

Initial Study and Proposed Mitigated Negative Declaration California Environmental Quality Act (CEQA) Environmental Study

ACV Airport Microgrid Project

California Redwood Coast-Humboldt County Airport (ACV) Humboldt County, California

March 27, 2018

Prepared by:
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| LIST O | F ACRO | NYMS |
| ACV Ai | rport | California Redwood Coast-Humboldt County Airport |
| CCA | | Community choice aggregation |
| EV | | Electric vehicle |
| HCC | | Humboldt County Code |
| HMI · / | KEL LIBOURN | Human machine interface |
| in/sec | ppv | Inches per second (peak particle velocity) |
| kW LID | | kilowatt Low impact development |
| MW | | megawatt |
| PG&E | | Pacific Gas & Electric |
| PV | | Photovoltaic |
| RCEA | | Redwood Coast Energy Authority |
| SERC | | Schatz Energy Research Center |
| | | <u> </u> |

1.0 PROJECT OVERVIEW

Project Title: ACV Airport Microgrid Project

<u>Project Summary:</u> The proposed project would construct and operate a 2.3 megawatt photovoltaic solar array facility to enhance electrical reliability at the California Redwood Coast-Humboldt County Airport.

Lead Agency Name and Address:

Humboldt County Public Works Department

1106 Second Street, Eureka, CA, 95501

Contact Person:

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Project Location:

3561 Boeing Avenue, McKinleyville, Humboldt County

Latitude: 40.967°N, Longitude: -124.105°W

Affected Parcels:

Assessor Parcel Numbers (APN):

Owner:

General Plan

Designation:

Zoning:

Coastal Zone:

| 511-071-005 | 511-082-009 | 511-082-010 |
|----------------------------|----------------------------|----------------------------|
| County of Humboldt | County of Humboldt | County of Humboldt |
| PF (Public Facility) | PF (Public Facility) | PF (Public Facility) |
| (McKinleyville | (McKinleyville | (McKinleyville |
| Community Plan) | Community Plan) | Community Plan) |
| Airport (AV) | Airport (AV) | Residential (R-1) |
| AP (Airport Safety Review) | AP (Airport Safety Review) | B-6 (Building site area as |
| N (Noise Impact) | N (Noise Impact) | shown on subdivision maps |
| WR (Streamside | WR (Streamside | of record) |
| management areas and | management areas and | AP (Airport Safety Review) |
| wetlands) | wetlands) | N (Noise Impact) |
| No | No | No |

Surrounding Land Uses: Public facility, industrial, commercial, residential

Other Public Agencies Whose Approval Is Required:

- California Energy Commission
- Redwood Community Energy Authority

<u>Tribal Consultation:</u> Humboldt County Public Works Department retained a consulting archaeologist to consult with Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and the Wiyot Tribe in the preparation of an Archaeological Survey Report.

CEQA Requirement:

The proposed ACV Airport Microgrid Project is subject to the requirements of the California Environmental Quality Act (CEQA). CEQA encourages lead agencies and applicants to modify their

projects to avoid potentially significant adverse impacts (CEQA Section 20180[c] [2] and State CEQA Guidelines Section 15070[b] [2]).

The Lead Agency for the proposed project is the County of Humboldt, per CEQA Guidelines Section 21067. Compliance with CEQA is being implemented through the Department of Public Works. The purpose of this Initial Study is to provide a basis for determining whether to prepare an Environmental Impact Report (EIR), Negative Declaration, or Mitigated Negative Declaration. This Initial Study is intended to satisfy the requirements of CEQA (Public Resources Code, Div 13, Sec 21000-21177) and the State CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387).

Section 15063(d) of the State CEQA Guidelines states that an Initial Study shall contain the following information in brief form:

- 1) A description of the project including the project location
- 2) Identification of the environmental setting
- Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to provide evidence to support the entries
- Discussion of means to mitigate identified significant effects
- Examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls
- 6) The name of the person or persons who prepared and/or participated in the Initial Study

The California Department of Fish & Wildlife is a trustee agency under CEQA.

The environmental checklist form contained in this document is based on Appendix G of the CEQA Guidelines (2018).

2.0 PROJECT DESCRIPTION

2.1 Introduction

2.1.1 Project Overview

The ACV Airport Microgrid Project will be located at the California Redwood Coast-Humboldt County Airport (ACV). A site location map is provided in Figure 1. A microgrid is a discrete energy system comprised of electricity sources and storage devices that can supply the centralized power grid or operate autonomously in non-connected ("island") mode. The project will include two co-located solar photovoltaic (PV) arrays, a lithium-ion energy storage system, four electric vehicle (EV) chargers, and associated electrical conductors and equipment. The microgrid will enhance electrical reliability for 18 electricity accounts on Pacific Gas & Electric's (PG&E's) Janes Creek 1103 distribution circuit, which includes Humboldt County's main commercial airport and Coast Guard Air Station Humboldt Bay.

The project area will be approximately nine acres. The majority of the land area will be covered by the solar arrays, which will be mounted on a racking system attached to steel piles driven into the ground. The bottom edge of the solar arrays will be approximately two to three feet above ground and the top edge of the solar arrays will be approximately six to seven feet above ground. A line of Monterey pine trees along Airport Road may need to be removed. A chain link fence with barbed wire on top will be installed around the nine-acre area with gates for access.

The power generated by the solar system and battery will be exported onto PG&E's existing electricity grid. The project will largely rely upon PG&E's existing wires and poles so construction outside the nineacre area will be minimal. A pole-mounted computer controlled switch will be used to disconnect and reconnect the microgrid from the PG&E grid when islanded microgrid operation is required due to a PG&E outage or another reason. The pole-mounted switch will be mounted on a new utility pole in the existing PG&E right of way for the Janes Creek 1103 distribution circuit within the limits of the nine-acre area of disturbance along with the battery and power conversion devices.

The solar panels have a 25 year useful life and during that period other components such as the battery and power conversion devices may need to be replaced once or twice. The system has no moving parts except for electrical contacts that operate infrequently. The noise generated by the power conversion devices and transformers is minimal, consisting mostly of low humming and cooling fans. The power conversion area will be at the north end of the nine-acre area. Regular maintenance items over the life of the system will include washing the dust off the panels during the summer and managing vegetation.

Roof-mounted or ground-mounted solar projects have been installed at San Francisco International Airport, Mineta San Jose International Airport, Denver International Airport, and other airports around the world. Airports can be attractive as solar sites because they have undeveloped land adjacent to runways and restrictions on aboveground obstructions. Technical guidance for developing solar facilities at airports is provided in FAA (2010). Proposed projects must conform with FAA's Interim Policy on solar energy system projects on federally obligated airports (FAA, 2013).

The project will be led by the Humboldt State Sponsored Programs Foundation/Schatz Energy Research Center (SERC). Project partners include the Redwood Coast Energy Authority (RCEA), PG&E, County of Humboldt, Schweitzer Engineering Laboratories, TRC Inc., GHD Inc., The Energy Authority, Tesla Energy, McKeever Energy & Electric, and additional construction contractors yet to be determined. The project will be jointly funded by the California Energy Commission and RCEA.

