**	0	0	1	0	27	0	27	**5**	1	0	**6**	0	27	1	28	62
Total Volume	1	0	1	2	0	114	0	114	13	3	0	16	0	107	4	111	243
% App. Total	50	0	50		0	100	0		81.2	18.8	0		0	96.4	3.6		
PHF	.250	.000	.250	.500	.000	.792	.000	.792	.650	.375	.000	.667	.000	.892	.500	.925	.868

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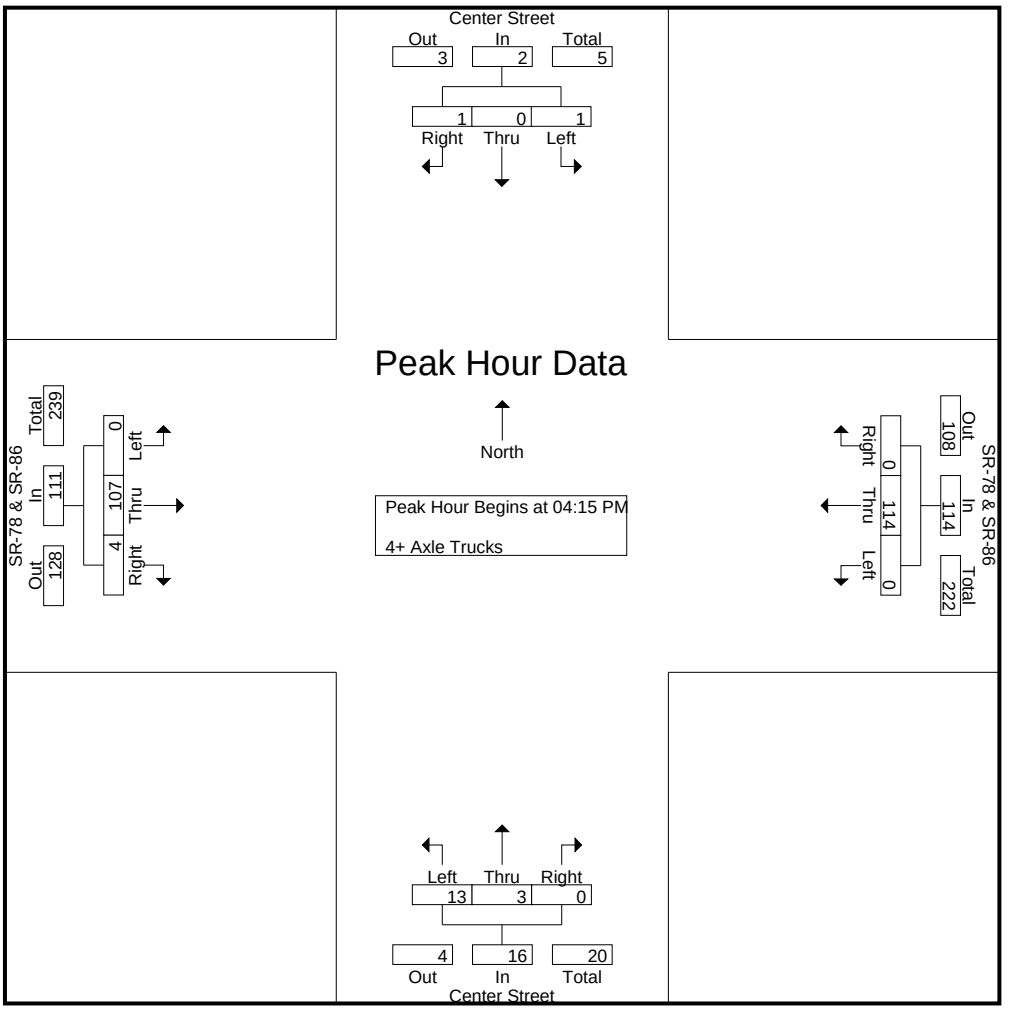
County of Imperial
N/S: Center Street (S-30)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 03_CIM_Center_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	**1**	**1**	0	24	0	24	3	0	0	3	0	22	1	23
+15 mins.	0	0	0	0	0	27	0	27	1	**2**	0	3	0	28	**2**	**30**
+30 mins.	0	0	0	0	0	**36**	0	**36**	4	0	0	4	0	**30**	0	30
+45 mins.	**1**	0	0	1	0	27	0	27	**5**	1	0	**6**	0	27	1	28
Total Volume	1	0	1	2	0	114	0	114	13	3	0	16	0	107	4	111
% App. Total	50	0	50		0	100	0		81.2	18.8	0		0	96.4	3.6	
PHF	.250	.000	.250	.500	.000	.792	.000	.792	.650	.375	.000	.667	.000	.892	.500	.925

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County of Imperial
N/S: Boarts Road (S-26)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 04_CIM_Boarts_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 1

Groups Printed- Total Volume

	Boarts Road Southbound			SR-78 & SR-86 Westbound			SR-78 & SR-86 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	6	6	60	1	61	3	85	88	155
07:15 AM	0	1	1	55	0	55	2	89	91	147
07:30 AM	0	3	3	76	1	77	2	98	100	180
07:45 AM	0	3	3	76	1	77	2	124	126	206
Total	0	13	13	267	3	270	9	396	405	688
08:00 AM	1	4	5	64	1	65	5	93	98	168
08:15 AM	0	4	4	73	0	73	4	93	97	174
08:30 AM	0	3	3	74	2	76	9	83	92	171
08:45 AM	0	3	3	77	0	77	0	97	97	177
Total	1	14	15	288	3	291	18	366	384	690
Grand Total	1	27	28	555	6	561	27	762	789	1378
Apprch %	3.6	96.4		98.9	1.1		3.4	96.6		
Total %	0.1	2	2	40.3	0.4	40.7	2	55.3	57.3	

	Boarts Road Southbound			SR-78 & SR-86 Westbound			SR-78 & SR-86 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	3	3	**76**	**1**	**77**	2	98	100	180
07:45 AM	0	3	3	76	1	77	2	**124**	**126**	**206**
08:00 AM	**1**	**4**	**5**	64	1	65	**5**	93	98	168
08:15 AM	0	4	4	73	0	73	4	93	97	174
Total Volume	1	14	15	289	3	292	13	408	421	728
% App. Total	6.7	93.3		99	1		3.1	96.9		
PHF	.250	.875	.750	.951	.750	.948	.650	.823	.835	.883

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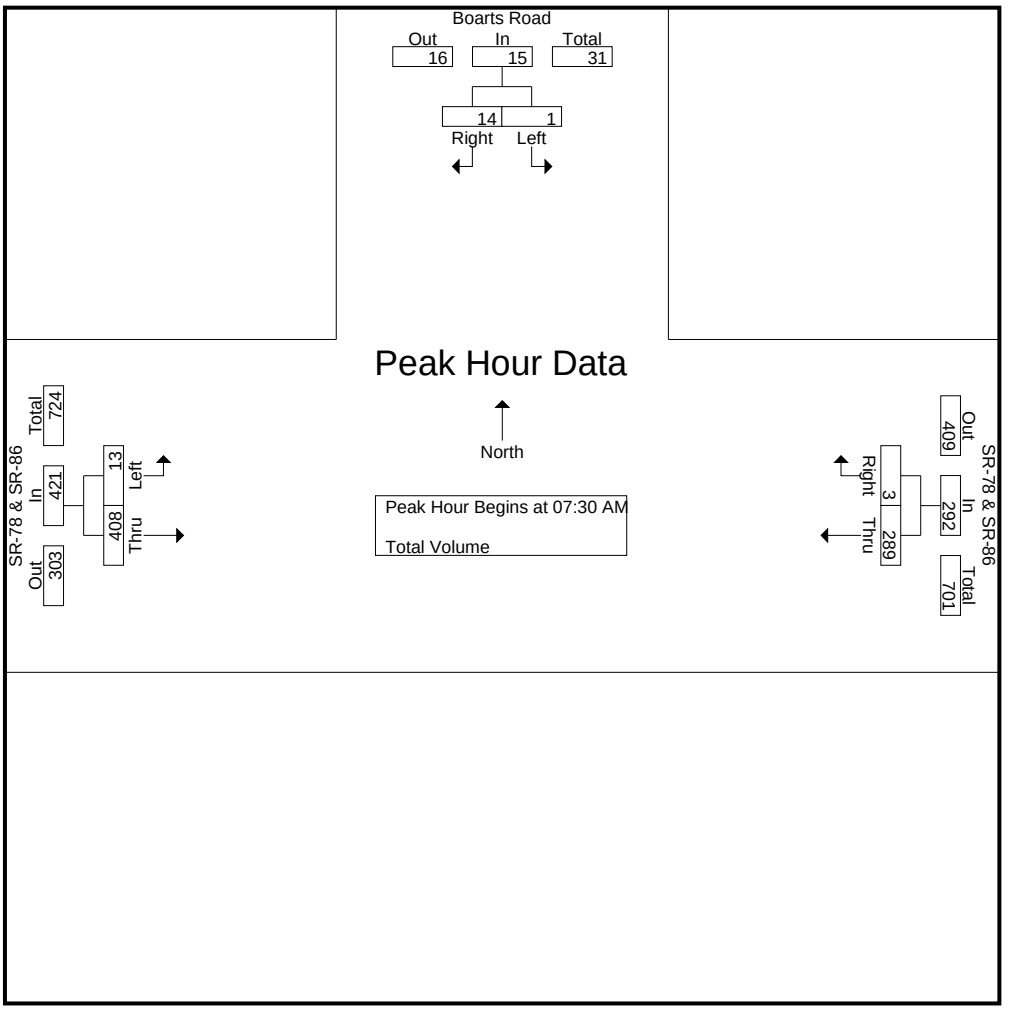
County of Imperial
N/S: Boarts Road (S-26)
E/W: SR-78 & SR-86
Weather: Clear

File Name : 04_CIM_Boarts_SR-78 AM
Site Code : 04121755
Start Date : 12/15/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	3	3	**76**	**1**	**77**	2	98	100
+15 mins.	0	3	3	76	1	77	2	**124**	**126**
+30 mins.	**1**	**4**	**5**	64	1	65	**5**	93	98
+45 mins.	0	4	4	73	0	73	4	93	97
Total Volume	1	14	15	289	3	292	13	408	421
% App. Total	6.7	93.3		99	1		3.1	96.9	
PHF	.250	.875	.750	.951	.750	.948	.650	.823	.835

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Weather: Clear

File Name : 04_CIM_Boarts_SR-78 PM
Site Code : 04121755
Start Date : 12/15/2021
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Groups Printed- Total Volume

	Boarts Road Southbound			SR-78 & SR-86 Westbound			SR-78 & SR-86 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	1	1	2	95	0	95	1	105	106	203
04:15 PM	1	5	6	114	0	114	2	114	116	236
04:30 PM	1	4	5	133	1	134	1	105	106	245
04:45 PM	1	3	4	118	1	119	2	108	110	233
Total	4	13	17	460	2	462	6	432	438	917
05:00 PM	0	2	2	113	2	115	1	94	95	212
05:15 PM	1	2	3	88	0	88	3	108	111	202
05:30 PM	0	1	1	105	1	106	1	106	107	214
05:45 PM	0	2	2	95	1	96	0	94	94	192
Total	1	7	8	401	4	405	5	402	407	820
Grand Total	5	20	25	861	6	867	11	834	845	1737
Apprch %	20	80		99.3	0.7		1.3	98.7		
Total %	0.3	1.2	1.4	49.6	0.3	49.9	0.6	48	48.6	

	Boarts Road Southbound			SR-78 & SR-86 Westbound			SR-78 & SR-86 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	**1**	**5**	**6**	114	0	114	**2**	**114**	**116**	236
04:30 PM	1	4	5	**133**	1	**134**	1	105	106	**245**
04:45 PM	1	3	4	118	1	119	2	108	110	233
05:00 PM	0	2	2	113	**2**	115	1	94	95	212
Total Volume	3	14	17	478	4	482	6	421	427	926
% App. Total	17.6	82.4		99.2	0.8		1.4	98.6		
PHF	.750	.700	.708	.898	.500	.899	.750	.923	.920	.945

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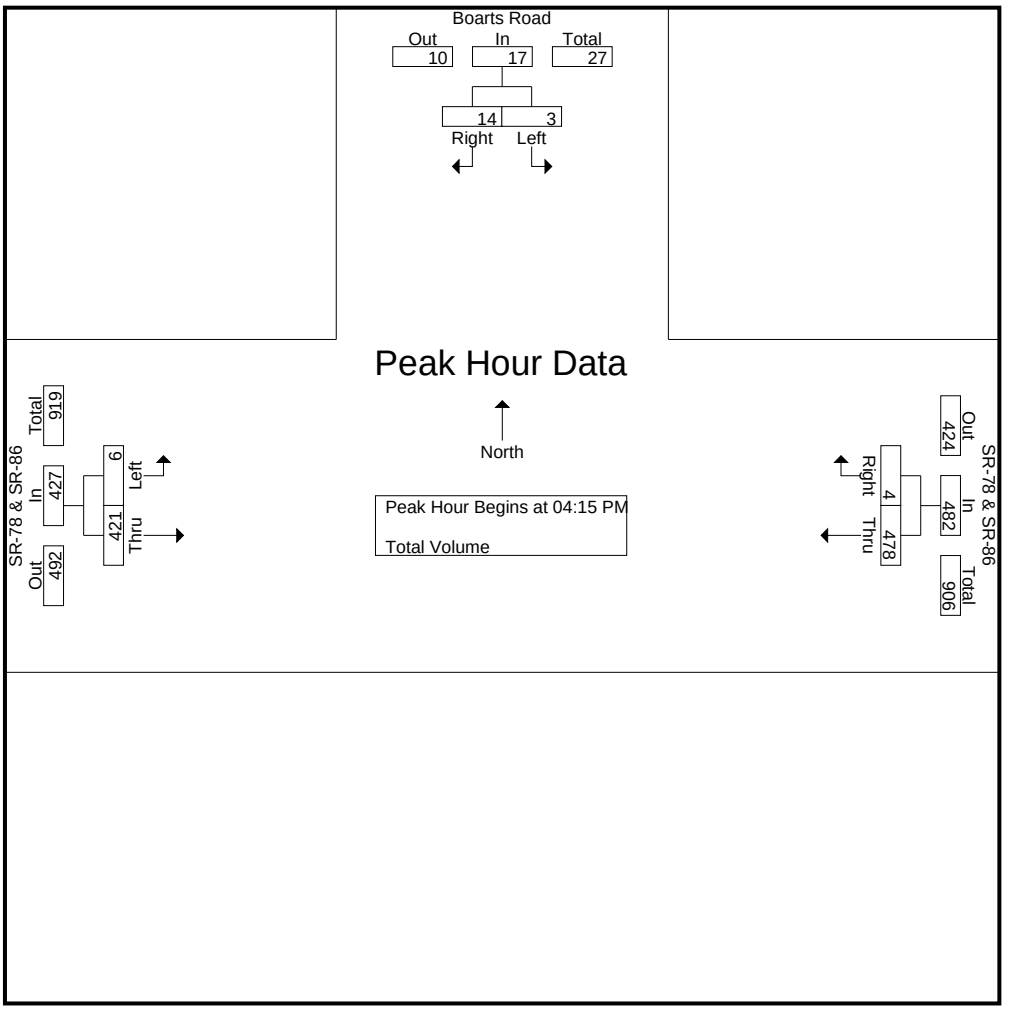

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:00 PM		
+0 mins.	**1**	1	2	114	0	114	1	105	106
+15 mins.	1	**5**	**6**	**133**	1	**134**	**2**	**114**	**116**
+30 mins.	1	4	5	118	1	119	1	105	106
+45 mins.	1	3	4	113	**2**	115	2	108	110
Total Volume	4	13	17	478	4	482	6	432	438
% App. Total	23.5	76.5		99.2	0.8		1.4	98.6	
PHF	1.000	.650	.708	.898	.500	.899	.750	.947	.944

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Weather: Clear

File Name : 05_CIM_SR-86_SR-78 AM
Site Code : 04121755
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Groups Printed- Total Volume

	SR-78 & SR-86 Southbound				SR-78 Westbound				SR-86 Northbound				Fredericks Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	65	30	0	95	2	0	36	38	0	27	1	28	0	1	0	1	162
07:15 AM	62	26	0	88	1	2	33	36	2	30	1	33	0	2	0	2	159
07:30 AM	88	29	0	117	1	1	41	43	0	46	0	46	0	1	0	1	207
07:45 AM	81	43	0	124	0	0	44	44	0	38	2	40	0	1	0	1	209
Total	296	128	0	424	4	3	154	161	2	141	4	147	0	5	0	5	737
08:00 AM	66	35	0	101	1	0	48	49	0	31	0	31	0	2	0	2	183
08:15 AM	74	38	0	112	2	1	48	51	1	33	2	36	0	0	0	0	199
08:30 AM	58	33	0	91	2	6	55	63	2	35	0	37	0	1	0	1	192
08:45 AM	54	40	0	94	2	0	52	54	0	25	1	26	0	1	0	1	175
Total	252	146	0	398	7	7	203	217	3	124	3	130	0	4	0	4	749
Grand Total	548	274	0	822	11	10	357	378	5	265	7	277	0	9	0	9	1486
Apprch %	66.7	33.3	0		2.9	2.6	94.4		1.8	95.7	2.5		0	100	0		
Total %	36.9	18.4	0	55.3	0.7	0.7	24	25.4	0.3	17.8	0.5	18.6	0	0.6	0	0.6	