2.1.2 Purpose and Need

The purpose of this project is to implement a multi-customer, renewable energy microgrid under a partnership between an investor owned utility as the microgrid distribution circuit owner (PG&E), and a community choice aggregation (CCA) program as the generation asset owner (RCEA), to add resiliency to the electricity supply for the ACV Airport and the USCG Air Station, two of the most critical facilities in Humboldt County. The project will demonstrate a replicable business model and will illustrate a clear path to microgrid deployment throughout California.

As demonstrated by the recently completed Blue Lake Rancheria microgrid project, microgrids can facilitate greater penetration of distributed energy resources (DER) and are an important tool in the transition to the sustainable, smart grid of the future. In addition, microgrids can improve the reliability and resilience of the electric grid. The project will result in public benefits of greater electricity reliability, increased safety, increased use of renewable energy, and decreased greenhouse gas emissions.

The project will provide the following specific benefits:

- Over 3,100 megawatt hours per year (MWh/yr) of renewable energy will be generated, and 83 MWh/yr will be saved from energy efficiency measures, resulting in a carbon dioxide emission reductions of over 900 metric tons per year (MT/yr) and an annual economic benefit of approximately \$375,000.
- RCEA's CCA program will make significant progress in its mandate to deliver locally produced renewable electricity to its ratepayers.
- An estimated 37 full-time employee (FTE) jobs will be created with \$1.5M in earnings and \$3.4 in economic output during the construction phase. 0.2 FTE jobs/yr will be created long term.
- The ACV Airport will save approximately \$70,000 on its electricity bill and the project will help ACV pursue Leadership in Energy and Environmental Design (LEED) certification.

2.1.3 Existing Conditions

The area where the PV arrays will be installed is currently a grassy field with intermittent brushy vegetation and trees. The area where the battery and interconnection switchgear will be installed is a former parking area no longer used for normal airport operational purposes. The overhead power lines that will comprise the microgrid circuit will be reconfigured near the PV/battery location but will otherwise be unaltered under the project. Pictures of existing conditions are provided in Figure 2 and Attachment A.



Figure 1: Site location map





Figure 2a: Photos of existing conditions





Figure 2b: Photos of existing conditions

2.2 Detailed Project Information

2.2.1 New Facilities

New facilities will include:

- RCEA wholesale PV array: This 2-megawatt PV array will provide wholesale supply for RCEA's CCA program. The total footprint is approximately 6.15 acres.
- ACV net-metered PV array: This 250-kilowatt PV array will provide supply to ACV Airport and the USCG Air Station. The total footprint is approximately 1.0 acres.
- RCEA wholesale generation system: This facility includes the energy storage system (up to eight
 modular batteries), coordinated electrical house, and pad-mounted transformers and metering
 equipment. A set of flooded lead-acid batteries will provide an uninterruptible power supply for
 the microgrid controls. The total footprint is approximately 9,000 square feet.
- Electric vehicle (EV) chargers: Four EV chargers will be installed in the parking area located south
 of the airport terminal.
- PG&E infrastructure: PG&E will install new utility poles, pole mounted electrical protection and switching gear, and underground conduit and wiring to connect to the PV arrays and the RCEA wholesale generation system. This infrastructure will be installed within PG&E's existing utility right of way or on County property.

Major new components to be installed under the project are listed in Table 1. Maps depicting the new facilities are provided in Figures 3 and 4.

Table 1: Major New Components

| Quantity | Description | Service Life | Hazardous |
|----------|---------------------------------|--------------|--------------------|
| | * | (years) | Materials (yes/no) |
| 11,000 | Multi-crystalline PV Modules | 25 | no |
| 10 | PV Inverters | 10 | no |
| 8 | Li-Ion Battery Packs (8 MWh) | 15 | yes |
| 8 | Battery inverters | 10 | no |
| 1 | Coordinated Electrical House | 30 | no |
| 1 | Lead-acid batteries | 20 | Yes |
| 2 | Oil filled voltage transformers | 25 | yes |
| 4 | EV chargers | 15 | no |

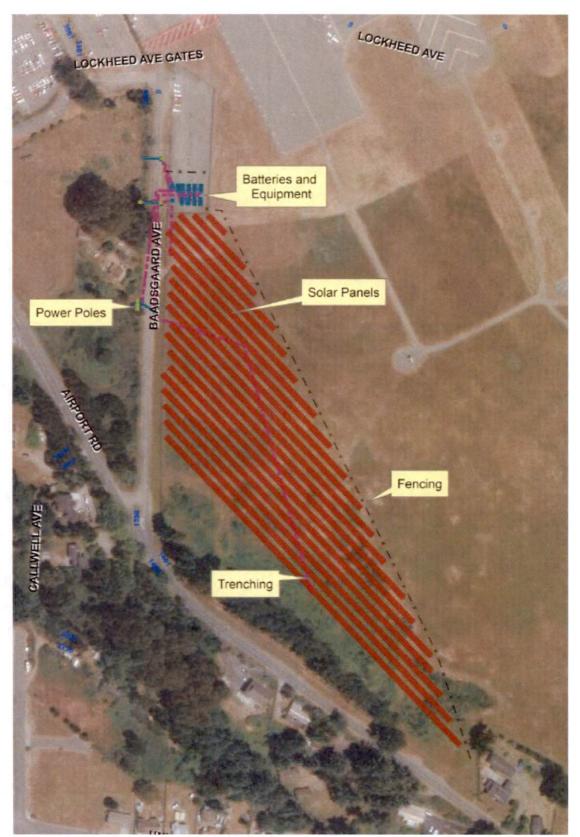


Figure 3: Proposed project - microgrid layout



Figure 4: Proposed project - electric vehicle charging area

Trenching

Various types of trenching will be required for power circuits and network communication cables. The depth of trenching will range from 3 to 6 feet below ground surface. The material excavated during trenching will be used to fill the trench after organic debris has been removed. Table 2 shows the various types of trenching that are planned and their associated length, width, and depths.

Table 2: Trenching

| Description | Length (ft) | Width (ft) | Depth (ft) |
|---|-------------|------------|------------|
| 1000 V DC Power Circuits from 2 MW PV Array to Battery | 1,265 | 4 | 4 |
| 1000 V DC Power Circuits to each DC/DC Converter | 155 | 2 | 4 |
| 480 V AC Power Circuits from ACV PV Array to POC | 135 | 2 | 4 |
| 480 V AC Power Circuits to MSB (Main AC Generation Trench) | 70 | 3 | 4 |
| 480 V AC Power Circuits from each Battery Inverter to main AC Generation Trench | 60 | 2 | 4 |
| 480 V AC Power Circuit from pole to MSB for ACV PV Array | 25 | 2 | 4 |
| 12.5 kV AC Power Circuit from pole to MSB for RCEA Wholesale Generation System | 70 | 2 | 6 |
| Network Communication Cables | 425 | 2 | 3 |
| 208 V AC Power for EV Chargers | 90 | 2 | 3 |

Grading

Grading will be minimal for this project. The PV arrays will follow the existing contour of the land and the surface under the array will remain grass. During construction, significant discontinuities in the ground surface beneath the PV arrays will be graded smooth. Due to the general uniformity of the ground surface where the arrays will be placed, the area that will require grading is anticipated to be less than one acre.