	SR-78 & SR-86 Southbound				SR-78 Westbound				SR-86 Northbound				Fredericks Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**88**	29	0	117	1	**1**	41	43	0	**46**	0	**46**	0	1	0	1	207
07:45 AM	81	**43**	0	**124**	0	0	44	44	0	38	**2**	40	0	1	0	1	**209**
08:00 AM	66	35	0	101	1	0	**48**	49	0	31	0	31	0	**2**	0	**2**	183
08:15 AM	74	38	0	112	**2**	1	48	**51**	**1**	33	2	36	0	0	0	0	199
Total Volume	309	145	0	454	4	2	181	187	1	148	4	153	0	4	0	4	798
% App. Total	68.1	31.9	0		2.1	1.1	96.8		0.7	96.7	2.6		0	100	0		
PHF	.878	.843	.000	.915	.500	.500	.943	.917	.250	.804	.500	.832	.000	.500	.000	.500	.955

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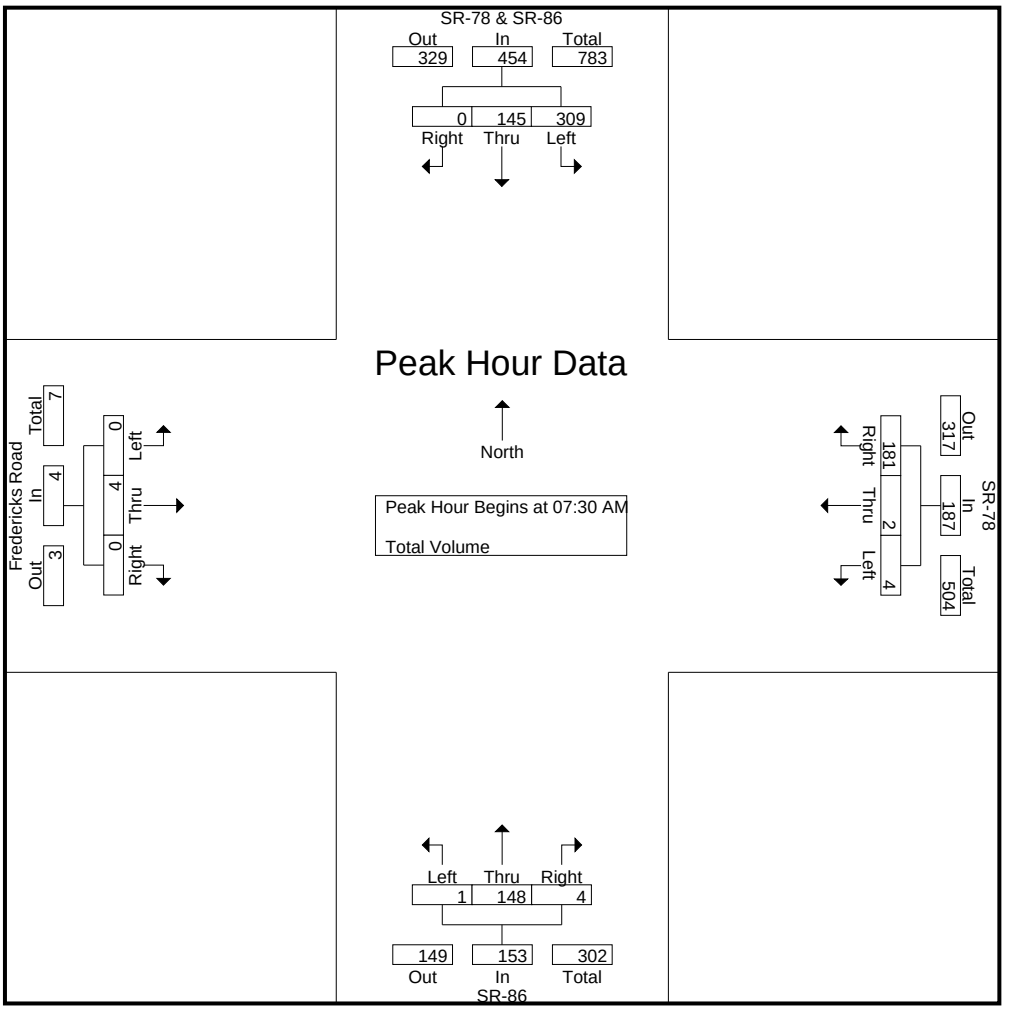

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:30 AM				07:15 AM			
+0 mins.	**88**	29	0	117	1	0	48	49	0	**46**	0	**46**	0	**2**	0	**2**
+15 mins.	81	**43**	0	**124**	**2**	1	48	51	0	38	**2**	40	0	1	0	1
+30 mins.	66	35	0	101	2	**6**	**55**	**63**	0	31	0	31	0	1	0	1
+45 mins.	74	38	0	112	2	0	52	54	**1**	33	2	36	0	2	0	2
Total Volume	309	145	0	454	7	7	203	217	1	148	4	153	0	6	0	6
% App. Total	68.1	31.9	0		3.2	3.2	93.5		0.7	96.7	2.6		0	100	0	
PHF	.878	.843	.000	.915	.875	.292	.923	.861	.250	.804	.500	.832	.000	.750	.000	.750

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Weather: Clear

File Name : 05_CIM_SR-86_SR-78 PM
Site Code : 04121755
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Groups Printed- Total Volume

	SR-78 & SR-86 Southbound				SR-78 Westbound				SR-86 Northbound				Fredericks Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	81	29	0	110	0	2	69	71	0	37	3	40	0	3	2	5	226
04:15 PM	63	48	0	111	1	1	84	86	1	33	1	35	0	1	0	1	233
04:30 PM	72	40	0	112	0	0	78	78	0	56	0	56	2	0	0	2	248
04:45 PM	64	44	0	108	0	0	84	84	0	43	0	43	0	1	1	2	237
Total	280	161	0	441	1	3	315	319	1	169	4	174	2	5	3	10	944
05:00 PM	82	27	0	109	0	0	79	79	0	23	2	25	2	2	1	5	218
05:15 PM	56	41	0	97	1	2	68	71	0	28	0	28	1	1	2	4	200
05:30 PM	69	54	1	124	0	1	78	79	1	35	0	36	0	2	1	3	242
05:45 PM	55	42	0	97	0	1	71	72	0	24	1	25	0	0	0	0	194
Total	262	164	1	427	1	4	296	301	1	110	3	114	3	5	4	12	854
Grand Total	542	325	1	868	2	7	611	620	2	279	7	288	5	10	7	22	1798
Apprch %	62.4	37.4	0.1		0.3	1.1	98.5		0.7	96.9	2.4		22.7	45.5	31.8		
Total %	30.1	18.1	0.1	48.3	0.1	0.4	34	34.5	0.1	15.5	0.4	16	0.3	0.6	0.4	1.2	

	SR-78 & SR-86 Southbound				SR-78 Westbound				SR-86 Northbound				Fredericks Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**81**	29	0	110	0	**2**	69	71	0	37	**3**	40	0	**3**	**2**	**5**	226
04:15 PM	63	**48**	0	111	**1**	1	**84**	**86**	**1**	33	1	35	0	1	0	1	233
04:30 PM	72	40	0	**112**	0	0	78	78	0	**56**	0	**56**	**2**	0	0	2	**248**
04:45 PM	64	44	0	108	0	0	84	84	0	43	0	43	0	1	1	2	237
Total Volume	280	161	0	441	1	3	315	319	1	169	4	174	2	5	3	10	944
% App. Total	63.5	36.5	0		0.3	0.9	98.7		0.6	97.1	2.3		20	50	30		
PHF	.864	.839	.000	.984	.250	.375	.938	.927	.250	.754	.333	.777	.250	.417	.375	.500	.952

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Site Code : 04121755
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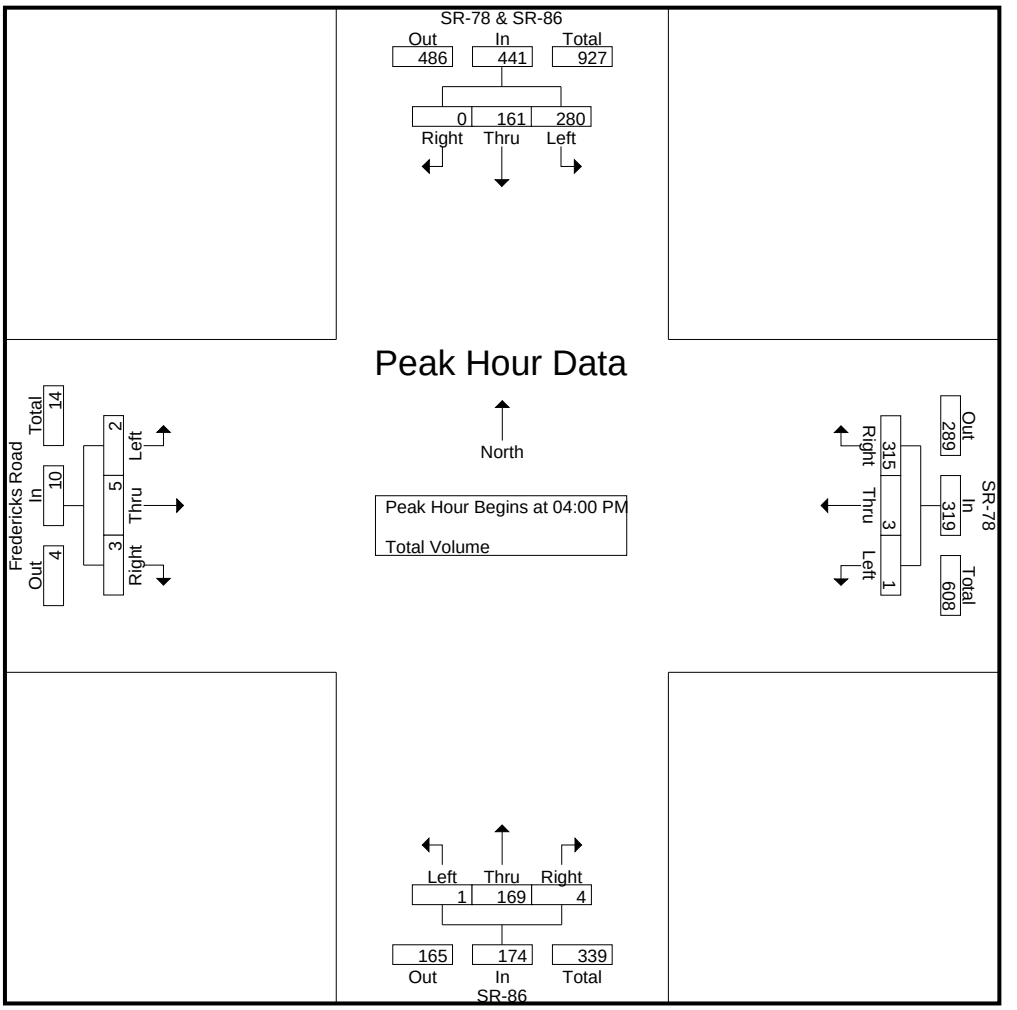


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:45 PM			
+0 mins.	**81**	29	0	110	**1**	**1**	**84**	**86**	0	37	**3**	40	0	1	1	2
+15 mins.	63	**48**	0	111	0	0	78	78	**1**	33	1	35	**2**	**2**	1	**5**
+30 mins.	72	40	0	**112**	0	0	84	84	0	**56**	0	**56**	1	1	**2**	4
+45 mins.	64	44	0	108	0	0	79	79	0	43	0	43	0	2	1	3
Total Volume	280	161	0	441	1	1	325	327	1	169	4	174	3	6	5	14
% App. Total	63.5	36.5	0		0.3	0.3	99.4		0.6	97.1	2.3		21.4	42.9	35.7	
PHF	.864	.839	.000	.984	.250	.250	.967	.951	.250	.754	.333	.777	.375	.750	.625	.700

APPENDIX B : EXISTING YEAR CONDITIONS ANALYSIS WORKSHEETS

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	313	0	8	283	0	2	1	1	1	0	0
Future Vol, veh/h	0	313	0	8	283	0	2	1	1	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	340	0	9	308	0	2	1	1	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	308	0	0	340	0	0	512	666	170	497	666	154
Stage 1	-	-	-	-	-	-	340	340	-	326	326	-
Stage 2	-	-	-	-	-	-	172	326	-	171	340	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1249	-	-	1216	-	-	445	379	844	456	379	864
Stage 1	-	-	-	-	-	-	648	638	-	661	647	-
Stage 2	-	-	-	-	-	-	813	647	-	814	638	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1249	-	-	1216	-	-	442	376	844	452	376	864
Mov Cap-2 Maneuver	-	-	-	-	-	-	442	376	-	452	376	-
Stage 1	-	-	-	-	-	-	648	638	-	661	642	-
Stage 2	-	-	-	-	-	-	807	642	-	812	638	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	12.6	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	478	1249	-	-	1216	-	-	452	-
HCM Lane V/C Ratio	0.009	-	-	-	0.007	-	-	0.002	-
HCM Control Delay (s)	12.6	0	-	-	8	-	-	13	0
HCM Lane LOS	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	402	0	1	409	3	1	0	2	2	2	0
Future Vol, veh/h	0	402	0	1	409	3	1	0	2	2	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	437	0	1	445	3	1	0	2	2	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	448	0	0	437	0	0	663	887	219	666	884	223
Stage 1	-	-	-	-	-	-	437	437	-	447	447	-
Stage 2	-	-	-	-	-	-	226	450	-	219	437	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1109	-	-	1119	-	-	347	282	785	345	283	780
Stage 1	-	-	-	-	-	-	568	578	-	560	572	-
Stage 2	-	-	-	-	-	-	756	570	-	763	578	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1109	-	-	1119	-	-	345	282	785	344	283	780
Mov Cap-2 Maneuver	-	-	-	-	-	-	345	282	-	344	283	-
Stage 1	-	-	-	-	-	-	568	578	-	560	571	-
Stage 2	-	-	-	-	-	-	752	569	-	761	578	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.6	16.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	551	1109	-	-	1119	-	-	311	-
HCM Lane V/C Ratio	0.006	-	-	-	0.001	-	-	0.014	-
HCM Control Delay (s)	11.6	0	-	-	8.2	-	-	16.7	0
HCM Lane LOS	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	264	21	3	218	14	7	4	1	30	6	26
Future Vol, veh/h	42	264	21	3	218	14	7	4	1	30	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	287	23	3	237	15	8	4	1	33	7	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	252	0	0	310	0	0	507	637	144	489	653	126
Stage 1	-	-	-	-	-	-	379	379	-	251	251	-
Stage 2	-	-	-	-	-	-	128	258	-	238	402	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1310	-	-	1247	-	-	449	393	877	462	385	901
Stage 1	-	-	-	-	-	-	615	613	-	731	698	-
Stage 2	-	-	-	-	-	-	862	693	-	744	599	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1310	-	-	1247	-	-	417	378	877	444	371	901
Mov Cap-2 Maneuver	-	-	-	-	-	-	417	378	-	444	371	-
Stage 1	-	-	-	-	-	-	593	592	-	705	697	-
Stage 2	-	-	-	-	-	-	825	692	-	712	578	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	13.8	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	421	1310	-	-	1247	-	-	551
HCM Lane V/C Ratio	0.031	0.035	-	-	0.003	-	-	0.122
HCM Control Delay (s)	13.8	7.8	-	-	7.9	-	-	12.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

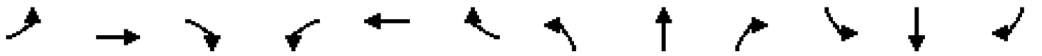
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	286	25	4	316	38	7	4	1	13	3	61
Future Vol, veh/h	47	286	25	4	316	38	7	4	1	13	3	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	311	27	4	343	41	8	4	1	14	3	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	384	0	0	338	0	0	594	805	156	632	812	192
Stage 1	-	-	-	-	-	-	413	413	-	372	372	-
Stage 2	-	-	-	-	-	-	181	392	-	260	440	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1171	-	-	1218	-	-	389	315	862	365	312	817
Stage 1	-	-	-	-	-	-	587	592	-	621	617	-
Stage 2	-	-	-	-	-	-	803	605	-	722	576	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1171	-	-	1218	-	-	342	300	862	348	297	817
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	300	-	348	297	-
Stage 1	-	-	-	-	-	-	561	566	-	594	615	-
Stage 2	-	-	-	-	-	-	732	603	-	684	551	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.1	15.9	11.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	343	1171	-	-	1218	-	-	631
HCM Lane V/C Ratio	0.038	0.044	-	-	0.004	-	-	0.133
HCM Control Delay (s)	15.9	8.2	-	-	8	-	-	11.6
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	297	33	7	214	25	32	45	13	44	37	13
Future Volume (veh/h)	17	297	33	7	214	25	32	45	13	44	37	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	323	36	8	233	27	35	49	14	48	40	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	555	1290	143	500	1285	147	675	560	160	666	529	185
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	9.7	9.8	9.8	10.2	9.3	9.3	9.0	0.0	8.6	9.2	0.0	8.6
Ln Grp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		377			268			98			102	
Approach Delay, s/veh		9.8			9.3			8.8			8.9	
Approach LOS		A			A			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		6.0		6.0		6.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		4.8		5.2		4.7		5.3
Max Q Clear (g_c+I1), s		3.6		5.0		4.0		5.3
Green Ext Time (g_e), s		0.3		1.7		0.3		1.2
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1350		1119		1339		1022