Access Roads

Access roads are planned to have a grass surface. However, if wet weather access is deemed to be problematic during site investigations for final design, the access roads may be graded and finished in aggregate base. Any spoils generated will be used onsite or hauled away for reuse as topsoil.

Concrete Slabs

Table 3 below shows the concrete slabs planned under the project. Note that the dimensions shown in Table 3 are preliminary with the intent to show conservatively large slabs for evaluating potential environmental impacts.

Table 3: Concrete Slabs

| Description | Quantity | Length (ft) | Width (ft) | Footing Depth (ft bgs) | Slab Thickness (in) |
|---|----------|----------------|---------------|---------------------------|------------------------|
| Battery Energy Storage System Module | 8 | 19 | 7.5 | 2 | 10 |
| RCEA Generation Switchgear | 1 | 19 | 7.5 | 2 | 10 |
| RCEA Generation Metering and XFMR | 1 | 12 | 6 | 1.5 | 6 |
| ACV PV Array Metering and MSB | 1 | 9 | 7.5 | 1.5 | 6 |
| EV Chargers | 4 | 2 | 2 | 0 | 12 |

Driven Steel Piles

The PV arrays will be mounted on above ground racking supported on approximately 630 galvanized steel beams (W6x9). These steel beams will be driven into the ground to an embedment depth of at least 6 feet by machinery specifically designed for that purpose. The beams may be embedded slightly more than six feet but typically not more than eight feet. No excavation is required to install the steel beams.

Fencing

Approximately 1,640 feet of new chain link fencing will be installed under the project. The fencing will be seven feet high with barbed wire along the top edge. There will a fence post every eight feet for a total of approximately 205 posts. Each post will be embedded in circular concrete footing with a diameter of 1.5 feet and a depth of 3 feet. Approximately 40 cubic yards (CY) of soil will need to be excavated to install the footings. This material will be used onsite or hauled away for reuse as topsoil.

Utility Poles

PG&E will install six new utility poles under the project. These utility poles will be installed using a truck mounted auger that will bore a 2 foot diameter hole into the ground to a depth of approximately 10 feet. A portion of the spoils from this auguring will be used to set the utility pole and the remainder will be removed off site or used onsite. Approximately seven CY of soil will need to be excavated to install the utility poles. This material will be used onsite or hauled away for reuse as topsoil.

Impermeable Surface

The project will result in new impermeable surfaces due to the installation of new concrete slabs. Installing the PV arrays will not result in more impermeable surfaces since the ground beneath the modules will remain a grass covered landscape. The surface area covered by the steel beams that are driven into the ground to support the PV rack system is negligible.

The total estimated area to be made impermeable due to construction of concrete slabs under the project is approximately 1,140 square feet (sf). If access roads are graded and finished with compacted aggregate base, approximately one acre of ground will become impermeable.

2.2.2 Construction Activities

This section describes the planned construction activities.

Demolition

Demolition activities include removal of trees along Airport Road and potentially removal of brush along the southern edge of the PV array field. Additionally, some Eucalyptus trees overhanging the microgrid electrical circuit will be removed. Figure 2 below shows the anticipated tree and brush removal.



Figure 5: Tree and brush removal

Other demolition activities consist of cutting and removing existing asphalt for trenching near the EV chargers and cutting and removing sections of the old parking lot for the installation of the concrete slabs.

Construction Narrative

The following is description of how construction of the project will likely proceed. Note that the licensed and bonded construction contractors selected to build the project will have the final say regarding the means and methods for construction and their preferred construction sequence will be honored within other applicable constraints. However, the schedule can be dictated by SERC through the terms of the construction contract.

The following construction contracts will be active during construction of this project:

- PV System Installation Contract
 - This contract will cover installation of both the 250 kW ACV PV system and the 2 MW RCEA wholesale generation PV system
- Balance of Systems Construction Contract
 - This contract will cover installation of the battery system, the main interconnecting switchgear for the RCEA wholesale generation system, and the EV chargers.

The PV Installation Contractor has already been selected by a competitive bid process and the contractor for the balance of systems work will be selected by a competitive bid process in Q2 2019.

In addition to these two contracts, PG&E will complete construction activities to facilitate the connection of the 250 kW ACV PV system, the 2 MW RCEA wholesale generation system, and the microgrid switchgear.

Construction will begin as soon as weather permits after May 15, 2019. The PV Installation Contractor will start with the 250 kW ACV PV array and the racking system for the 2 MW RCEA PV array. First any surface discontinuities in the array field will be graded smooth. Next, control points for the PV array layout and the fencing will be staked by a licensed surveyor. Next the fencing will be installed to allow site access control during construction. Then the steel piles will be driven into the earth using a small rubber track mounted machine designed specifically for this purpose.

The 250 kW ACV PV array is scheduled to become operational in the fall of 2019. Once the piles are driven for that array, the following construction items will be prioritized for that system:

- The racking system will be attached to the steel piles and the modules and inverters will be mounted and wired.
- A trench will be dug along the west edge of the 250 kW ACV PV array for the AC power home run circuits.
- A concrete pad will be constructed for the AC disconnect and switchgear and the PG&E meter.

In parallel with the work described above, PG&E will install a new power pole, overhead conductors, and a secondary service drop to the new meter. Once the PV Installation Contractor and PG&E have finished these tasks, the system will be ready for commissioning and the pre-parallel inspection. The Permission to Operate determination from PG&E will follow.

As long as the construction of the 250 kW ACV PV array is on schedule, the PV Installation Contractor may continue driving piles and assembling the racking system for the 2 MW RCEA PV array in parallel with other work during the 2019 construction season. Trenching and conduit installation for the 2 MW RCEA PV array may also be started, schedule permitting. The PV Installation Contractor will stop work for the season on or before October 15, 2019.

In parallel with the work being completed by the PV Installation Contractor during the 2019 construction season, the Balance of Systems Installation Contractor will install the EV Charging Stations and potentially construct concrete pads, trench and install conduits for the battery system and interconnection switchgear. The battery system is not scheduled to become operational until the fall of 2020, so whether or not the Balance of Systems Installation Contractor will begin work on items related to the battery system will depend on the status of the final design and the lead time for the battery.

Construction of the RCEA Wholesale Generation System, which includes the 2 MW PV array and the battery energy storage system, will begin again on May 15, 2020, weather permitting. The PV Installation Contractor will complete installation of the 2 MW RCEA PV array and the Balance of Systems Installation Contractor will complete the installation of the battery system and the interconnection switchgear. This will involve driving piles for the PV racking system, trenching for power circuits, pouring concrete pads, pulling wires, and installing electrical equipment. PG&E will install four new power poles, new overhead conductors, and new transformers and reclosers for the microgrid. Construction will be completed by October 15, 2020, after which final commissioning will begin. The system should be operational by January 1, 2021.

2.2.3 Operation and Maintenance

Operation of the microgrid system, EV chargers, 250 kW ACV PV Array, and RCEA Wholesale Generation System will be automated with manual control possible via an onsite microgrid controller. Normal day-to-day operations will consist of a file being transmitted over the internet to the onsite controller for use in determining the desired output of the RCEA wholesale generation system. The 250 kW ACV PV system will operate independently as a typical grid-connected PV system.