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1399		3226		1324		3213

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		400		357		463		368

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	35	0	18	0	48	0	8
Grp Sat Flow (s), veh/h/ln	0	1350	0	1119	0	1339	0	1022
Q Serve Time (g_s), s	0.0	0.7	0.0	0.5	0.0	1.0	0.0	0.2
Cycle Q Clear Time (g_c), s	0.0	1.6	0.0	2.6	0.0	2.0	0.0	3.3
Perm LT Sat Flow (s_l), veh/h/ln	0	1350	0	1119	0	1339	0	1022
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	17.2	0.0	15.9	0.0	17.0	0.0	15.0
Perm LT Q Serve Time (g_ps), s	0.0	0.7	0.0	0.5	0.0	1.0	0.0	0.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	675	0	555	0	666	0	500
V/C Ratio (X)	0.00	0.05	0.00	0.03	0.00	0.07	0.00	0.02
Avail Cap (c_a), veh/h	0	675	0	555	0	666	0	500
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.8	0.0	9.6	0.0	9.0	0.0	10.1
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.0	0.0	9.7	0.0	9.2	0.0	10.2
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.1	0.0	0.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	177	0	0	0	128
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	3.0	0.0	0.0	0.0	2.1
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.0	0.0	0.0	0.0	2.1
Lane Grp Cap (c), veh/h	0	0	0	711	0	0	0	711
V/C Ratio (X)	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.18
Avail Cap (c_a), veh/h	0	0	0	711	0	0	0	711
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.0	0.0	0.0	0.0	8.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	9.8	0.0	0.0	0.0	9.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	63	0	182	0	54	0	132
Grp Sat Flow (s), veh/h/ln	0	1798	0	1806	0	1787	0	1804
Q Serve Time (g_s), s	0.0	1.0	0.0	3.0	0.0	0.8	0.0	2.1
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	3.0	0.0	0.8	0.0	2.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.22	0.00	0.20	0.00	0.26	0.00	0.20
Lane Grp Cap (c), veh/h	0	719	0	722	0	715	0	722
V/C Ratio (X)	0.00	0.09	0.00	0.25	0.00	0.08	0.00	0.18
Avail Cap (c_a), veh/h	0	719	0	722	0	715	0	722
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.4	0.0	9.0	0.0	8.4	0.0	8.7
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.8	0.0	0.2	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.6	0.0	9.8	0.0	8.6	0.0	9.3
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.9	0.0	0.3	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	1.1	0.0	0.3	0.0	0.8
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.04	0.00	0.02	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	213	26	12	258	32	40	13	12	44	48	21
Future Volume (veh/h)	8	213	26	12	258	32	40	13	12	44	48	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	232	28	13	280	35	43	14	13	48	52	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	524	1279	153	555	1273	158	655	357	331	700	492	217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	9.9	9.3	9.3	9.6	9.6	9.6	9.3	0.0	8.3	8.8	0.0	8.8
Ln Grp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		269			328			70			123	
Approach Delay, s/veh		9.3			9.6			8.9			8.8	
Approach LOS		A			A			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		6.0		6.0		6.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		4.5		5.3		4.7		5.2
Max Q Clear (g_c+I1), s		4.1		4.9		3.4		4.6
Green Ext Time (g_e), s		0.2		1.2		0.4		1.5
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1325		1065		1383		1119
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		892		3197		1229		3182
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		829		382		544		394
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	43	0	9	0	48	0	13
Grp Sat Flow (s), veh/h/ln	0	1325	0	1065	0	1383	0	1119
Q Serve Time (g_s), s	0.0	0.9	0.0	0.3	0.0	1.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	2.1	0.0	2.9	0.0	1.4	0.0	2.5
Perm LT Sat Flow (s_l), veh/h/ln	0	1325	0	1065	0	1383	0	1119
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.8	0.0	15.4	0.0	17.6	0.0	15.9
Perm LT Q Serve Time (g_ps), s	0.0	0.9	0.0	0.3	0.0	1.0	0.0	0.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	655	0	524	0	700	0	555
V/C Ratio (X)	0.00	0.07	0.00	0.02	0.00	0.07	0.00	0.02
Avail Cap (c_a), veh/h	0	655	0	524	0	700	0	555
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.1	0.0	9.8	0.0	8.7	0.0	9.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.3	0.0	9.9	0.0	8.8	0.0	9.6
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	0.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	128	0	0	0	155
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.6
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.6
Lane Grp Cap (c), veh/h	0	0	0	711	0	0	0	711
V/C Ratio (X)	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.22
Avail Cap (c_a), veh/h	0	0	0	711	0	0	0	711
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	8.7	0.0	0.0	0.0	8.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	9.3	0.0	0.0	0.0	9.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	27	0	132	0	75	0	160
Grp Sat Flow (s), veh/h/ln	0	1721	0	1802	0	1773	0	1799
Q Serve Time (g_s), s	0.0	0.4	0.0	2.1	0.0	1.2	0.0	2.6
Cycle Q Clear Time (g_c), s	0.0	0.4	0.0	2.1	0.0	1.2	0.0	2.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.48	0.00	0.21	0.00	0.31	0.00	0.22
Lane Grp Cap (c), veh/h	0	688	0	721	0	709	0	720
V/C Ratio (X)	0.00	0.04	0.00	0.18	0.00	0.11	0.00	0.22
Avail Cap (c_a), veh/h	0	688	0	721	0	709	0	720
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.2	0.0	8.7	0.0	8.5	0.0	8.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.6	0.0	0.3	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.3	0.0	9.3	0.0	8.8	0.0	9.6
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.7	0.0	0.4	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.8	0.0	0.4	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.03	0.00	0.03	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	13	408	289	3	1	14
Future Vol, veh/h	13	408	289	3	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	443	314	3	1	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	317	0	-	0	564	157
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	250	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1240	-	-	-	456	861
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	768	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1240	-	-	-	451	861
Mov Cap-2 Maneuver	-	-	-	-	451	-
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	768	-

Approach	EB	WB	SW
HCM Control Delay, s	0.2	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1	SWLn2
Capacity (veh/h)	1240	-	-	-	451	861
HCM Lane V/C Ratio	0.011	-	-	-	0.002	0.018
HCM Control Delay (s)	7.9	-	-	-	13	9.3
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

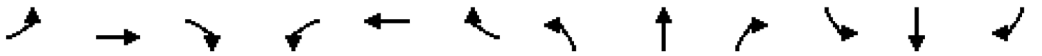
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	6	421	478	4	3	14
Future Vol, veh/h	6	421	478	4	3	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	458	520	4	3	15

Major/Minor	Major1			Major2		
Conflicting Flow All	524	0	-	0	763	260
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	243	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1039	-	-	-	341	739
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	775	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1039	-	-	-	339	739
Mov Cap-2 Maneuver	-	-	-	-	339	-
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	775	-

Approach	EB	WB	SW
HCM Control Delay, s	0.1	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1	SWLn2
Capacity (veh/h)	1039	-	-	-	339	739
HCM Lane V/C Ratio	0.006	-	-	-	0.01	0.021
HCM Control Delay (s)	8.5	-	-	-	15.7	10
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	4	0	4	2	181	1	148	4	309	145	0
Future Volume (veh/h)	0	4	0	4	2	181	1	148	4	309	145	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	4	0	4	2	0	1	161	4	336	158	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	160	748	0	723	748		617	1421	634	1200	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.40	0.00	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	8.1	0.0	8.2	8.1	0.0	8.9	8.6	8.1	10.9	8.6	0.0
Ln Grp LOS	A	A	A	A	A		A	A	A	B	A	A
Approach Vol, veh/h		4			6			166			494	
Approach Delay, s/veh		8.1			8.2			8.6			10.2	
Approach LOS		A			A			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		6.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.2		5.2		4.6		4.3
Max Q Clear (g_c+I1), s		3.3		2.1		8.0		2.1
Green Ext Time (g_e), s		0.8		0.0		1.8		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1228		1415		2368		1412

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3554		1870		3554		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		0		1585		1585

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	1	0	0	0	336	0	4
Grp Sat Flow (s), veh/h/ln	0	1228	0	1415	0	1184	0	1412
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.3	0.0	0.0	0.0	6.0	0.0	0.1
Perm LT Sat Flow (s_l), veh/h/ln	0	1228	0	1415	0	1184	0	1412
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	0.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.7	0.0	0.0	0.0	16.7	0.0	17.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	617	0	160	0	1200	0	723
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.01
Avail Cap (c_a), veh/h	0	617	0	160	0	1200	0	723
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	0.0	0.0	10.4	0.0	8.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	0.0	0.0	10.9	0.0	8.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	161	0	4	0	158	0	2
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	1.3	0.0	0.1	0.0	1.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.3	0.0	0.1	0.0	1.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1421	0	748	0	1421	0	748
V/C Ratio (X)	0.00	0.11	0.00	0.01	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1421	0	748	0	1421	0	748
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	8.1	0.0	8.5	0.0	8.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.6	0.0	8.1	0.0	8.6	0.0	8.1
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

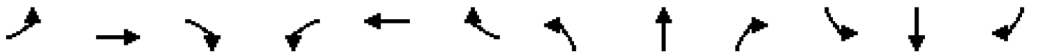
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R				R		R
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	4	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	0	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	634	0	0	0	634	0	634
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	634	0	0	0	634	0	634
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	3	315	2	5	3	1	169	4	280	161	0
Future Volume (veh/h)	1	3	315	2	5	3	1	169	4	280	161	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	3	342	2	5	0	1	184	4	304	175	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	722	6	629	402	748		606	1421	634	1172	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	8.2	0.0	13.7	13.3	8.1	0.0	9.0	8.7	8.1	10.9	8.7	0.0
Ln Grp LOS	A	A	B	B	A		A	A	A	B	A	A
Approach Vol, veh/h		346			7			189			479	
Approach Delay, s/veh		13.7			9.6			8.7			10.1	
Approach LOS		B			A			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		6.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.2		5.6		4.7		5.1
Max Q Clear (g_c+I1), s		3.5		9.5		7.8		9.6
Green Ext Time (g_e), s		0.9		1.4		1.8		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1210		1411		2319		1036

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3554		14		3554		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1573		1585		1585

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	1	0	1	0	304	0	2
Grp Sat Flow (s), veh/h/ln	0	1210	0	1411	0	1160	0	1036
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	0.1	0.0	5.8	0.0	7.6
Perm LT Sat Flow (s_l), veh/h/ln	0	1210	0	1411	0	1160	0	1036
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.6	0.0	17.9	0.0	16.5	0.0	10.5
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	606	0	722	0	1172	0	402
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	606	0	722	0	1172	0	402
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.0	0.0	8.1	0.0	10.4	0.0	13.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.0	0.0	8.2	0.0	10.9	0.0	13.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	2	0	0	0	2	0	1
Grp Vol (v), veh/h	0	184	0	0	0	175	0	5
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	1870
Q Serve Time (g_s), s	0.0	1.5	0.0	0.0	0.0	1.4	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.0	0.0	1.4	0.0	0.1
Lane Grp Cap (c), veh/h	0	1421	0	0	0	1421	0	748
V/C Ratio (X)	0.00	0.13	0.00	0.00	0.00	0.12	0.00	0.01
Avail Cap (c_a), veh/h	0	1421	0	0	0	1421	0	748
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	0.0	0.0	8.5	0.0	8.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.7	0.0	0.0	0.0	8.7	0.0	8.1
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	4	0	345	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1587	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	7.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	7.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.99	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	634	0	635	0	634	0	634
V/C Ratio (X)	0.00	0.01	0.00	0.54	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	634	0	635	0	634	0	634
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	10.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	13.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX C : NEAR TERM PROJECT ANALYSIS WORKSHEETS

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	330	0	8	299	0	2	1	1	1	0	0
Future Vol, veh/h	0	330	0	8	299	0	2	1	1	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	359	0	9	325	0	2	1	1	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	325	0	0	359	0	0	540	702	180	523	702	163
Stage 1	-	-	-	-	-	-	359	359	-	343	343	-
Stage 2	-	-	-	-	-	-	181	343	-	180	359	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1231	-	-	1196	-	-	425	361	832	437	361	853
Stage 1	-	-	-	-	-	-	632	626	-	646	636	-
Stage 2	-	-	-	-	-	-	803	636	-	804	626	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1231	-	-	1196	-	-	422	358	832	433	358	853
Mov Cap-2 Maneuver	-	-	-	-	-	-	422	358	-	433	358	-
Stage 1	-	-	-	-	-	-	632	626	-	646	631	-
Stage 2	-	-	-	-	-	-	797	631	-	802	626	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	12.9	13.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	458	1231	-	-	1196	-	-	433	-
HCM Lane V/C Ratio	0.009	-	-	-	0.007	-	-	0.003	-
HCM Control Delay (s)	12.9	0	-	-	8	-	-	13.3	0
HCM Lane LOS	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	424	0	1	431	3	1	0	2	2	2	0
Future Vol, veh/h	0	424	0	1	431	3	1	0	2	2	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	461	0	1	468	3	1	0	2	2	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	471	0	0	461	0	0	698	934	231	701	931	234
Stage 1	-	-	-	-	-	-	461	461	-	470	470	-
Stage 2	-	-	-	-	-	-	237	473	-	231	461	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1087	-	-	1096	-	-	327	264	771	325	265	768
Stage 1	-	-	-	-	-	-	550	564	-	543	558	-
Stage 2	-	-	-	-	-	-	745	557	-	751	564	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1087	-	-	1096	-	-	325	264	771	324	265	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	325	264	-	324	265	-
Stage 1	-	-	-	-	-	-	550	564	-	543	557	-
Stage 2	-	-	-	-	-	-	741	556	-	749	564	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.8	17.5
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	529	1087	-	-	1096	-	-	292	-
HCM Lane V/C Ratio	0.006	-	-	-	0.001	-	-	0.015	-
HCM Control Delay (s)	11.8	0	-	-	8.3	-	-	17.5	0
HCM Lane LOS	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	279	22	3	230	15	7	4	1	32	6	27
Future Vol, veh/h	44	279	22	3	230	15	7	4	1	32	6	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	303	24	3	250	16	8	4	1	35	7	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	266	0	0	327	0	0	534	671	152	514	687	133
Stage 1	-	-	-	-	-	-	399	399	-	264	264	-
Stage 2	-	-	-	-	-	-	135	272	-	250	423	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1295	-	-	1229	-	-	429	376	867	443	368	892
Stage 1	-	-	-	-	-	-	598	601	-	718	689	-
Stage 2	-	-	-	-	-	-	854	683	-	732	586	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1295	-	-	1229	-	-	397	361	867	425	354	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	397	361	-	425	354	-
Stage 1	-	-	-	-	-	-	576	579	-	691	688	-
Stage 2	-	-	-	-	-	-	816	682	-	699	564	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	14.3	12.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1295	-	-	1229	-	-	531
HCM Lane V/C Ratio	0.032	0.037	-	-	0.003	-	-	0.133
HCM Control Delay (s)	14.3	7.9	-	-	7.9	-	-	12.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	302	26	4	333	40	7	4	1	14	3	64
Future Vol, veh/h	50	302	26	4	333	40	7	4	1	14	3	64
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	328	28	4	362	43	8	4	1	15	3	70