Manual control of the microgrid will be possible from a human machine interface (HMI) located in a coordinated electrical house installed near the batteries. Under emergency situations or for testing, local operation will consist of an operator sitting at the HMI and exerting control actions through a computer.

The system will be capable of being controlled from PG&E's distribution control center (DCC) over the internet. However, PG&E has not yet determined whether or not they will develop the systems needed for this functionality within their DCC.

Maintenance will include the following types of activities:

- Vegetation Management
- PV Module Cleaning
- Operational Data Stewardship
- Substation Battery Maintenance
- · Periodic Equipment Inspection
- Monthly System Performance Evaluation at HMI.

Vegetation Management

The PV array will be constructed to allow sheep or goats to be used as vegetation management under the PV modules and on the access roads. Fencing design requirements to prevent unauthorized entry will be more than adequate to ensure that the sheep are contained and a loading area will be provided to enable sheep to be brought in and taken away as needed.

In the battery and switchgear yard, the surface will remain in its current state, which is old asphalt and gravel. Weed management in this area will be accomplished using string trimmers, vinegar treatments, or herbicide.

PV Module Cleaning

Cleaning requirements are minimal for the PV arrays due to the local climate. However, modules may need to be cleaned once per summer by spraying with a power washer if performance decreases due to the deposition of dust or ash. Over time a biofilm will typically develop along the bottom edge of the PV modules and this should be addressed periodically as needed to prevent a buildup, which can cause performance to degrade.

Operational Data Stewardship

This activity will be entirely computer based office work.

Substation Battery Maintenance

The main electrical switchgear for the RCEA Wholesale Generation System will have a flooded lead acid battery system to provide uninterruptible power for the microgrid control system. This battery system will have a spill containment system and venting system. Maintenance requirements for this flooded

lead acid battery system include checking electrolyte level, checking for corrosion on the terminals, checking cell voltages, and load testing. These activities will occur inside the compartment where the batteries are mounted.

Periodic Equipment Inspection

The batteries, PV inverters, transformers, main switchgear enclosures, weather station, EV charging stations, and other components will need to be visually inspected periodically for signs of corrosion, or physical damage. These inspections will be conducted by authorized personnel.

Monthly System Performance Evaluation at HMI

This activity will be entirely computer based office work.

2.2.4 Standards and Regulations

The following codes and regulations apply to the construction and operation of the project:

- FAA Interim Policy on Review of Solar Energy System Projects on Federally Obligated Airports
 (FAA, 2013). Establishes procedures and standards for FAA to review proposals for solar energy
 systems on airports that receive federal funding aid.
- FAA Advisory Circular 150/5370-2G: Operational Safety on Airports during Construction. Sets
 guidelines to ensure compatibility between construction activities and aircraft operations.
 Notice of proposed construction or alteration at an airport is provided through FAA Form 7460.
- California Building Code. Governs how construction projects are designed to ensure safe operation.
- California Electric Rule 21. A tariff that describes interconnection, operating, and metering requirements for generation facilities connected to the distribution grid in California.
- PG&E Service Requirements (Greenbook). Governs how infrastructure used to connect to the distribution grid is built.
- California Independent System Operator New Resource Implementation Process and Requirements. Governs how the RCEA Wholesale Generation System must be configured in order for the system to be eligible to participate in wholesale energy markets.
- Western Electricity Coordinating Council Operating Rules. Governs how the output from the RCEA Wholesale Generation System must be metered to be eligible for Renewable Energy Credits.
- State Water Resources Control Board's General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Applicable for projects with disturbed soil area greater than one acre. Contains requires for best management practices to minimize construction-related impacts to stormwater.
- Small Construction Site Erosion and Sediment Control Plan (Humboldt County Code Sect. 331).
 Applicable for projects with disturbed soil area less than once acre. Contains requirements for best management practices to minimize erosion and control sediment during construction.
- Stormwater Quality Management and Discharge Control Ordinance (Humboldt County Code Sect. 337). Requires conformance with the Humboldt County Low Impact Development Stormwater Manual to maintain a site's pre-development runoff characteristics.

2.2.5 Design Measures to Minimize Impacts

This section describes the design features that were incorporated into the project to minimize environmental impacts.

The PV modules will be mounted on driven steel beams and the surface beneath the modules will remain vegetated and permeable, rather than installing geotextile fabric and aggregate base. To keep the grass from growing tall enough to shade the PV modules, vegetation control may achieved with sheep or goats, or mechanical mowing. The array field has been designed to safely accommodate sheep or goats and safe load-in/load-out areas will be provided along with water and an area for supplemental feeding if needed.

New facilities will be located, to the extent possible, on existing infrastructure or previously disturbed areas. The battery system and switchgear will be installed in an old parking lot that is no longer used for airport business. Reusing this already disturbed, hardscaped area will minimize the amount of new impermeable surface that results from the project. The utility poles will be installed within existing rights of way for PG&E power lines. The EV chargers will be installed in an existing parking lot.

The PV modules will be oriented to minimize glare. This will be accomplished using the Solar Glare Hazard Analysis Tool, developed by Sandia National Laboratories. The FAA requires that this tool be used for all federally obligated airports to demonstrate the potential for glare caused by a proposed PV array.

2.2.6 Timeline

Approval of the funding agreement from the California Energy Commission is expected in June 2018. Contracting for the project is expected to be completed by September 2018. The winter of 2018 will be spent completing engineering design and construction will begin in May 2019, weather permitting, and continue until October 15, 2019. Winter 2019 will be spent completing microgrid controller testing. Construction will start back up in May of 2020 weather permitting. Commissioning will occur in the fall of 2020 and the system is scheduled to become fully operational by January 1, 2021. The project will then enter the system observation, analysis, and reporting stage. The project will end in June 2022; the microgrid is expected to continue operating into the foreseeable future.

3.0 PROJECT LOCATION AND SETTING

Project Location

The California Redwood Coast-Humboldt County Airport (ACV) is located in the unincorporated community of McKinleyville, Humboldt County, located approximately seven miles north of the city of Arcata and 15 miles north of the city of Eureka (Figure 1). From Highway 101, the facility is accessed via Airport Road. ACV is depicted on the Arcata North 7.5-minute U.S. Geological Survey quadrangle. The area surrounding the airport is also known as Dows Prairie.

Ownership

The entire airport encompasses approximately 745 acres. The Assessor Parcel Numbers (APNs) of the three parcels affected by the project are APN 511-071-005, APN 511-082-009, and APN 511-082-010 (Figure 6). These three parcels are owned by the County of Humboldt in fee.