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	405	0	0	356	0	0	627	849	164	666	856	203
Stage 1	-	-	-	-	-	-	436	436	-	392	392	-
Stage 2	-	-	-	-	-	-	191	413	-	274	464	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1150	-	-	1199	-	-	368	296	852	345	294	804
Stage 1	-	-	-	-	-	-	569	578	-	604	605	-
Stage 2	-	-	-	-	-	-	792	592	-	709	562	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1150	-	-	1199	-	-	321	281	852	327	279	804
Mov Cap-2 Maneuver	-	-	-	-	-	-	321	281	-	327	279	-
Stage 1	-	-	-	-	-	-	542	551	-	576	603	-
Stage 2	-	-	-	-	-	-	717	590	-	670	536	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.1	16.7	11.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	322	1150	-	-	1199	-	-	608
HCM Lane V/C Ratio	0.041	0.047	-	-	0.004	-	-	0.145
HCM Control Delay (s)	16.7	8.3	-	-	8	-	-	11.9
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	313	35	7	226	26	34	47	14	46	39	14
Future Volume (veh/h)	18	313	35	7	226	26	34	47	14	46	39	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	340	38	8	246	28	37	51	15	50	42	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	547	1290	143	490	1288	145	672	555	163	664	526	188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	9.8	9.9	10.0	10.3	9.4	9.4	9.0	0.0	8.7	9.3	0.0	8.6
Ln Grp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		398			282			103			107	
Approach Delay, s/veh		9.9			9.4			8.8			8.9	
Approach LOS		A			A			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		6.0		6.0		6.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		4.8		5.2		4.7		5.3
Max Q Clear (g_c+I1), s		3.7		5.2		4.1		5.4
Green Ext Time (g_e), s		0.3		1.8		0.3		1.2
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1346		1105		1335		1005
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1388		3225		1316		3219
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		408		358		470		363
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	37	0	20	0	50	0	8
Grp Sat Flow (s), veh/h/ln	0	1346	0	1105	0	1335	0	1005
Q Serve Time (g_s), s	0.0	0.8	0.0	0.5	0.0	1.1	0.0	0.2
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	2.8	0.0	2.1	0.0	3.4
Perm LT Sat Flow (s_l), veh/h/ln	0	1346	0	1105	0	1335	0	1005
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	17.1	0.0	15.7	0.0	17.0	0.0	14.8
Perm LT Q Serve Time (g_ps), s	0.0	0.8	0.0	0.5	0.0	1.1	0.0	0.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	672	0	547	0	664	0	490
V/C Ratio (X)	0.00	0.06	0.00	0.04	0.00	0.08	0.00	0.02
Avail Cap (c_a), veh/h	0	672	0	547	0	664	0	490
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	9.7	0.0	9.1	0.0	10.2
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.0	0.0	9.8	0.0	9.3	0.0	10.3
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.1	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.1	0.0	0.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	186	0	0	0	135
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	2.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	2.2
Lane Grp Cap (c), veh/h	0	0	0	711	0	0	0	711
V/C Ratio (X)	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.19
Avail Cap (c_a), veh/h	0	0	0	711	0	0	0	711
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.0	0.0	0.0	0.0	8.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	9.9	0.0	0.0	0.0	9.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	66	0	192	0	57	0	139
Grp Sat Flow (s), veh/h/ln	0	1797	0	1806	0	1786	0	1805
Q Serve Time (g_s), s	0.0	1.0	0.0	3.2	0.0	0.9	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	3.2	0.0	0.9	0.0	2.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.23	0.00	0.20	0.00	0.26	0.00	0.20
Lane Grp Cap (c), veh/h	0	719	0	722	0	714	0	722
V/C Ratio (X)	0.00	0.09	0.00	0.27	0.00	0.08	0.00	0.19
Avail Cap (c_a), veh/h	0	719	0	722	0	714	0	722
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.4	0.0	9.1	0.0	8.4	0.0	8.8
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.9	0.0	0.2	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.7	0.0	10.0	0.0	8.6	0.0	9.4
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	1.0	0.0	0.3	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	1.2	0.0	0.3	0.0	0.8
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.05	0.00	0.02	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	225	27	13	272	34	42	14	13	46	51	22
Future Volume (veh/h)	8	225	27	13	272	34	42	14	13	46	51	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	245	29	14	296	37	46	15	14	50	55	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	514	1282	150	547	1273	158	651	356	332	698	494	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.0	9.4	9.4	9.7	9.7	9.7	9.4	0.0	8.4	8.9	0.0	8.8
Ln Grp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		283			347			75			129	
Approach Delay, s/veh		9.4			9.7			9.0			8.8	
Approach LOS		A			A			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		6.0		6.0		6.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		4.5		5.3		4.8		5.2
Max Q Clear (g_c+I1), s		4.3		5.1		3.5		4.8
Green Ext Time (g_e), s		0.2		1.2		0.4		1.6
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1320		1047		1381		1105
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		890		3204		1235		3182
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		831		375		539		394
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	46	0	9	0	50	0	14
Grp Sat Flow (s), veh/h/ln	0	1320	0	1047	0	1381	0	1105
Q Serve Time (g_s), s	0.0	1.0	0.0	0.3	0.0	1.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	3.1	0.0	1.5	0.0	2.6
Perm LT Sat Flow (s_l), veh/h/ln	0	1320	0	1047	0	1381	0	1105
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.7	0.0	15.2	0.0	17.5	0.0	15.7
Perm LT Q Serve Time (g_ps), s	0.0	1.0	0.0	0.3	0.0	1.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	651	0	514	0	698	0	547
V/C Ratio (X)	0.00	0.07	0.00	0.02	0.00	0.07	0.00	0.03
Avail Cap (c_a), veh/h	0	651	0	514	0	698	0	547
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	10.0	0.0	8.7	0.0	9.6
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.4	0.0	10.0	0.0	8.9	0.0	9.7
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	0.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	135	0	0	0	164
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.7
Lane Grp Cap (c), veh/h	0	0	0	711	0	0	0	711
V/C Ratio (X)	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.23
Avail Cap (c_a), veh/h	0	0	0	711	0	0	0	711
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	8.8	0.0	0.0	0.0	8.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	9.4	0.0	0.0	0.0	9.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.8	0.0	0.0	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	29	0	139	0	79	0	169
Grp Sat Flow (s), veh/h/ln	0	1721	0	1803	0	1773	0	1799
Q Serve Time (g_s), s	0.0	0.5	0.0	2.3	0.0	1.3	0.0	2.8
Cycle Q Clear Time (g_c), s	0.0	0.5	0.0	2.3	0.0	1.3	0.0	2.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.48	0.00	0.21	0.00	0.30	0.00	0.22
Lane Grp Cap (c), veh/h	0	688	0	721	0	709	0	720
V/C Ratio (X)	0.00	0.04	0.00	0.19	0.00	0.11	0.00	0.23
Avail Cap (c_a), veh/h	0	688	0	721	0	709	0	720
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.2	0.0	8.8	0.0	8.5	0.0	8.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.6	0.0	0.3	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.4	0.0	9.4	0.0	8.8	0.0	9.7
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.7	0.0	0.4	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.8	0.0	0.4	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.03	0.00	0.03	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	14	430	305	3	1	15
Future Vol, veh/h	14	430	305	3	1	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	467	332	3	1	16

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	335	0	-	0	596	166			
Stage 1	-	-	-	-	332	-			
Stage 2	-	-	-	-	264	-			
Critical Hdwy	4.14	-	-	-	6.84	6.94			
Critical Hdwy Stg 1	-	-	-	-	5.84	-			
Critical Hdwy Stg 2	-	-	-	-	5.84	-			
Follow-up Hdwy	2.22	-	-	-	3.52	3.32			
Pot Cap-1 Maneuver	1221	-	-	-	435	849			
Stage 1	-	-	-	-	699	-			
Stage 2	-	-	-	-	756	-			
Platoon blocked, %		-	-	-					
Mov Cap-1 Maneuver	1221	-	-	-	430	849			
Mov Cap-2 Maneuver	-	-	-	-	430	-			
Stage 1	-	-	-	-	691	-			
Stage 2	-	-	-	-	756	-			

Approach	EB	WB	SW
HCM Control Delay, s	0.3	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1	SWLn2
Capacity (veh/h)	1221	-	-	-	430	849
HCM Lane V/C Ratio	0.012	-	-	-	0.003	0.019
HCM Control Delay (s)	8	-	-	-	13.4	9.3
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

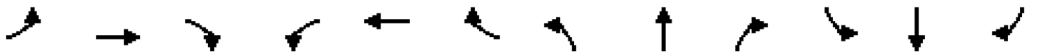
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	6	444	504	4	3	15
Future Vol, veh/h	6	444	504	4	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	483	548	4	3	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	552	0	-	0	804	274
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1014	-	-	-	321	724
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1014	-	-	-	319	724
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SW
HCM Control Delay, s	0.1	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1	SWLn2
Capacity (veh/h)	1014	-	-	-	319	724
HCM Lane V/C Ratio	0.006	-	-	-	0.01	0.023
HCM Control Delay (s)	8.6	-	-	-	16.4	10.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	4	0	4	2	191	1	156	4	326	153	0
Future Volume (veh/h)	0	4	0	4	2	191	1	156	4	326	153	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	4	0	4	2	0	1	170	4	354	166	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	160	748	0	723	748		612	1421	634	1189	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.40	0.00	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	8.1	0.0	8.2	8.1	0.0	8.9	8.7	8.1	11.2	8.7	0.0
Ln Grp LOS	A	A	A	A	A		A	A	A	B	A	A
Approach Vol, veh/h		4			6			175			520	
Approach Delay, s/veh		8.1			8.2			8.7			10.4	
Approach LOS		A			A			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		6.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.2		5.2		4.6		4.3
Max Q Clear (g_c+I1), s		3.4		2.1		8.4		2.1
Green Ext Time (g_e), s		0.8		0.0		1.9		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1220		1415		2349		1412

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3554		1870		3554		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		0		1585		1585

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	1	0	0	0	354	0	4
Grp Sat Flow (s), veh/h/ln	0	1220	0	1415	0	1174	0	1412
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.3	0.0	0.0	0.0	6.4	0.0	0.1
Perm LT Sat Flow (s_l), veh/h/ln	0	1220	0	1415	0	1174	0	1412
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	0.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.7	0.0	0.0	0.0	16.6	0.0	17.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	612	0	160	0	1189	0	723
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.01
Avail Cap (c_a), veh/h	0	612	0	160	0	1189	0	723
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	0.0	0.0	10.5	0.0	8.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	0.0	0.0	11.2	0.0	8.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	170	0	4	0	166	0	2
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	1.4	0.0	0.1	0.0	1.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	0.1	0.0	1.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1421	0	748	0	1421	0	748
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1421	0	748	0	1421	0	748
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.5	0.0	8.1	0.0	8.5	0.0	8.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.7	0.0	8.1	0.0	8.7	0.0	8.1
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

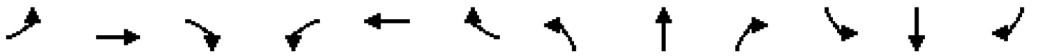
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R				R		R
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	4	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	0	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	634	0	0	0	634	0	634
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	634	0	0	0	634	0	634
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	3	332	2	5	3	1	178	4	295	170	0
Future Volume (veh/h)	1	3	332	2	5	3	1	178	4	295	170	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	3	361	2	5	0	1	193	4	321	185	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	722	5	630	385	748		600	1421	634	1161	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	8.2	0.0	14.2	13.7	8.1	0.0	9.0	8.8	8.1	11.1	8.7	0.0
Ln Grp LOS	A	A	B	B	A		A	A	A	B	A	A
Approach Vol, veh/h		365			7			198			506	
Approach Delay, s/veh		14.2			9.7			8.8			10.2	
Approach LOS		B			A			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		6.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.2		5.6		4.7		5.1
Max Q Clear (g_c+I1), s		3.6		10.0		8.2		10.1
Green Ext Time (g_e), s		0.9		1.5		1.9		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1199		1411		2300		1018

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3554		13		3554		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1574		1585		1585

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	1	0	1	0	321	0	2
Grp Sat Flow (s), veh/h/ln	0	1199	0	1411	0	1150	0	1018
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.1	0.0	6.2	0.0	8.1
Perm LT Sat Flow (s_l), veh/h/ln	0	1199	0	1411	0	1150	0	1018
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.5	0.0	17.9	0.0	16.4	0.0	10.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	600	0	722	0	1161	0	385
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.01
Avail Cap (c_a), veh/h	0	600	0	722	0	1161	0	385
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.0	0.0	8.1	0.0	10.5	0.0	13.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.0	0.0	8.2	0.0	11.1	0.0	13.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	2	0	0	0	2	0	1
Grp Vol (v), veh/h	0	193	0	0	0	185	0	5
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	1870
Q Serve Time (g_s), s	0.0	1.6	0.0	0.0	0.0	1.5	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.6	0.0	0.0	0.0	1.5	0.0	0.1
Lane Grp Cap (c), veh/h	0	1421	0	0	0	1421	0	748
V/C Ratio (X)	0.00	0.14	0.00	0.00	0.00	0.13	0.00	0.01
Avail Cap (c_a), veh/h	0	1421	0	0	0	1421	0	748
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.6	0.0	0.0	0.0	8.5	0.0	8.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.8	0.0	0.0	0.0	8.7	0.0	8.1
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	4	0	364	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1587	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	8.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	8.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.99	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	634	0	635	0	634	0	634
V/C Ratio (X)	0.00	0.01	0.00	0.57	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	634	0	635	0	634	0	634
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	10.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	14.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX D : NEAR TERM WITH PROJECT ANALYSIS WORKSHEETS

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	330	20	140	299	0	2	1	1	1	0	0
Future Vol, veh/h	0	330	20	140	299	0	2	1	1	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	359	22	152	325	0	2	1	1	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	325	0	0	381	0	0	826	988	180	809	1010	163
Stage 1	-	-	-	-	-	-	359	359	-	629	629	-
Stage 2	-	-	-	-	-	-	467	629	-	180	381	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1231	-	-	1174	-	-	264	246	832	272	238	853
Stage 1	-	-	-	-	-	-	632	626	-	437	474	-
Stage 2	-	-	-	-	-	-	545	474	-	804	612	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1231	-	-	1174	-	-	238	214	832	244	207	853
Mov Cap-2 Maneuver	-	-	-	-	-	-	238	214	-	244	207	-
Stage 1	-	-	-	-	-	-	632	626	-	437	413	-
Stage 2	-	-	-	-	-	-	474	413	-	802	612	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.7	18.1	19.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	280	1231	-	-	1174	-	-	244	-
HCM Lane V/C Ratio	0.016	-	-	-	0.13	-	-	0.004	-
HCM Control Delay (s)	18.1	0	-	-	8.5	-	-	19.8	0
HCM Lane LOS	C	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0	0	-	-	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	424	0	1	431	3	21	0	134	2	2	0
Future Vol, veh/h	0	424	0	1	431	3	21	0	134	2	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	461	0	1	468	3	23	0	146	2	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	471	0	0	461	0	0	698	934	231	701	931	234
Stage 1	-	-	-	-	-	-	461	461	-	470	470	-
Stage 2	-	-	-	-	-	-	237	473	-	231	461	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1087	-	-	1096	-	-	327	264	771	325	265	768
Stage 1	-	-	-	-	-	-	550	564	-	543	558	-
Stage 2	-	-	-	-	-	-	745	557	-	751	564	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1087	-	-	1096	-	-	325	264	771	264	265	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	325	264	-	264	265	-
Stage 1	-	-	-	-	-	-	550	564	-	543	557	-
Stage 2	-	-	-	-	-	-	741	556	-	609	564	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.5	18.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	650	1087	-	-	1096	-	-	264	-
HCM Lane V/C Ratio	0.259	-	-	-	0.001	-	-	0.016	-
HCM Control Delay (s)	12.5	0	-	-	8.3	-	-	18.9	0
HCM Lane LOS	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	1	0	-	-	0	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	279	22	3	342	15	27	4	1	32	6	27
Future Vol, veh/h	44	279	22	3	342	15	27	4	1	32	6	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	303	24	3	372	16	29	4	1	35	7	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	327	0	0	595	793	152	636	809	194
Stage 1	-	-	-	-	-	-	399	399	-	386	386	-
Stage 2	-	-	-	-	-	-	196	394	-	250	423	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1167	-	-	1229	-	-	388	320	867	363	313	815
Stage 1	-	-	-	-	-	-	598	601	-	609	609	-
Stage 2	-	-	-	-	-	-	787	604	-	732	586	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1167	-	-	1229	-	-	356	306	867	347	300	815
Mov Cap-2 Maneuver	-	-	-	-	-	-	356	306	-	347	300	-
Stage 1	-	-	-	-	-	-	573	576	-	584	608	-
Stage 2	-	-	-	-	-	-	749	603	-	696	562	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	16.2	14.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	355	1167	-	-	1229	-	-	447
HCM Lane V/C Ratio	0.098	0.041	-	-	0.003	-	-	0.158
HCM Control Delay (s)	16.2	8.2	-	-	7.9	-	-	14.6
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	414	46	4	333	40	7	4	1	14	3	64
Future Vol, veh/h	50	414	46	4	333	40	7	4	1	14	3	64
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	450	50	4	362	43	8	4	1	15	3	70

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	405	0	0	500	0	0	749	971	225	727	1000	203
Stage 1	-	-	-	-	-	-	558	558	-	392	392	-
Stage 2	-	-	-	-	-	-	191	413	-	335	608	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1150	-	-	1060	-	-	300	251	778	312	242	804
Stage 1	-	-	-	-	-	-	482	510	-	604	605	-
Stage 2	-	-	-	-	-	-	792	592	-	653	484	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1150	-	-	1060	-	-	261	238	778	295	230	804
Mov Cap-2 Maneuver	-	-	-	-	-	-	261	238	-	295	230	-
Stage 1	-	-	-	-	-	-	459	486	-	576	603	-
Stage 2	-	-	-	-	-	-	717	590	-	616	461	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.1	19.2	12.3
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	267	1150	-	-	1060	-	-	578
HCM Lane V/C Ratio	0.049	0.047	-	-	0.004	-	-	0.152
HCM Control Delay (s)	19.2	8.3	-	-	8.4	-	-	12.3
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	313	35	7	318	26	54	47	14	46	39	14
Future Volume (veh/h)	18	313	35	7	318	26	54	47	14	46	39	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	340	38	8	346	28	59	51	15	50	42	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	493	1290	143	490	1332	107	672	555	163	664	526	188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.5	9.9	10.0	10.3	9.9	9.9	9.3	0.0	8.7	9.3	0.0	8.6
Ln Grp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		398			382			125			107	
Approach Delay, s/veh		10.0			9.9			9.0			8.9	
Approach LOS		A			A			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		6.0		6.0		6.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		4.6		5.3		4.7		5.3
Max Q Clear (g_c+I1), s		4.2		5.8		4.1		5.4
Green Ext Time (g_e), s		0.4		1.8		0.3		1.8
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1346		1009		1335		1005
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1388		3225		1316		3331
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		408		358		470		268
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	59	0	20	0	50	0	8
Grp Sat Flow (s), veh/h/ln	0	1346	0	1009	0	1335	0	1005
Q Serve Time (g_s), s	0.0	1.3	0.0	0.6	0.0	1.1	0.0	0.2
Cycle Q Clear Time (g_c), s	0.0	2.2	0.0	3.8	0.0	2.1	0.0	3.4
Perm LT Sat Flow (s_l), veh/h/ln	0	1346	0	1009	0	1335	0	1005
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	17.1	0.0	14.9	0.0	17.0	0.0	14.8
Perm LT Q Serve Time (g_ps), s	0.0	1.3	0.0	0.6	0.0	1.1	0.0	0.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	672	0	493	0	664	0	490
V/C Ratio (X)	0.00	0.09	0.00	0.04	0.00	0.08	0.00	0.02
Avail Cap (c_a), veh/h	0	672	0	493	0	664	0	490
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.0	0.0	10.3	0.0	9.1	0.0	10.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.0	0.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.3	0.0	10.5	0.0	9.3	0.0	10.3
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.1	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	0.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	186	0	0	0	184
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	3.1
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	3.1
Lane Grp Cap (c), veh/h	0	0	0	711	0	0	0	711
V/C Ratio (X)	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.26
Avail Cap (c_a), veh/h	0	0	0	711	0	0	0	711
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.0	0.0	0.0	0.0	9.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	9.9	0.0	0.0	0.0	9.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	66	0	192	0	57	0	190
Grp Sat Flow (s), veh/h/ln	0	1797	0	1806	0	1786	0	1822
Q Serve Time (g_s), s	0.0	1.0	0.0	3.2	0.0	0.9	0.0	3.1
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	3.2	0.0	0.9	0.0	3.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.23	0.00	0.20	0.00	0.26	0.00	0.15
Lane Grp Cap (c), veh/h	0	719	0	722	0	714	0	729
V/C Ratio (X)	0.00	0.09	0.00	0.27	0.00	0.08	0.00	0.26
Avail Cap (c_a), veh/h	0	719	0	722	0	714	0	729
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.4	0.0	9.1	0.0	8.4	0.0	9.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.9	0.0	0.2	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.7	0.0	10.0	0.0	8.6	0.0	9.9
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	1.0	0.0	0.3	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	1.2	0.0	0.3	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.05	0.00	0.02	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	317	47	13	272	34	42	14	13	46	51	22
Future Volume (veh/h)	8	317	47	13	272	34	42	14	13	46	51	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	345	51	14	296	37	46	15	14	50	55	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	514	1244	182	481	1273	158	651	356	332	698	494	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.0	10.1	10.1	10.5	9.7	9.7	9.4	0.0	8.4	8.9	0.0	8.8
Ln Grp LOS	B	B	B	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		405			347			75			129	
Approach Delay, s/veh		10.1			9.7			9.0			8.8	
Approach LOS		B			A			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		6.0		6.0		6.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		4.5		5.3		4.8		5.3
Max Q Clear (g_c+I1), s		4.3		5.4		3.5		5.8
Green Ext Time (g_e), s		0.2		1.9		0.4		1.5
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1320		1047		1381		988
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		890		3110		1235		3182
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		831		456		539		394
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	46	0	9	0	50	0	14
Grp Sat Flow (s), veh/h/ln	0	1320	0	1047	0	1381	0	988
Q Serve Time (g_s), s	0.0	1.0	0.0	0.3	0.0	1.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	3.1	0.0	1.5	0.0	3.8
Perm LT Sat Flow (s_l), veh/h/ln	0	1320	0	1047	0	1381	0	988
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.7	0.0	15.2	0.0	17.5	0.0	14.6
Perm LT Q Serve Time (g_ps), s	0.0	1.0	0.0	0.3	0.0	1.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	651	0	514	0	698	0	481
V/C Ratio (X)	0.00	0.07	0.00	0.02	0.00	0.07	0.00	0.03
Avail Cap (c_a), veh/h	0	651	0	514	0	698	0	481
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	10.0	0.0	8.7	0.0	10.4
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.4	0.0	10.0	0.0	8.9	0.0	10.5
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	0.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T				T
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	196	0	0	0	164
Grp Sat Flow (s), veh/h/ln	0	0	0	1777	0	0	0	1777
Q Serve Time (g_s), s	0.0	0.0	0.0	3.3	0.0	0.0	0.0	2.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.3	0.0	0.0	0.0	2.7
Lane Grp Cap (c), veh/h	0	0	0	711	0	0	0	711
V/C Ratio (X)	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.23
Avail Cap (c_a), veh/h	0	0	0	711	0	0	0	711
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.1	0.0	0.0	0.0	8.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	10.1	0.0	0.0	0.0	9.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	29	0	200	0	79	0	169
Grp Sat Flow (s), veh/h/ln	0	1721	0	1788	0	1773	0	1799
Q Serve Time (g_s), s	0.0	0.5	0.0	3.4	0.0	1.3	0.0	2.8
Cycle Q Clear Time (g_c), s	0.0	0.5	0.0	3.4	0.0	1.3	0.0	2.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.48	0.00	0.25	0.00	0.30	0.00	0.22
Lane Grp Cap (c), veh/h	0	688	0	715	0	709	0	720
V/C Ratio (X)	0.00	0.04	0.00	0.28	0.00	0.11	0.00	0.23
Avail Cap (c_a), veh/h	0	688	0	715	0	709	0	720
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.2	0.0	9.1	0.0	8.5	0.0	8.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	1.0	0.0	0.3	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.4	0.0	10.1	0.0	8.8	0.0	9.7
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	1.0	0.0	0.4	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	1.2	0.0	0.4	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.05	0.00	0.03	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	14	430	392	3	1	20
Future Vol, veh/h	14	430	392	3	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	467	426	3	1	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	429	0	-	0	690	213
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	264	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1127	-	-	-	379	792
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	756	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1127	-	-	-	374	792
Mov Cap-2 Maneuver	-	-	-	-	374	-
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	756	-

Approach	EB	WB	SW
HCM Control Delay, s	0.3	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1	SWLn2
Capacity (veh/h)	1127	-	-	-	374	792
HCM Lane V/C Ratio	0.014	-	-	-	0.003	0.027
HCM Control Delay (s)	8.2	-	-	-	14.7	9.7
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

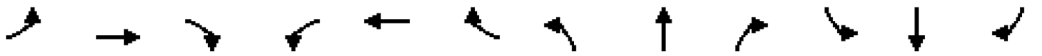
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	11	531	504	4	3	15
Future Vol, veh/h	11	531	504	4	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	577	548	4	3	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	552	0	-	0	861	274
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	313	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1014	-	-	-	295	724
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	715	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1014	-	-	-	291	724
Mov Cap-2 Maneuver	-	-	-	-	291	-
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	715	-

Approach	EB	WB	SW
HCM Control Delay, s	0.2	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1	SWLn2
Capacity (veh/h)	1014	-	-	-	291	724
HCM Lane V/C Ratio	0.012	-	-	-	0.011	0.023
HCM Control Delay (s)	8.6	-	-	-	17.5	10.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	4	0	4	2	238	1	195	4	326	153	0
Future Volume (veh/h)	0	4	0	4	2	238	1	195	4	326	153	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	4	0	4	2	0	1	212	4	354	166	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	160	748	0	723	748		612	1421	634	1138	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.40	0.00	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	8.1	0.0	8.2	8.1	0.0	8.9	8.8	8.1	11.6	8.7	0.0
Ln Grp LOS	A	A	A	A	A		A	A	A	B	A	A
Approach Vol, veh/h		4			6			217			520	
Approach Delay, s/veh		8.1			8.2			8.8			10.6	
Approach LOS		A			A			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		6.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.2		5.2		4.7		4.3
Max Q Clear (g_c+I1), s		3.7		2.1		9.0		2.1
Green Ext Time (g_e), s		1.1		0.0		1.9		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00
Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1220		1415		2261		1412
Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3554		1870		3554		1870
Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		0		1585		1585
Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	1	0	0	0	354	0	4
Grp Sat Flow (s), veh/h/ln	0	1220	0	1415	0	1130	0	1412
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.3	0.0	0.0	0.0	7.0	0.0	0.1
Perm LT Sat Flow (s_l), veh/h/ln	0	1220	0	1415	0	1130	0	1412
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	0.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.7	0.0	0.0	0.0	16.3	0.0	17.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	612	0	160	0	1138	0	723
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.01
Avail Cap (c_a), veh/h	0	612	0	160	0	1138	0	723
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.9	0.0	0.0	0.0	10.9	0.0	8.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	0.0	0.0	11.6	0.0	8.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	212	0	4	0	166	0	2
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	1.7	0.0	0.1	0.0	1.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.1	0.0	1.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1421	0	748	0	1421	0	748
V/C Ratio (X)	0.00	0.15	0.00	0.01	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1421	0	748	0	1421	0	748
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.6	0.0	8.1	0.0	8.5	0.0	8.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.8	0.0	8.1	0.0	8.7	0.0	8.1
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

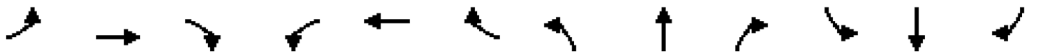
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R				R		R
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	4	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	0	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	634	0	0	0	634	0	634
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	634	0	0	0	634	0	634
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	3	332	2	5	3	1	178	4	342	209	0
Future Volume (veh/h)	1	3	332	2	5	3	1	178	4	342	209	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	3	361	2	5	0	1	193	4	372	227	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	722	5	630	385	748		574	1421	634	1161	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	8.2	0.0	14.2	13.7	8.1	0.0	9.3	8.8	8.1	11.5	8.9	0.0
Ln Grp LOS	A	A	B	B	A		A	A	A	B	A	A
Approach Vol, veh/h		365			7			198			599	
Approach Delay, s/veh		14.2			9.7			8.8			10.5	
Approach LOS		B			A			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		6.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.2		5.6		4.7		5.1
Max Q Clear (g_c+I1), s		3.9		10.0		9.1		10.1
Green Ext Time (g_e), s		0.9		1.5		2.2		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		1154		1411		2300		1018

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3554		13		3554		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1574		1585		1585

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L		L		L

Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	1	0	1	0	372	0	2
Grp Sat Flow (s), veh/h/ln	0	1154	0	1411	0	1150	0	1018
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	0.1	0.0	7.1	0.0	8.1
Perm LT Sat Flow (s_l), veh/h/ln	0	1154	0	1411	0	1150	0	1018
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	16.2	0.0	17.9	0.0	16.4	0.0	10.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	574	0	722	0	1161	0	385
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.01
Avail Cap (c_a), veh/h	0	574	0	722	0	1161	0	385
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.3	0.0	8.1	0.0	10.8	0.0	13.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.3	0.0	8.2	0.0	11.5	0.0	13.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	2	0	0	0	2	0	1
Grp Vol (v), veh/h	0	193	0	0	0	227	0	5
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	1870
Q Serve Time (g_s), s	0.0	1.6	0.0	0.0	0.0	1.8	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.6	0.0	0.0	0.0	1.8	0.0	0.1
Lane Grp Cap (c), veh/h	0	1421	0	0	0	1421	0	748
V/C Ratio (X)	0.00	0.14	0.00	0.00	0.00	0.16	0.00	0.01
Avail Cap (c_a), veh/h	0	1421	0	0	0	1421	0	748
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.6	0.0	0.0	0.0	8.7	0.0	8.1
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.8	0.0	0.0	0.0	8.9	0.0	8.1
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	4	0	364	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1587	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	8.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	8.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.99	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	634	0	635	0	634	0	634
V/C Ratio (X)	0.00	0.01	0.00	0.57	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	634	0	635	0	634	0	634
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	10.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	14.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Water Supply Assessment
For the ZGlobal Vega SES 6, LLC
Solar Energy and Battery Storage Project
Imperial County, California

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March 7, 2023

Water Supply Assessment
For the ZGlobal Vega SES 6, LLC
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1.0 INTRODUCTION

EMKO Environmental, Inc. (EMKO) has prepared this Water Supply Assessment (WSA) as a subconsultant to ECORP Consulting, Inc. for the proposed Vega SES 6, LLC Solar Energy and Battery Storage Project (Project) in Imperial County, California at the location indicated on Figure 1. Project water use includes dust control and soil conditioning requirements during construction and routine maintenance, primarily panel washing, during operation.

Water Code Sections 10910 through 10915 were amended by Senate Bill 610 (SB 610) in 2002. SB 610 requires that under specific circumstances, as detailed below, an assessment of available water supplies must be conducted. The purpose of the assessment is to determine if available water supplies are sufficient to serve the demand generated by the Project, as well as the reasonably foreseeable demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Water Code Section 10910 was further amended by SB 1262 on September 24, 2016, to require a Water Supply Assessment to include additional information regarding the groundwater basin designation and adjacent water systems. This report provides the information required for a Water Supply Assessment (WSA), as described in the October 2003 *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to Assist Water Suppliers, Cities, and Counties in Integrating Water and Land Use Planning*, published by the California Department of Water Resources (DWR Guidebook) along with the additional information required by SB 1262.

2.0 PROJECT DESCRIPTION

Vega SES 6, LLC is proposing to construct and operate the Project on private lands in the Imperial Valley in Imperial County, California**.** The Project site is located approximately five miles southwest of the community of Westmorland and 10 miles west of the City of Brawley, south of Andre Road (see Figures 1 and 2). The Project includes approximately 320 acres in Section 26 of Township 13 South, Range 12 East of the San Bernardino Base and Meridian (SBB&M) within the “Westmorland West” 7.5-minute U.S. Geologic Survey (USGS) quadrangle. The Project site covers Imperial County Assessor’s Parcel Number (APN) 034-160-002. The site is one-half mile west of the Imperial Irrigation District (IID) Westside Main Canal (see Figure 2). The Project will

include an 80-megawatt solar photovoltaic system and integrated 160-megawatt battery energy storage system along with related substations and transmission lines. Figure 3 is a Site Plan showing the Project layout and ancillary facilities.

The parcel is not currently located within the Imperial County Renewable Energy Overlay Zone. Thus, an amendment to the County's General Plan must be approved, along with a Conditional Use Permit (CUP), to allow construction and operation of the Project. These are discretionary actions by the County requiring compliance with the California Environmental Quality Act (CEQA). This Water Supply Assessment is intended to support and be a part of the CEQA analysis.

Domestic water and sanitation facilities would be required during construction. These would be provided through bottled water and portable facilities. A domestic/potable water connection would not be required.

Construction is anticipated to require 12 to 18 months to complete. Anticipated operational Project life is 25 to 30 years.