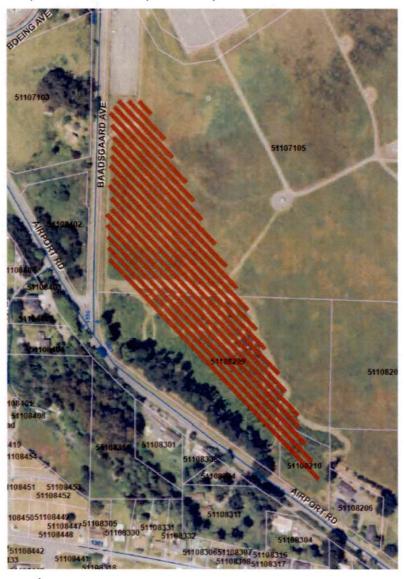


Figure 6: Assessor parcels

An excerpt from the Airport Layout Plan showing the project area is provided in Figure 7. The project has been verified to meet the required setbacks from runways and taxiways (Dietz, 2018). The project will go through formal review and approval by FAA during the design phase.

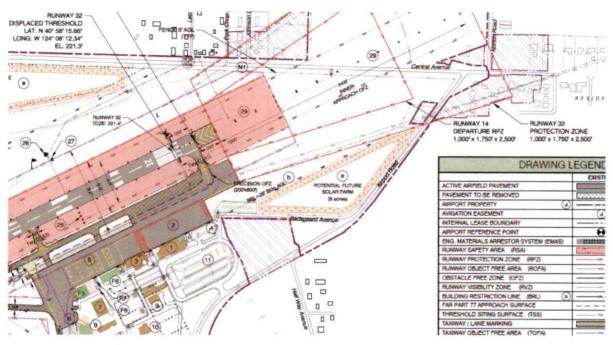


Figure 7: Portion of Airport Layout Plan (Mead & Hunt, August 2017)

Project Setting and Surrounding Land Uses

ACV is situated north of Airport Road and west of Central Avenue. The airport is bordered by residential, commercial, and light-industrial development. The project area is located outside of the coastal zone.

ACV is situated in the North Coast Range geomorphic province and occupies a relatively flat marine terrace with a ground surface elevation of approximately 200 feet above mean sea level. In the vicinity of the airport, the Coast Range contains primarily sedimentary rocks underlain by Franciscan basement rocks. The dominant soil type is a silty clay loam. The majority of the airport property has undergone significant disturbance since construction starting in 1942.

4.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed project, and would involve at least one impact that is determined to be a "Potentially Significant Impact":

| | Aesthetics | | Agriculture Resources | | Air Quality |
|-------------|------------------------|-------------|----------------------------|-------------|-----------------------|
| \boxtimes | Biological Resources | \boxtimes | Cultural Resources | | Geology and Soils |
| П | Greenhouse Gas | | Hazards and Hazardous | П | Hydrology and Water |
| | Emissions | | Materials | | Quality |
| | Land Use and Planning | | Mineral Resources | \boxtimes | Noise |
| | Population and | | Public Services | | Recreation |
| | Housing | | rubiic Services | ш | Recreation |
| | Transportation/Traffic | | Tribal Cultural Resources | | Utilities and Service |
| ш | Transportation, Traine | Ш | irribal cultural Nesources | | Systems |
| | Mandatory Findings of | | | | |
| ш | Significance | | | | |

Detailed explanations are provided in the checklist on the following pages. All answers take into account 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. The explanation of each issue identifies: (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 a less than significant level.

In the checklist the following definitions are used:

- "Potentially Significant Impact" means there is substantial evidence that an effect may be significant.
- "Potentially Significant Unless Mitigation Incorporated" means the incorporation of one or more
 mitigation measures can reduce the effect from potentially significant to a less than significant level.
- "Less Than Significant Impact" means that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.
- "No Impact" means that the effect does not apply to the project, or clearly will not impact nor be impacted by the project.

DETERMINATION: (To be completed by the Lead Agency on the basis of this initial evaluation)

| - | The transfer of the completed by the ceau Agency of the | ne basis of this initial evaluation) |
|----------|---|---|
| | I find that the proposed project COULD NOT ha NEGATIVE DECLARATION will be prepared. | ve a significant effect on the environment, and a |
| | I find that although the proposed project could there will not be a significant effect in this case by or agreed to by the project proponent. A MI prepared. | because revisions in the project have been made |
| | I find that the proposed project MAY have a sig ENVIRONMENTAL IMPACT REPORT is required. | |
| | | ironment, but at least one effect 1) has been rsuant to applicable legal standards, and 2) has on the earlier analysis as described on attached |
| | I find that although the proposed project could because all potentially significant effects (a) has NEGATIVE DECLARATION pursuant to applicable mitigated pursuant to that earlier EIR or NEGAT mitigation measures that are imposed upon the | we been analyzed adequately in an earlier EIR or e standards, and (b) have been avoided or TVE DECLARATION, including revisions or |
| | anh Seenan | March 27, 2018 |
| Signatur | re | Date |

CEQA Initial Study March 27, 2018

5.0 EVALUATION OF ENVIRONMENTAL IMPACTS

Pursuant to Section 15063 of the California Environmental Quality Act Guidelines, a brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources. 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 projects 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.

| I. AESTHETICS. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|--------------|
| a) Have a substantial adverse effect on a scenic vista? Threshold of significance: Temporary or permanent change in the physical environment that would be perceived by the public as detracting from the views or lines of sight from a scenic vista. | | | ⊠ | |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? Threshold of significance: Permanent change to the physical environment that would eliminate or substantially alter or degrade scenic resources within a state scenic highway. | | | | \boxtimes |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? Threshold of significance: Permanent changes in the project area that would degrade the key elements of the visual character or quality of the project area. | | | ⊠ | |
| d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? Threshold of significance: Introduction of a temporary or permanent source of light or glare that would detract from an area that is otherwise subject to little artificial light or glare. | | | | |

DISCUSSION:

Images and illustrations of the proposed project are included in Attachment A.

I. (a) and (c) - Less than significant impact: For this analysis, a "scenic vista" is considered a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. According to the Scenic Resources section of the Final Environmental Impact Report for the Humboldt County General Plan Update (Humboldt County, 2017), important scenic vistas in Humboldt County include viewpoints from major public roadways and public areas providing views of the coast, forests, open space, or agricultural lands, as well as views of historic districts, landmarks, and cultural sites. "Visual character or quality" refers to the visual attributes of the elements in a landscape and the relationships between those elements.

Potential viewers affected by the project include airport visitors, travelers along Airport Road and Central Avenue, neighbors, and airplane passengers. The project will affect views of the southern portion of the airport; however, the airport itself is not considered a scenic resource within the context of CEQA due to the high level of development, including security fencing, antennae, utility poles, overhead lines, buildings, and pavement markings. The color and vividness of the solar arrays will be somewhat different from the existing development at the airport, but consistent with roof-top solar panels commonly found in many communities.

The project may affect views from Airport Road toward the forested hills east of McKinleyville; however, the low profile of the project features would not substantially obstruct these views. Views from Airport Road are not rare or unique, and are already impacted by other obstructions. The project will have no effect on panoramic views of the Pacific Ocean or Trinidad Head, based on topography and existing obstructions such as trees, utility poles, and buildings.

The features introduced by the project will be consistent with, and not detract from, the visual character of the surrounding area. Viewer response may be negative for viewers who place a high value on open space, or positive for viewers who place a high value on renewable energy. The limited expanse of the project features, the consistency with existing development on the airport, and the limited importance of the affected viewpoints result in the impacts being less than significant.