Figure 1. Regional Location Map

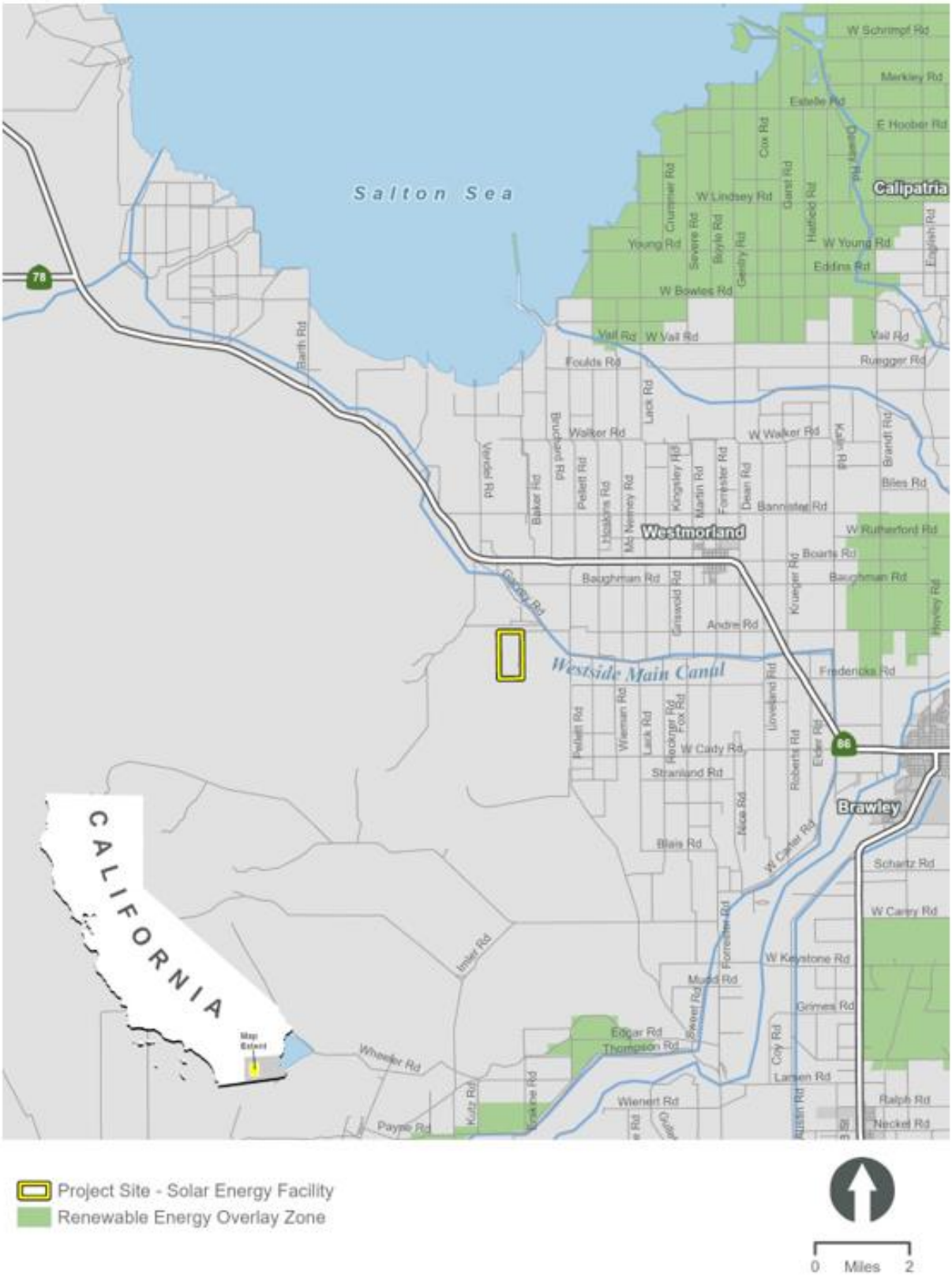
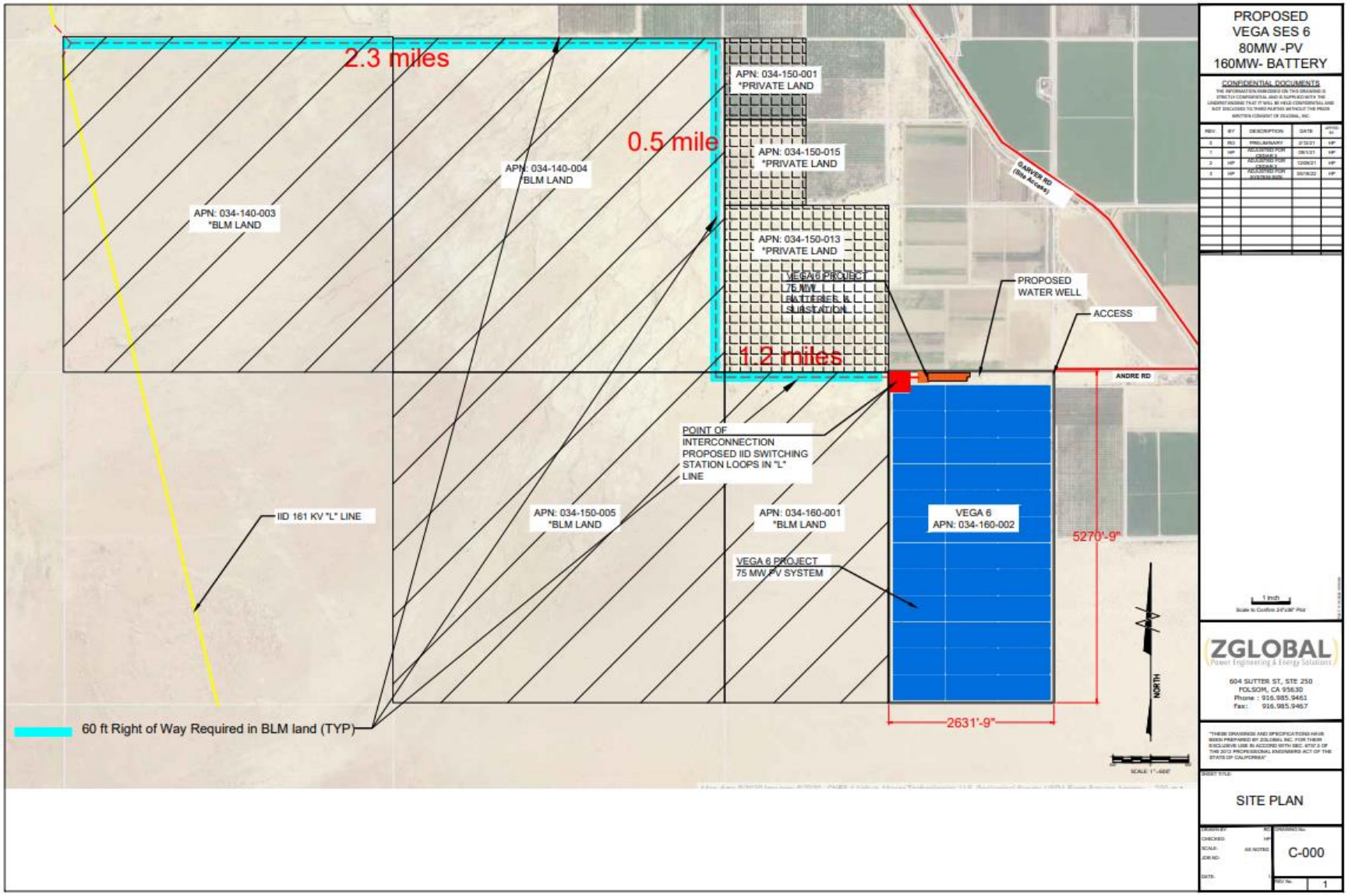


Figure 2. Project Location

FIGURE 3. Site Plan



3.0 WATER SUPPLY PLANNING UNDER SB 610 and SB 1262

SB 610, effective January 1, 2002, amends Sections 10910 through 10915 of the Water Code by requiring preparation of a WSA for development projects subject to CEQA and other criteria, as discussed below. SB 610 also amends Section 10631 of the Water Code, which relates to Urban Water Management Plans (UWMPs). The WSA process under SB 610 is designed to rely on the information typically contained in UWMPs, where available.

On September 24, 2016, SB 1262 further amended Section 10910 of the Water Code to require additional information related to adjacent public water systems and the status of the groundwater basin. These amendments provide additional consistency with the Sustainable Groundwater Management Act of 2014, as discussed further in Section 4.3.

The first steps in the WSA process are to determine whether SB 610 applies to the proposed Project. If so, then documentation of available water supplies, anticipated Project demand, and the sufficiency of supplies must be conducted. These issues are summarized by the following questions, as outlined in the DWR Guidebook:

1. Is the proposed Project subject to CEQA?
2. Is the proposed Project a "Project" under SB 610?
3. Is there a public water system that will service the proposed Project?
4. Is there a current UWMP that accounts for the project demand?
5. Is groundwater a component of the supplies for the Project?
6. Are there sufficient supplies to serve the Project over the next twenty years?

Each of these issues are discussed in the following sections as they relate to the proposed Project.

3.1 Is the Proposed Project Subject to CEQA?

The first step in the SB 610 process is to determine whether the proposed project is subject to CEQA. Water Code Section 10910(a) states that any city or county that determines that an application meets the definition of "project", per Water Code Section 10912 (see Section 3.2, below), and is subject to CEQA, shall prepare a water supply assessment for the project. CEQA applies to projects requiring issuance of a discretionary permit by a public agency, projects undertaken by a public agency, or projects funded by a public agency. As noted in Section 2.0, the proposed Project requires discretionary approval of a General Plan Amendment and a CUP by Imperial County, a public agency. Therefore, the Project is subject to CEQA. This WSA has been prepared to support the environmental review that will be conducted by Imperial County under CEQA.

3.2 Is the Proposed Project a "Project" Under SB 610?

The second step in the SB 610 process is to determine if the proposed Project meets the definition of "project" under Water Code Section 10912(a). Under Section 10912(a) a "project" is defined as meeting any of the following criteria:

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 defined above; or
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.

The Vega SES 6 site is 320 acres. As a result, the Project will include an industrial site that is larger than 40 acres and thus this WSA is being prepared in accordance with criterion 5, above.

3.3 Is There a Public Water System That Will Service the Proposed Project?

Section 10912(c) of the Water Code identifies a public water system as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. The Project site is approximately five to 10 miles away from the nearest municipal water systems (i.e., the community of Westmorland and the City of Brawley, respectively). Furthermore, the water allocations to these systems from IID would likely be insufficient to serve the Project. For example, the annual allocation to Westmorland in 2022 was 723.4 acre-feet, which is not much greater than the construction water demand for the Project (IID, 2023a). The Project parcel is also located outside of IID's Imperial Unit and, therefore, does not have water service from IID (IID, 2023b). Thus, there is not a public water system that will serve the Project. The water supply will be provided by a new onsite groundwater supply well or wells to be drilled and installed as part of the Project.

3.4 Is There a Current Urban Water Management Plan That Accounts for the Project Demand?

The Water Code requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet per year, must prepare an UWMP. The DWR Guidebook (page iii) states that SB 610 repeatedly refers to the UWMP as a planning document that can be used to meet the standards set forth in the statute, and that UWMPs act as a foundation to fulfill the requirements of the statute. As noted in Section 3.3, above, there is no public water system that will serve the Project and, therefore, there is not an UWMP that addresses the Project area or Project demand. Since there is not an UWMP that accounts for the Project demand, this WSA is based upon available and relevant information from DWR, USGS, and other publicly available data. As this WSA has been prepared for use by the CEQA lead agency, this document includes an evaluation of whether the total projected water supplies, determined to be available during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses, including agricultural and manufacturing uses, in accordance with Water Code § 10910(c)(4).

3.5 Is Groundwater a Component of the Supplies for the Project?

Water Code Section 10910(f), paragraphs 1 through 5, must be addressed if groundwater is a source of supply for the proposed Project. As described in Section 3.3, the water supply will be provided by a new groundwater supply well or wells that will be drilled and installed as part of the Project. Therefore, an assessment of groundwater conditions is included in this document.

Water Code Section 10910(f) paragraphs 1 through 5, as modified by SB 1262, state:

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

> (1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.
>
> (2) (A) A description of any groundwater basin or basins from which the proposed project will be supplied. (B) For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. (C) For a basin that has not been adjudicated that is a basin designated as high- or medium priority pursuant to Section 10722.4, information regarding the following: (i) Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924; and (ii) If a groundwater sustainability agency has adopted a groundwater

> sustainability plan or has an approved alternative, a copy of that alternative or plan. (D) For a basin that has not been adjudicated that is a basin designated as low- or very-low priority pursuant to Section 10722.4, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.
>
> (3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
>
> (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
>
> (5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

Paragraphs 1 through 4, above, are addressed in Section 4.0, below, including a description of the groundwater basin, groundwater conditions, and available supply. Section 5.0 presents available information regarding water demand for the Project.

The Paragraph 5 requirement to provide an analysis of the sufficiency of the groundwater basin to meet the projected water demand associated with the proposed project is addressed in Section 6.0, below.

3.6 Are There Sufficient Supplies to Serve the Project Over the Next Twenty Years?

Water Code Section 10910(c)(4) requires the WSA to "*include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-*

year projection, will meet the projected water demand associated with the proposed project, in addition to existing and future planned uses, including agricultural and manufacturing uses."

The sufficiency of water supply for the proposed Project is addressed in Sections 6.0 and 7.0, below.

4.0 PROJECT WATER SUPPLY

As stated in Section 3.3, above, water for the Project will be provided by a new well or wells to be drilled on the Project site. As such, groundwater will be the sole water supply for both the construction and operational water needs. Because there are no public water systems that rely on groundwater, or other significant users of groundwater in the groundwater basin, there are no Urban Water Management Plans or similar planning documents available that include information regarding groundwater supply. Thus, limited information is available regarding groundwater conditions in the Project vicinity.

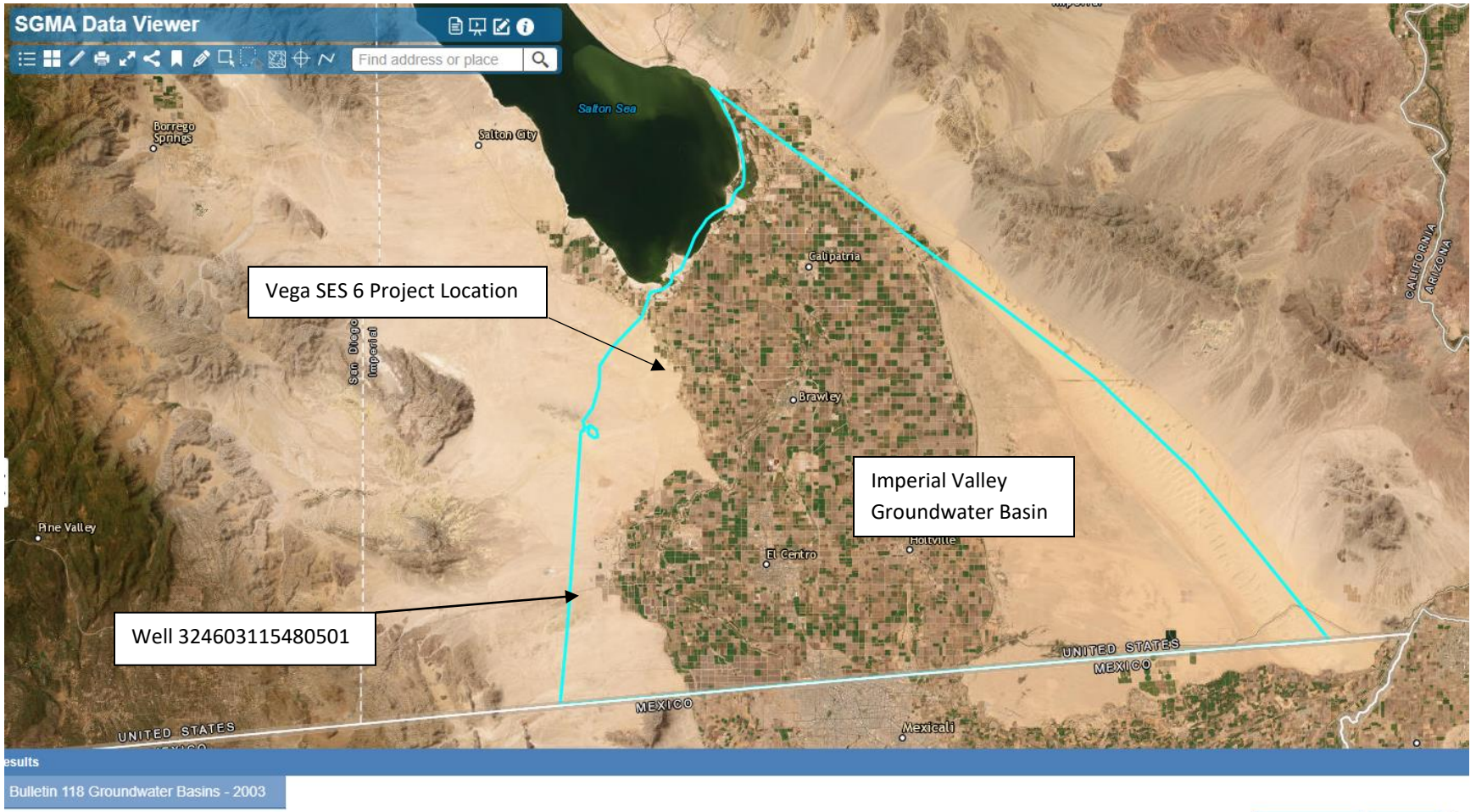
Overall conditions within the groundwater basin are described in Section 4.1. Groundwater recharge and available supply are discussed in Section 4.2. Groundwater level trends and the status of the basin relative to the Sustainable Groundwater Management Act of 2014 (SGMA) is provided in Section 4.3, as required by SB 1262.

4.1 Groundwater Basin

The Project is located within the northwestern part of the Imperial Valley Groundwater Basin (Basin), designated as basin number 7-030, as defined by DWR (2023a), as indicated on Figure 4. The Basin is bounded on the east by the Sand Hills and on the west by the igneous and metamorphic rocks of the Fish Creek and Coyote Mountains (DWR, 2003). The northern boundary is the Salton Sea while the southern boundary is the international border with Mexico. The groundwater basin has an area of approximately 1,200,000 acres, or 1,870 square miles (DWR, 2003). The Basin has not been adjudicated (DWR, 2023b). Figure 4 shows the groundwater basin boundary and the approximate location of the Project.

Groundwater occurs within 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 aquifers consist mostly of alluvial deposits of late Tertiary and Quaternary age that have eroded from the adjacent mountains and filled the valley. The upper aquifer has an average thickness of approximately 200 feet with a maximum thickness of 450 feet. The lower aquifer averages approximately 380 feet thick with a maximum thickness of 1,500 feet. (DWR, 2003)

FIGURE 4. Imperial Valley Groundwater Basin



Source: DWR, 2023a

4.2 Groundwater Supply and Recharge

Much of the Basin area consists of irrigated agriculture, as can be seen on Figure 4. Surface water from the Colorado River provides almost all of the irrigation and municipal water supply, through IID. Ninety-seven percent of IID's 3.1-million-acre-foot entitlement is used to irrigate almost 500,000 acres of farmland (IID, 2023c). The remaining three percent of IID's allocation supplies municipal, commercial, industrial, and rural domestic needs. DWR (2023b) reports that the population in the Imperial Valley Groundwater Basin in 2010 was approximately 164,037 persons and that the population is expected to increase 30 percent by 2030. Growth in municipal areas often occurs on land that was previously irrigated. Due to the very small percentage of water demand that is due to municipal and domestic uses, and the offset of previous irrigation use, the projected future population growth is not expected to result in a measurable change in water demand in the Basin.

The total groundwater storage capacity of the Basin is estimated to be as much as 14,000,000 acre-feet (DWR, 2003). However, much of the groundwater is not usable for agricultural and municipal purposes due to high levels of dissolved solids (see additional discussion below). As a result, there are only seven public water supply wells and 57 total wells present within the 1,200,000-acre Basin (DWR, 2023b).