- **I. (b) No impact:** Highway 101 is eligible for scenic highway designation, but is not officially designated as a scenic highway. The project is not visible from Highway 101.
- I. (d) Less than significant impact: Solar PV panels function by absorbing radiation rather than reflecting radiation. PV systems are fundamentally different technology than Concentrated Solar Power systems, which use large reflective surfaces to focus the sun's energy on a fixed point to produce intense heat (FAA, 2010). Solar PV panels are constructed of dark-colored materials and covered with anti-reflective coatings to minimize optical reflection. Reflection from PV panels is typically comparable to, or less than, reflection from water surfaces and building windows.

The potential for glare associated with reflection from the PV panels will be addressed in the design phase through compliance with FAA's Interim Policy for solar energy system projects (FAA, 2013). FAA's Interim Policy for solar energy system projects (FAA, 2013) requires project proponents to demonstrate that a proposed system will not result in an ocular impact that compromises the safety of the air transportation system. Standard practice is to utilize the Solar Glare Hazard Analysis Tool to ensure that reflectivity from the system will not produce glare (or glint) that interferes with pilot or airport staff visibility.

Sources of light at the airport are common, and no significant new lighting is proposed as part of the project.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have No Impact on Aesthetics.

| II. AGRICULTURE AND FORESTRY RESOURCES. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|---|------------------------------------|--------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland Statewide Importance (Farmland), as shown on the map prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, non-agricultural use? Threshold of significance: Conversion of more than one acre agricultural lands that are designated under the Farmland Mapping and Monitoring Program. | to \Box | | | × |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? Threshold of significance: Change in land management or lan use regulation that would substantially affect agricultural activities in more than one acre of lands zoned for agriculture particularly lands under Williamson Act contracts. | | | | ⊠ |
| 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 PRC section 4526), of timberland zoned Timberland Production (as defined by Government Code section 51104(g))? Threshold of significance: Change in land management or land use regulation that would substantially affect more than one acre of forestland or timberland. | | | | |
| d) Result in the loss of forest land or conversion of forest la to non-forest use? Threshold of significance: Conversion of more than three acr of forest land to non-forest uses. | | | | |
| e) Involve other changes in the existing environment which due to their location or nature, could result in conversion Farmland to non-agricultural use or conversion of forestland to non-forest use? Threshold of significance: Introduction of changes into the project area that would substantially affect the viability of methan one acre of farmland or forestland. | n of | | | ⊠ |

DISCUSSION:

II. (a) through (e) - No impact: No Prime Farmland, Unique Farmland, Farmland, land under Williamson Act contract, or forestland are present within or adjacent to the project area. Therefore the project will result in no impact to these resources.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have No Impact on Agriculture and Forestry Resources.

| III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|--------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? Threshold of significance: Project-related effect that would directly interfere with the attainment of long-term air quality objectives. | | | ⊠ | |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? Threshold of significance: Contribution of pollutants by the project that would violate an existing air quality standard, or contribution in a substantive way to non-attainment of air quality objectives in the project area air basin. | | | | |
| c) 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 ozone precursors)? Threshold of significance: Generation of pollutants by the project that would cumulatively contribute to non-attainment for any priority pollutant. | | | | |
| d) Expose sensitive receptors to substantial pollutant concentrations? Threshold of significance: Pollutant loading generated by the project near sensitive receptors that would result in a locally significant air quality impact. | | | | |
| e) Create objectionable odors affecting a substantial number of people? Threshold of significance: Release of a project-related odor that would affect a substantial number of receptors. | | | | |

DISCUSSION:

The project is located within the North Coast Air Basin and subject to the jurisdiction of the North Coast Unified Air Quality Management District (North Coast Unified AQMD, or Air District). The following information was obtained from the Air District website.

Humboldt County is listed as "attainment" or "unclassified" for all federal and state ambient air quality standards except the state 24-hour standard for particulate matter of 10 microns or less (PM_{10}), for which Humboldt County is designated "nonattainment." PM_{10} air emissions include chemical emissions and other inhalable particulate matter with an aerodynamic diameter of less than 10 microns. PM_{10} emissions include smoke from wood stoves, airborne salts, diesel exhaust, and other particulate matter naturally generated by ocean surf. Primary sources of particulate matter include on-road vehicles (engine exhaust and dust from paved and unpaved roads), open burning of vegetation (both residential

and commercial), residential wood stoves, and stationary industrial sources (factories). In 1995, the Air District conducted a study to identify the major contributors of PM₁₀, which is summarized in the draft report entitled Particulate Matter PM₁₀ Attainment Plan. According to the Air District website, this report should be used cautiously as it is not a document that is required in order for the Air District to come into attainment for the state standard. Cars and trucks and other vehicles are considered a source of particulate matter within the district. Fugitive emissions as a result of vehicular traffic on unpaved roadways are the largest source of particulate matter emissions within the district.

In determining whether a project has significant air quality impacts on the environment, planners typically apply their local air district's thresholds of significance to projects in the review process. However, the Air District has not formally adopted significance thresholds, but rather utilizes the Best Available Control Technology emission rates for stationary sources as defined and listed in the Air District's Rule 110 - New Source Review And Prevention of Significant Deterioration. The Air District does not currently have any thresholds for toxics, but recommends the use of the latest version of the California Air Pollution Control Officers Association's "Health Risk Assessments for Proposed Land Use Project" to evaluate and reduce air pollution impacts from new development.

III. (a), (b), (c) - Less than significant: Air quality impacts for the proposed project are associated with typical construction-related activities. Based on knowledge of emissions from similar projects, calculation of estimated emissions is not necessary in order to conclude with certainty that the project would have a less than significant impact on increases of any criteria pollutants, and would not result in cumulatively considerable net increases of any criteria pollutants. The project would be consistent with the Air District's PM₁₀ Attainment Plan as the project is located in an urbanized area, does not include the operation of woodstoves or hearths, and would not emit PM₁₀ at levels that would exceed the Air District's threshold of 15 tons per year. This project will not conflict with or obstruct implementation of the Air District's air quality objectives or standards, or contribute in a substantive way to a non-attainment of air quality objectives in the project area air basin.

The project is subject to the Air District's Rule 104, Section D, for fugitive dust emissions. Pursuant to Rule 104, no person shall allow handling, transporting, or open storage of materials in such a manner which allows or may allow unnecessary amounts of particulate matter to become airborne. Further, reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including:

- Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust;
- (2) The use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
- (3) The application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.
- (4) The prompt removal of earth or other track out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.
- **III.** (d) Less than significant: The project site is not situated near schools, parks and playgrounds, day care centers, nursing homes, or hospitals. One residential dwelling unit is situated approximately 65 feet from the southeast end of the proposed solar array, and two dwelling units are situated approximately 200 feet from the solar array across Airport Road. Air emissions associated with the project are limited to construction-related emissions, which are minor and of limited duration, and do not present a significant exposure concern. Emissions from construction-related vehicles and equipment will dissipate

into the atmosphere before they could expose people working or residing in the area to substantial pollutants.

III. (e) - Less than significant: Construction of the project may result in minor, temporary, nuisance odors associated with construction activities. These odors would not persist after project completion. Visitors to the airport are unlikely to notice any odors associated with the project.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have Less Than Significant Impacts on Air Quality.

| IV. BIOLOGICAL RESOURCES. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|--------------|
| 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 Wildlife or U.S. Fish and Wildlife Service? Threshold of significance: Uncompensated loss of any plant or animal species or individuals listed as rare, threatened, or endangered by federal or state government, or loss or degradation of habitat that supports such species. | | | | |
| 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 Wildlife or U.S. Fish and Wildlife Service? Threshold of significance: Uncompensated loss of more than an incidental and minor area of riparian habitat or other sensitive habitat type (excluding wetlands defined by Section 404 of the Clean Water Act) identified under federal, state or local policies. | | | | |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? Threshold of significance: Uncompensated loss or severe degradation of more than an incidental or minor area of wetlands as defined by Section 404 of the Clean Water Act. | | | | \boxtimes |

| 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 native wildlife nursery sites? Threshold of significance: Uncompensated loss or substantive | П | П | П | × |
|--|---|----|---|-------------|
| modification of key habitat areas that provide for continuity of movement for resident or migratory wildlife, or as a loss or substantive degradation of key habitat components that would result in loss of use of important concentration areas for wildlife. | |] | | |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | П | \boxtimes |
| <u>Threshold of significance</u> : Uncompensated loss of important biological resources that is inconsistent with local ordinance or policies. | _ | _ | | |
| 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? | 9 | Q. | | |
| Threshold of significance: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. | | | | |

DISCUSSION:

The coast checkerbloom (Sidalcea oregano ssp. Eximia) is a rare, protected plant species that is abundant and well-distributed on the airport (CDFG, 2009a; CDFG, 2009b; CNPS, 2011). Although not a federal or state listed species, coast checkerbloom is listed on the California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Plants list as a 1B species (plants that are rare, threatened, or endangered in California and elsewhere), which makes it eligible for state listing. A closely related species, the Siskiyou checkerbloom (Sidalcea malviflora ssp. patula), also has the potential to occur on the airport. Both species have the same status under the CNPS rare plant inventory, and from a conservation and management perspective are equivalent.

Coast checkerbloom is a herbaceous perennial primarily found in areas of the airport which are actively mowed and retain native soils. Regular mowing of airport grounds supports the reproductive success of the coast checkerbloom by preventing encroachment of shrub species (e.g., salal, heather, scotch broom, willow) and succession from coastal prairie grassland to coastal scrub habitat. To document the occurrence of the coast checkerbloom at the site, field surveys were conducted across a large portion of the airport by California Department of Fish and Game (now the Department of Fish and Wildlife) and the U.S. Fish and Wildlife Service in June of 2009 (Attachment B). The checkerbloom population is expected to fluctuate in spatial distribution and abundance. Humboldt County has a management policy to avoid, minimize, and/or mitigate for any impacts to the coast checkerbloom, and project-specific surveys are conducted during the planning phase of ground-disturbing projects.

IV. (a) and (b) - Less than significant with mitigation incorporated:

In 2010, Runway 32 was lengthened approximately 200 feet as part of the Arcata-Eureka Airport Phase 1 Runway Safety Area Improvement Project to comply with Federal Aviation Administration standards (Figure 8). In June 2009, a botanist performed a screening survey to check for the potential presence of checkerbloom within the project area. Checkerbloom occurrences were identified near the end of the runway, but were not identified within the area that overlaps with the project area for the microgrid project (Attachment B). In September 2016, a botanist performed a survey to re-check for checkerbloom within the microgrid project area, and no occurrences were identified (Attachment B).

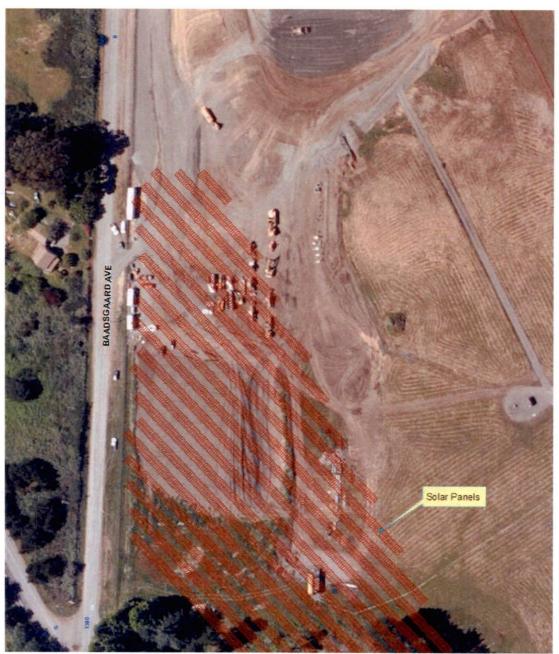


Figure 8: Runway safety area construction in 2010.

The presence of checkerbloom within this project area is highly unlikely due to the grading and placement of fill material that occurred during the runway safety area project in 2010. Based on the existing data and information indicating the high unlikelihood of checkerbloom presence, no mitigation measures are proposed.

A row of primarily Monterrey pine trees extends along Airport Road at the south end of the project area. These trees may need to be removed, pending further evaluation of solar radiation exposure and budgetary considerations. These trees provide nesting and roosting opportunities for raptors and other bird species. Migratory birds are protected under the federal Migratory Bird Treaty Act, and native birds are protected under the California Fish and Game Code Section 3503. Destruction of an active nest or disturbance that results in the abandonment of an active nest would represent a significant impact.

If these trees are removed, tree removal is expected to occur outside the nesting bird season in Northern California (March 15 - August 15). However, if trees are removed during the nesting season, a qualified biologist would perform one or more pre-construction nesting bird surveys to ensure that there are no impacts to birds protected under the Migratory Bird Treaty Act. Pre-construction nesting bird surveys are described in further detail below in Mitigation Measure BIO-1. With the implementation of this mitigation measure, potential impacts from the proposed project on protected bird species would be reduced to a less than significant level.

- IV. (c) and (d) No impact: The project area does not contain wetlands or significant corridors for fish and wildlife.
- **IV. (e)** Less than significant impact: The McKinleyville Community Plan contains policies for streamside management areas, wetland and wetland buffer areas, and other sensitive and critical habitats. The project area does not contain streamside management areas, wetlands, or wetland buffer areas. Based on the monitoring and analysis described in Section IV. (a) and (b) above regarding the checkerbloom plant, the project area does not contain occupied checkerbloom habitat and is unlikely to provide potentially suitable habitat due to the historical level of disturbance and import of fill material.
- IV. (f) No Impact: The project area is not subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

MITIGATION MEASURES:

The County of Humboldt will implement the following measures to ensure no significant impacts to native migratory bird species:

Mitigation Measure BIO-1 - SERC will attempt to remove trees and other vegetation that could potentially contain nesting birds outside the bird nesting season (March 15 to August 15). If vegetation removal occurs outside the bird nesting season, no further mitigation is necessary. If vegetation removal occurs between March 15 and August 15, SERC shall have a qualified wildlife biologist conduct preconstruction surveys within the vicinity of the impact area, to check for nesting activity of native birds. The biologist shall conduct a minimum of one preconstruction survey within the sevenday period prior to vegetation removal activities. If vegetation removal work lapses for seven days or longer during the nesting season, a qualified biologist shall conduct a supplemental avian survey before project work is reinitiated. If an active nest is found, the biologist will determine the extent of an appropriate construction-free buffer zone to be established around the nest and/or operational

restrictions in consultation with the California Department of Fish and Wildlife. Buffer zones will be delineated with flagging and maintained until the nests have fledged or nesting activity has ceased.