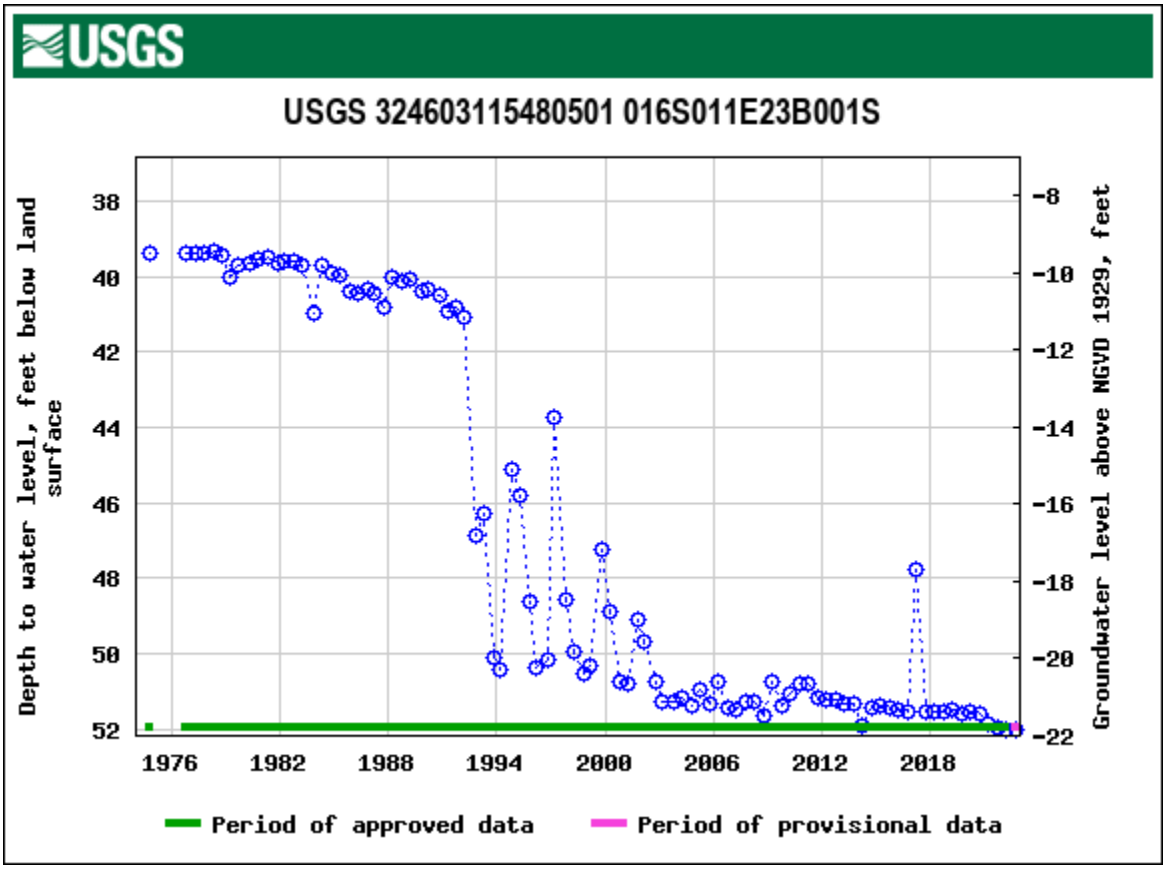
The average annual rainfall is very low, as discussed further in Section 6.0 below, and typically does not provide a sufficient quantity of moisture to percolate deep into the alluvial sediments. As a result, recharge of groundwater occurs primarily due to deep percolation of applied irrigation water and lateral inflow from adjacent groundwater basins. The average annual increase in groundwater storage in the Basin is estimated to be 17,000 acre-feet per year (DWR, 2003).

DWR's SGMA Data Viewer website (DWR, 2023a) and the USGS's National Water Information System mapping application (https://maps.waterdata.usgs.gov/mapper/index.html) indicate that there are approximately 15 active groundwater monitoring locations within the Basin at the time this report was prepared. However, all but one of the wells are located in the eastern part of the Basin. The nearest active monitoring well to the Project site is approximately 18 miles to the southwest of the Project site, near Interstate Highway 8 at the western edge of the Basin (see Figure 4). The well has USGS identification number 324603115480501, which identifies the latitude and longitude of the well (i.e., 32°46'03" latitude, -115°48'05" longitude), and California state well number 016S011E23B001, which indicates the township, range, and quarter-quarter section (i.e., northwest quarter of the northeast quarter of section 23 in township 16S, range 11E, San Bernardino Base and Meridian). The ground surface elevation at the well location is reported to be 30

feet above mean sea level (ft msl – NGVD29 datum) while the well depth is reported to be 114.7 feet below ground surface (ft bgs) (USGS, 2023).

Figure 5 is a hydrograph from USGS (2023) showing the groundwater level and groundwater elevation measured since 1974 in Well 324603115480501. Data have been measured from October 1974 to October 2022. As indicated on Figure 5, from 1974 to 1992, the depth to groundwater changed from approximately 39.5 ft bgs to 41 ft bgs. Between 1992 and 1994, the groundwater level decreased relatively rapidly from 41 ft bgs to about 50 ft bgs. Since 1992, the groundwater level has decreased from 50 ft bgs to 52 ft bgs. From 1974 to 1992, the rate of change in the groundwater level was approximately 0.08 foot per year, while from 1994 to 2022 the rate of change in the groundwater level was approximately 0.7 foot per year. Between 1993 and 2002, the data indicate that fluctuations occurred seasonally, potentially as a result of pumping. The overall decline of 12.5 feet from 1974 to 2022 represents a reduction in the available water column in the well of approximately 17 percent.

FIGURE 5. USGS Groundwater Level Hydrograph



As noted above, much of the groundwater in the Basin is not usable for agricultural and municipal purposes due to high levels of total dissolved solids (TDS). DWR (2003) reports that the TDS level may range from approximately 500 milligrams per liter (mg/L,

equivalent to parts per million, or ppm) to over 7,000 mg/L. Five public supply wells in the Basin reportedly have TDS concentrations ranging from 662 mg/L to 800 mg/L (DWR, 2003). The secondary maximum contaminant level (MCL) for TDS in drinking water ranges from 500 mg/L to 1,000 mg/L.

Water quality samples have been collected from Well 324603115480501 by the USGS (2023). Water quality samples were collected and analyzed in March 1964 and December 1974. Table 1 shows the water quality results from the March 1964 sample. Only the water temperature (24.0 degrees C) and the specific conductance (16,700 microsiemens per centimeter) were reported for the December 1974 sample. The groundwater sampled from the monitoring well has an alkaline pH and very high specific conductance, TDS, sodium + potassium, chloride and sulfate. The TDS level is appreciably greater than the high end of the range of the secondary MCL. The sodium and sulfate concentrations are also much greater than their respective secondary MCL of 250 mg/L. The water quality reported from Well 324603115480501 is much more saline than in many other parts of the Basin, based on the information reported by DWR (2003) and renders the groundwater unusable for potable or agricultural uses. The existing water quality is suitable for use for construction purposes but may require treatment for use in washing the photovoltaic panels. Without treatment, scaling and spotting could occur on the panel surfaces.

TABLE 1. USGS Water Quality Data (March 19, 1964)

Parameter	Units	Result
Specific Conductance	MicroSiemens per centimeter at 25° C	17,800
pH	Standard units	8.2
Bicarbonate Alkalinity	mg/L as calcium carbonate ($CaCO_3$)	184
Hardness	mg/L as $CaCO_3$	760
Non-carbonate hardness	mg/L as $CaCO_3$	610
Calcium	mg/L	148
Magnesium	mg/L	96
Sodium + Potassium	mg/L	4,200
Chloride	mg/L	4,380
Sulfate	mg/L	3,300
Silica	mg/L as silica dioxide (SiO_2)	3
Dissolved Solids	mg/L	12,200

Source: USGS, 2023

4.3 Groundwater Sustainability

A series of three bills passed by the California legislature 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 (2023b), the Basin is a very low priority basin. DWR has not identified the Basin as overdrafted nor has it projected that the basin will become overdrafted if present management conditions continue (DWR, 2021 and 2023b). Thus, the Basin is not subject to the current requirements of SGMA, including the formation of a groundwater sustainability agency (GSA) and preparation of a groundwater sustainability plan (GSP).

5.0 PROJECT WATER DEMAND

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 2. Project Water Demand

Site	Area (acres)	Output (megawatts)	Construction Water (acre-feet)	Operational Water (acre-feet per year)
Vega SES 6	320	80	170	8

Table 2 provides a summary of Project parameters that affect water demand and the estimated water needs for construction and operation. 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. The construction water demand of the Project is estimated to be 160 acre-feet, with an additional 10 acre-feet required for dust control on offsite access roads that are not paved. Thus, as indicated in Table 2, the full construction water requirements are 170 acre-feet. Construction is anticipated to require 12 to 18 months to complete. Thus, the monthly water demand during that period may range from 9.4 acre-feet to 14.2 acre-feet, on average.

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 be 8 acre-feet per year. Maintenance activities 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 Project.

6.0 DRY YEAR SUPPLY

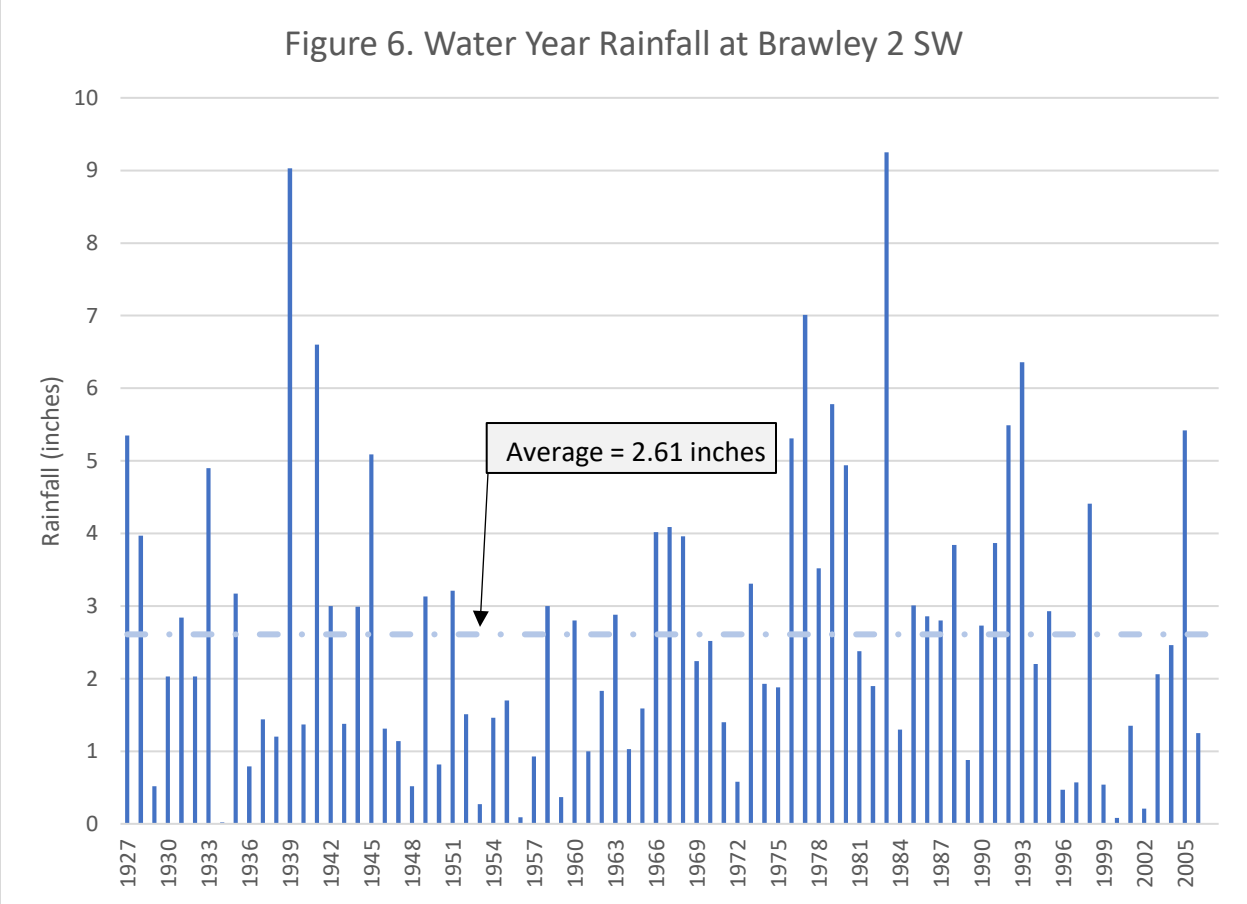
The volume and sustainability of dry-year water supply for a project in California is typically addressed by comparing annual rainfall with changes in groundwater levels in the Basin. This comparison is made for a normal or average water year[1], for single dry year, and for multiple dry water years. For this Project, local rainfall data were obtained from the Western Region Climate Center (WRCC, 2023) for the Brawley 2 SW meteorological station in Brawley, California, located approximately 15 miles east of the Project site (see Figure 1).

Figure 6 shows the annual water year rainfall for the Brawley 2 SW station from 1927 through 2007. The average water year rainfall during this period is 2.61 inches. The driest year was 2007, when no precipitation was recorded. The driest year with recorded rainfall was 1934, with only 0.2 inch of rainfall reported. The wettest year was 1983, when 9.25 inches of rain were measured. As indicated on Figure 6, a relatively wet period occurred from 1976 to 1986, with 14 of 18 water years exceeding the average annual rainfall. In comparison, the period from 1996 to 2012 was relatively dry, with 10 of 12 water years having below normal rainfall.

The historic rainfall data on Figure 6 can be compared with the groundwater levels shown on Figure 5 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 consistently declining. During the dry period from 1996 to 2016, groundwater levels were also declining, but at a rate that was slightly less than during the wet period from 1976 to 1986. The relatively large decrease in groundwater levels between 1992 and 1994 corresponds to a period with above-normal rainfall. 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 above in Section 4.2, recharge of groundwater

[1] In California, a water year is defined as the period from October 1 of a calendar year through September 30 of the subsequent calendar year. A water year is designated by the year in which it ends. For example, the period from October 1, 2006 through September 30, 2007 is referred to as the 2007 water year. Due to the nature of weather patterns in the state, a water year better represents hydrologic conditions related to wet and dry periods than does a calendar year.

occurs primarily due to deep percolation of applied irrigation water and lateral inflow from adjacent groundwater basins (DWR, 2003).



The total groundwater storage capacity of the Basin is estimated to be 14,000,000 acre-feet and the average annual increase in groundwater storage is estimated to be 17,000 acre-feet per year (DWR, 2003), as described in Section 4.2, above. While the groundwater elevation data shown on Figure 5 indicate that there may have been a loss of groundwater in storage of up to 17 percent, the construction water demand of 170 acre-feet and the annual operational water needs of 8 acre-feet are miniscule (0.0015 percent and 0.00008 percent, respectively) compared to the available groundwater in storage after accounting for the potential 17 percent reduction indicated from Figure 5. Overall, there is adequate water available to supply the Project water needs during single dry year and multiple dry year periods.

7.0 FINDINGS AND DISCUSSION

This WSA has been prepared in accordance with SB 610 and SB 1262 to support the CEQA environmental review for the proposed Project and provides an assessment of water supply adequacy for the Project in accordance with Water Code Sections 10910 through 10915. As stated in Section 1.0, the purpose of the assessment is to determine if available water supplies are sufficient to serve the demand generated by the Project, as well as the reasonably foreseeable demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. As noted in Section 4.2, above, while groundwater levels in the Basin have been declining, the potential cumulative effect on the volume of groundwater storage in the western part of the Basin may be in the range of 17 percent over the past 60 years. While the population is anticipated to increase over the next several decades, any related increase in water demand is anticipated to be met using surface water from IID because the groundwater quality is generally not adequate for municipal and agricultural uses. Therefore, the Basin has adequate groundwater resources for current and anticipated future water needs.

The water demand for the proposed Project will consist of water needed during construction and water needed for maintenance once the Project is operational. The construction water demand is anticipated to be 170 acre-feet over 12 to 18 months, primarily for dust control. The operational demand is anticipated to be 8 acre-feet per year for panel washing and other maintenance activities. The operational demand will exist for the life of the Project, which is anticipated to be 25 to 30 years.

The construction water demand is 1.0 percent of the average annual increase in groundwater storage of 17,000 acre-feet per year and 0.0015 percent of the volume of groundwater in storage in the Basin (accounting for the groundwater level decline from 1974 to 2022). Furthermore, 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 are equivalent to 0.05 percent of the average annual increase in groundwater storage of 17,000 acre-feet per year and 0.00008 percent of the volume of groundwater in storage in the Basin (accounting for the groundwater level decline from 1974 to 2022). Therefore, the long-term operation and maintenance of the Project would not have any measurable effect or impact on groundwater resources in the Basin.

Based on the analysis presented in this WSA, there will be sufficient water available for existing and anticipated future water demands in the Basin and the Project water demand during normal, single dry year, and multiple dry year periods for the life of the Project, which is expected to be greater than 20 years.

8.0 DOCUMENTS CONSIDERED AND REFERENCES CITED

Department of Water Resources (DWR), 2003, Bulletin 118 Update 2003 – Basin Report 7_030, https://data.cnra.ca.gov/dataset/bulletin-118-update-2003-basin-reports/resource/31404881-94e3-4eab-a213-06771ea3aa9c , accessed January 30, 2023.

Department of Water Resources (DWR), 2021, California's Groundwater Update 2020, Bulletin 118, https://data.cnra.ca.gov/dataset/calgw_update2020/resource/d2b45d3c-52c0-45ba-b92a-fb3c90c1d4be, accessed January 31, 2023.

Department of Water Resources (DWR), 2023a, SGMA Data Viewer, https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#boundaries, accessed January 30, 2023.

Department of Water Resources (DWR), 2023b, SGMA Basin Prioritization Dashboard, https://gis.water.ca.gov/app/bp-dashboard/final/, accessed January 30, 2023.

Imperial Irrigation District (IID), 2023a, Municipal Water Provider Contact Information, https://www.iid.com/water/municipal-industrial-and-commercial-customers/municipal-water-providers, accessed February 1, 2023.

Imperial Irrigation District (IID), 2023b, Public Water Map, https://mygis.iid.com/portal/apps/webappviewer/index.html?id=a33cfeb3714f4eb8a1c85320613a2d1b, accessed February 1, 2023.

Imperial Irrigation District (IID), 2023c, Water, https://www.iid.com/water, accessed January 31, 2023.

U.S. Geological Survey (USGS), 2023, National Water Information System (NWIS) website, available data for Well 324603115480501, https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=324603115480501, accessed February 1, 2023.

Western Region Climate Center (WRCC), 2023, Brawley 2 SW, California Climate Summary, https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca1048, accessed January 31, 2023.

Energy Consumption Assessment
for the
VEGA SES 6 Solar and Battery Storage Project

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LIST OF ACRONYMS AND ABBREVIATIONS

AC	Alternating Current
AF	Acre Feet
APN	Accessors Parcel Number
BESS	Battery Electric Storage System
BLM	Bureau of Land Management
CalEEMod	California Emissions Estimator Model
CAISO	California Independent System Operator
CARB	California Air Resources Board
CEC	California Energy Commission
CPUC	California Public Utilities Commission
DC	Direct Current
EO	Executive Order
EPS	Emissions Performance Standard
Gen-tie	Electrical generator intertie
GHG	Greenhouse gas emissions
HSAT	Horizontal Single-Axis Tracker
ICAPCD	Imperial County Air Pollution Control District
IID	Imperial Irrigation District
Kv	kilovolt
kWh	Kilowatt-Hours
MW	Megawatt
MWh	Megawatt Hour
PPA	Purchasing Power Agreement
PV	Photovoltaic
Project	VEGA SES 6 Project
RE	Renewable Energy
RPS	Renewable Portfolio Standard
SB	Senate Bill
SR	State Route

1.0 INTRODUCTION

This report documents the results of an Energy Impact Assessment completed for the VEGA SES 6 Solar and Battery Storage Project (Project) in Imperial County (County), California, which includes the construction of an 80 megawatt (MW) solar energy generation facility and a 160 MW battery energy storage system (BESS). The Project also proposes an electrical generator intertie (gen-tie) transmission line to connect to the Imperial Irrigation District's (IID) 161 kilovolt (kV) "L" Line. This report was prepared to analyze the potential direct and indirect environmental impacts associated with Project energy consumption, including the depletion of nonrenewable resources (oil, natural gas, coal, etc.) during the construction and operational phases. The impact analysis focuses on the four sources of energy that are relevant to the Proposed Project: electricity, natural gas, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations.

1.1 Project Location

The Proposed Project Site is located on approximately 320 acres of privately-owned vacant land on a single parcel (Assessor Parcel Number (APN) 034-160-002) in the unincorporated Imperial County, California (Figure 1-1. *Project Location Map*). The site is located approximately 6 miles south of the southern-most edge of the Salton Sea; 10 miles west of the City of Brawley; and approximately 5 miles southwest of the community of Westmorland. The solar energy facility site is located directly south of Andre Road and 0.50 mile west of the Westside Main Canal (Figure 1-2. *Project Vicinity Map*). The proposed BESS would be located in the northwest portion of the Project Site. The proposed gen-tie transmission line would span approximately four miles to connect to the IID's existing 161 kV "L" Line. The entire gen-tie route would be on federal lands managed by the Bureau of Land Management (BLM) within the California Desert Conservation Area planning area. The gen-tie route would begin at the northwest corner of the solar facility site, head west approximately 0.5 miles on BLM land, then north for approximately 1.0 mile, and then west for 2.5 miles along Garvey Road where it would connect to the IID 161 kV "L" Line.

The topography of the Project Site is relatively flat, with elevations ranging between -39 meters (-129 feet) and -6 meters (-21 feet). The solar energy facility site is bound by undeveloped Open Space/BLM land immediately to the west and south, and active agricultural land to the north and east. The Westside Main Canal travels southeast to northwest and is located northeast and east of the solar energy facility site.

Figure 1-1

Figure 1-2

1.2 Project Overview

In 2016, the County adopted the Imperial County Renewable Energy and Transmission Element, which includes a Renewable Energy (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 conditional use permit (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 1-1, the entire Project Site is located outside of the RE Overlay Zone. Therefore, the applicant is requesting a General Plan Amendment to include/classify the Project Site (APN No. 034-160-002) into the RE Overlay Zone. No change in the underlying General Plan land use (Agriculture) is proposed.

1.3 Project Description

As previously described, the Proposed Project involves the construction and operation of an 80 MW PV solar facility with an integrated 160 MW BESS on approximately 320 acres of privately-owned land. The Project would be comprised of solar PV arrays panels, an on-site substation, BESS, gen-tie line, inverters, transformers, underground electrical cables, and access roads. These Project components are described in detail below and depicted in Figure 1-3. *Site Plan*.

Figure 1-3

Photovoltaic Panels/Solar Arrays

The Project proposes to use either thin film or crystalline solar 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 fixed-frame racks would be secured at a fixed tilt of 20 to 30 degrees from horizontal facing a southerly direction. As proposed, individual PV modules would be mounted two high on a fixed frame, providing 12 to 24 inches of 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 six 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. Individual HSAT PV modules, each approximately two feet wide by four feet long (depending on the specific PV technology selected), would be mounted on a frame which is attached to an HSAT system. These HSAT arrays would be separated from each other and the perimeter security fence by up to 30-foot-wide roads, consistent with County emergency access requirements.

Battery Energy Storage System

The proposed BESS would be constructed adjacent to the Project's substation and would consist of either lithium ion or flow batteries. The batteries will either be housed in storage containers or buildings fitted with heating, ventilation, and air conditioning and fire suppression systems. Inside the housing, the batteries would 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 direct current (DC) power to alternating current (AC) power. The BESS would be capable of storing up to 160 MW.

Substation and Interconnection Switching Station

As shown in Figure 1-3, a new substation would be constructed in the northwest portion of the solar energy facility site. The inverters would be connected to pad-mounted transformers. This system collects the energy from all the inverters and then transmits it through a generator step-up transformer, which steps up the voltage level to the 161 kV of the existing IID "L" line.

A new interconnection switching station would be constructed in the northwest corner of the solar energy facility site, immediately adjacent to the substation. 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 equipped with two circuit breakers, allowing for looping in of the IID 161 kV "L" transmission line as well as connection to the Project's gen-tie line. The substation and

switching station would be connected via a single overhead 161 kV line. The switching station would be enclosed within its own fence.

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

Electrical Generator Intertie (Gen-Tie) Transmission Line

As previously stated, the Proposed Project includes an approximately 4-mile gen-tie transmission line that would connect to the IID's existing 161 kV "L" Line. The 4-mile gen-tie line would include a total of 78 pole structures, with a combination of tangent double circuit wood pole structures, dead-end double circuit wood pole structures, and double circuit steel poles. At the interconnection point, three wood pole structures and dead-end wood structures would be used. The height of the proposed gen-tie transmission structures would be 75 feet. The electrical energy produced by the Project would be conducted through the project substation to the proposed 161 kV gen-tie line and delivered to the existing IID-approved point of interconnection at the IID 161 kV "L" line. Construction of the gen-tie line would result in approximately 24.5 acres of disturbed area.

Site Access

The solar energy facility site would include one primary access driveway, proposed via State Route (SR) 78 from the north and west, and across the Westside Main Canal, via county roadways (Garvey Road and Andre Road). This driveway would be provided with a minimum of 30-foot double swing gates with "Knox Box" for keyed entry. Internal to the solar energy facility site, up to 30-foot-wide roads would be provided between the PV arrays, as well as around the perimeter of the solar energy facility site yet inside the perimeter security fence to provide access to all areas of the site for maintenance and emergency vehicles.

Project Construction

Construction activities would primarily involve demolition and grubbing; grading of the Project Area to establish access roads and pads for electrical equipment (inverters and step–up transformers); trenching for underground electrical collection lines; the installation of solar equipment and security fencing; and the offsite infrastructure work required for the IID gen-tie transmission line route. Stormwater management facilities would be constructed internally within the Project Site and would consist of basins and infiltration areas. Construction is estimated to take 12 to 18 months and would begin in 2023. A temporary, portable construction supply container would be located at the Project Site at the beginning of construction and removed at the end of construction.

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). The Proposed Project would require approximately 550-acre feet (AF) of water for dust suppression and site grading during construction of the arrays, BESS area, and onsite substation. Water for construction (primarily dust control) would be obtained from local IID irrigation canals or laterals in conformance with IID construction water acquisition requirements. Water would be picked up from a nearby

lateral canal and delivered to the construction location by a water truck that would be capable of carrying approximately 4,000 gallons per load.

The number of on-site construction workers for the solar energy facility is not expected to exceed 150 workers at any one time. The number of on-site construction workers for the BESS and the substation is not expected to exceed 100 workers at any one time.

Project Operations

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

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 Site would periodically (approximately every 3 months) be removed manually and/or treated with herbicides.

Periodic washing of the PV modules is not expected to be necessary but could be needed to remove dust to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at 10 AF per washing, with up to two washings per year, or a total of up to 20 AF per year. This water would be water purchased from the IID.

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

2.0 ENERGY CONSUMPTION

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 (California Energy Commission [CEC] 2021a). Imperial Irrigation District (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 (RPS) requirements to date, procuring renewable energy from diverse sources, including biomass, biowaste, geothermal, hydroelectric, solar and wind.

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 20,000 square miles throughout Central and Southern California, from Visalia to the Mexican border.

Imperial County, which encompasses the Project Site, contains 54 power plants generating electricity, of which 23 are solar-powered, 18 are geothermal, eight are hydro-powered, three are natural gas-fired, one is biomass-fired, and one is wind-powered (CEC 2021b).

2.1.1 Energy Consumption

Electricity use is measured in kilowatt-hours (kWh) and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g. of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all non-residential uses in Imperial County from 2017 to 2021 is shown in Table 2-1. As indicated, the demand has decreased since 2017.

Table 2-1. 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: CEC 2022

The natural gas consumption associated with all non-residential uses in Imperial County from 2017 to 2021 is shown in Table 2-2. As indicated, the demand has stayed relative consistent since 2017.

Table 2-2. Non-Residential Natural Gas Consumption in Imperial County 2017-2020

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: CEC 2022

Automotive fuel consumption in Imperial County from 2017 to 2022 is shown in Table 2-3. Fuel consumption has slightly decreased between 2017 and 2022.

Table 2-3. Automotive Fuel Consumption in Imperial County 2017-2021

Year	Total Fuel Consumption
2022	218,702,737
2021	217,447,173
2020	195,778,823
2019	219,032,998
2018	219,075,991
2017	220,921,357

Source: California Air Resources Board (CARB) 2021

2.2 Regulatory Framework

2.2.1 State

Executive Order B-55-18

In September 2018 Governor Jerry Brown Signed Executive Order (EO) B-55-18, which establishing a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving a net zero carbon dioxide emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for GHG emission reduction. EO B-55-18 requires the California Air Resource Board (CARB) to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law Senate Bill (SB) 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation by the state's utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the California Public Utilities Commission (CPUC).

The CEC has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to, publicly owned utilities, of 1,100 pounds carbon dioxide per megawatt hour (MWh). This would encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of greenhouse gas.
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long term while meeting the State's standards for environmental impact.
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard (EPS) (Perata, Chapter 598, Statutes of 2006).

2.2.2 Renewable Energy Sources (Renewable Portfolio Standards)

Established in 2002 under SB 1078 and accelerated by SB 107 (2006) and SB 2 (2011), California's Renewables Portfolio Standard (RPS) obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent of their electricity from renewable energy sources by 2020. Eligible renewable resources are defined in the 2013 RPS to include biodiesel; biomass; hydroelectric and small hydro (30 megawatts or less); Los Angeles Aqueduct hydro power plants; digester gas; fuel cells; geothermal; landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multi-fuel facilities using renewable fuels; solar photovoltaic; solar thermal electric; wind; and other renewables that may be defined later. Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 60 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator (CAISO) into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the CAISO to those markets, pursuant to a specified process. 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.

2.3 Energy Consumption Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to energy if it would do any of the following:

1) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The impact analysis focuses on the four sources of energy that are relevant to the Proposed Project: electricity, natural gas, the equipment fuel necessary for Project construction, and the automotive fuel necessary for Project operations. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use. For the purposes of this analysis, the amount of electricity and natural gas estimated to be consumed by the Project are quantified and compared to that consumed by all non-residential land uses in Imperial County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Imperial County.

2.3.2 Methodology

Levels of construction and operational related energy consumption estimated to be consumed by the Project include the number of kWh of electricity, therms of natural gas and gallons of gasoline. The amount of total construction-related fuel used was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Electricity and natural gas consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0 (see Air Quality and Greenhouse Gas Emissions Assessment: VEGA SES 6 [ECORP 2023]). CalEEMod is a statewide land use computer model designed to quantify resources associated with both construction and operations from a variety of land use projects. Operational automotive fuel consumption has been calculated with EMFAC 2021. EMFAC 2021 is a mathematical model that was developed to calculate emission rates and rates of gasoline consumption from motor vehicles that operate on highways, freeways, and local roads in California.

2.3.3 Impact Analysis

Project Energy Consumption

The Project is proposing the development of an 80 MW solar energy generation system accompanied by a 160 MW BESS. The Project would directly support the RPS goal of increasing the percentage of electricity procured from renewable sources.

This impact analysis focuses on the four sources of energy that are most relevant to the Project: the equipment fuel necessary for construction, the electricity and natural gas necessary during operations, and the automotive fuel necessary for ongoing maintenance activities during operations. 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 electricity and natural gas necessary during operations are compared with countywide consumption in 2021, the most recent year of data. 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 during operations would be new to Imperial County.

Energy consumption associated with the Proposed Project is summarized in Table 2-4.

Table 2-4. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Facility Electrical and Natural Gas Consumption		
Electricity Consumption[1]	3,470,860 kilowatt-hours	0.41 percent
Natural Gas[1]	45 therms	0.0001 percent
Automotive Fuel Consumption		
Year One of Construction[2] Year Two of Construction[2]	43,251 gallons 34,581 gallons	0.020 percent 0.016 percent
Project Operations[3]	2,785 gallons	0.001 percent

Source: [1]CalEEMod; [2]Climate Registry 2016; [3]EMFAC2021 (CARB 2021)

Notes: 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 2022, the most recent full year of data.

As shown in Table 2-4, the annual electricity consumption due to operations would be 3,470,860 kilowatt-hours, resulting in a negligible increase (0.41 percent) in the typical annual electricity consumption attributable to all non-residential uses in Imperial County. Table 2-4 shows that the annual natural gas consumption due to operations would be 45 therms, resulting an insignificant increase (0.0001 percent) in the typical annual natural gas consumption of nonresidential uses in Imperial County. These are potentially a conservative estimate since in September 2018 Governor Jerry Brown Signed Executive Order (EO) B-55-18, which established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving a net-zero carbon dioxide emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for greenhouse gas (GHG) emission reduction. Governor's Executive Order B-55-18 requires CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." Additionally, the Project proposes to construct and operate an 80 MW solar energy generation facility and a 160 MW BESS, which aligns with the state's goals of eliminating carbon emissions by generating energy from sustainable sources. For these

reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

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 indicated in Table 2-4, the Project's gasoline fuel consumption during the one-time construction period is estimated to be 43,251 gallons during the first year of construction and 34,581 gallons during the second year of construction. This would increase the annual countywide gasoline fuel use associated with offroad equipment in the County by 0.020 percent and 0.016 percent, respectively. 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 Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Once construction is completed the Project would be remotely controlled. No employees would be based at the Project site. The only operational emissions associated with the Project would be associated with motor vehicle use for routine maintenance work, water import, and site security as well as panel upkeep and cleaning. Six vehicle trips per day for routine maintenance work, site security, and trucking in water was assumed. This is a conservative estimate as most days would require no operational related vehicle trips. As indicated in Table 2-4, this would estimate to a consumption of approximately 2,785 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.001 percent.

Fuel consumption associated with both the construction equipment needed to construct the Project and the vehicle trips generated by the Project during ongoing maintenance activities would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

State and Local Plans for Renewable Energy/Energy Efficiency

The purpose of the Proposed Project is the construction of a renewable energy and storage facility in Imperial County. Once in operation, it will decrease the need for energy from fossil fuel–based power plants in the state. The result would be a net increase in electricity resources available to the regional grid, generated from a renewable source. Therefore, the Project would directly support the RPS goal of increasing the percentage of electricity procured from renewable sources. Additionally, the Project would also be consistent with the County's General Plan Conservation and Open Space Element, Objective 9.2 which encourages renewable energy developments. Therefore, the Project would directly support state and local plans for renewable energy development.

3.0 REFERENCES

California Air Resources Board (CARB). 2021. EMFAC2021 Web Database Emissions Inventory. https://www.arb.ca.gov/emfac/2021/

California Energy Commission (CEC). 2022. 2021b. California Energy Consumption Database. http://www.ecdms.energy.ca.gov/Default.aspx.

_____. 2021a. 2020 Total System Electric Generations in Gigawatt Hours. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation

_____. 2021b. Website: Annual Generation – County. https://ww2.energy.ca.gov/almanac/electricity_data/web_qfer/Annual_Generation-County_cms.php

Climate Registry. 2016. General Reporting Protocol for the Voluntary Reporting Program version 2.1. January 2016. http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf

LIST OF ATTACHMENTS

Attachment A - Energy Consumption Modeling Output

ATTACHMENT A

Energy Consumption Modeling Output