FINDINGS: The Project would have **Less than Significant Impacts** on Biological Resources **with Mitigation Incorporated**.

| | CULTURAL RESOURCES. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|-------------|--|--------------------------------------|---|------------------------------------|--------------|
| des in a | Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5? <u>eshold of significance</u> : Physical changes in known or ignated historical resources, or in their physical surroundings, manner that would degrade their significance. | | | | |
| that | Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5? <u>eshold of significance</u> : Physical changes in archaeological sites trepresent important or unique archaeological or historical rmation. | | \boxtimes | | |
| affe | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? <u>eshold of significance</u> : Physical changes that could adversely ct a unique paleontological resource/ site or unique geologic ure. | | | | |
| | Disturb any human remains, including those interred outside of formal cemeteries? <u>eshold of significance</u> : Disturbance of human burial sites as a all of project construction activities. | | ⊠ | | |

DISCUSSION:

The project area does not contain any buildings or structures that have the potential to be historical resource. The County retained Roscoe & Associates (2018) to perform an archaeological investigation of the project area to evaluate the potential presence of archaeological resources. Investigation efforts included a review of regional archaeological and ethno-geographic literature, pertinent historical maps and aerial photography; a project area record search at the California Historical Resources Information System's Northwest Information Center (NWIC) in Rohnert Park, California; a pedestrian field survey; and correspondence with local Native American tribal representatives.

Background archival research indicates that the project area was traditionally occupied by the Wiyot people. Villages were typically located around the shores of the Humboldt Bay and near the mouths of rivers. No village sites were ethnographically reported in the project vicinity. The project is also within an area of historic-era use by loggers and agriculturalists beginning in the late 1800's, including David Worth, one of the first settlers to the region. The records search at the NWIC revealed that the project area has been subject to five previous cultural resources investigations. Fourteen additional

investigations have been conducted within 0.5 miles of, but outlying the project area. A review of the ethnohistory and history of the project locale indicated only a slight possibility of the presence of significant remnants of cultural activity (Roscoe & Associates, 2018).

On November 9, 2017, James Roscoe M.A., Kimberley Roscoe A.A., Melinda Salisbury B.A., and Jonathan Roldon conducted a pedestrian field survey of the entire ACV Microgrid project area. No historical, tribal cultural, or unique archaeological resources, as defined in 14 CCR 15064.5(a), and PRC Sections 21074, and 21083.2(g), were identified in the project area during this investigation.

On November 15, 2017, Roscoe & Associates initiated correspondence regarding this project with local tribal representatives by sending letters to representatives of the Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and the Wiyot Tribe. These letters were sent to request information regarding tribal cultural resources within the project area. Correspondence with representatives of these three tribal groups continued through January 17, 2018. The local tribal representatives expressed concerns regarding the activities proposed within microgrid project area, because the southern portion of this area was not disturbed during the construction of the airport. Representatives expressed concern regarding the potential for buried archaeological deposits being discovered in this area, particularly during ground disturbing activities that will penetrate deeper than one foot below ground surface.

Based on the geological setting, there is not potential for the paleontological resources to be present.

V. (a) and (b) - Less than significant impact with mitigation incorporated: There are no known or designated historical, tribal cultural, or unique archaeological resources within the project area. However, there is a small potential that the proposed project activities could inadvertently uncover archaeological materials that would need to be evaluated further to determine their significance. A mitigation measure (CULT-1) is incorporated as a precautionary measure to ensure appropriate response in the event of inadvertent discovery of cultural resources. With mitigation a less than significant impact would occur.

V. (c) - No impact: The potential for discovering paleontological resources is considered negligible.

V. (d) - Less than significant impact with mitigation incorporated: The proposed project activities have the potential to inadvertently uncover human remains during construction. A mitigation measure (CULT-2) is incorporated as a precautionary measure to ensure appropriate response in the event of inadvertent discovery of cultural resources. With mitigation a less than significant impact would occur.

MITIGATION MEASURES:

CULT-1: The County and SERC will contact representatives of the Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and the Wiyot Tribe at least two months prior to the start of construction and offer the opportunity to monitor ground disturbing activities that will penetrate deeper than one foot below ground surface.

If cultural materials (e.g., chipped or ground stone, historic debris, building foundations, or bone) are discovered during ground-disturbance activities, work within 20 meters (66 feet) of the discovery shall be stopped, per the requirements of CEQA (Title 14 CCR 15064.5 [f]). Work near the archaeological find(s) shall not resume until a professional archaeologist, who meets the Secretary of the Interior's Standards and Guidelines, has evaluated the materials and offered recommendations for further action. Any identified cultural resources will be recorded on DPR 523 historic resource recordation forms, from

the Office of Historic Preservation. If Native American archaeological remains are inadvertently encountered, the Tribal Historic Preservation Officers (THPOs) of the three recognized Wiyot-area tribes (Blue Lake Rancheria, Bear River Band of Rohnverville Rancheria, and Wiyot Tribe) will be immediately notified, permitted to observe the findings in the field, and afforded the opportunity to make recommendations for avoiding, minimizing, or mitigating impacts from the proposed development.

CULT-2: If human remains are discovered during project construction, work within 20 meters (66 feet) of the discovery location, and within any nearby area reasonably suspected to overlie human remains, will cease (Public Resources Code, Section 7050.5). The Humboldt County Coroner will be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of the California Native American Heritage Commission (NAHC) (Public Resources Code, Section 5097). In this case, the coroner will contact NAHC. The descendants or most likely descendants of the deceased will be contacted, and work will not resume until they have made a recommendation to the landowner or person responsible for excavation work with direction regarding appropriate means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98.

FINDINGS: The Project would have **Less than Significant Impacts** on Biological Resources **with Mitigation Incorporated**.

| VI. GEOLOGY AND SOILS. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|---|------------------------------------|--------------|
| Expose people or structures to 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. Threshold of significance: Loss or damage to project elements as a direct result of fault movement along a fault identified on an Alquist-Priolo map. | | | \boxtimes | |
| ii) Strong seismic ground shaking? Threshold of significance: Loss or damage to project elements as a result of seismically derived ground movement. | | | \boxtimes | |
| iii) Seismic-related ground failure, including liquefaction? Threshold of significance: Loss or damage to project elements as a result of seismically derived ground failure. | | | | \boxtimes |
| iv) Landslides? <u>Threshold of significance</u> : Loss or damage to project elements due to landslides. | | | | \boxtimes |

| b) | Result in substantial soil erosion or the loss of topsoil? | | | | \boxtimes |
|---------------|---|---|---|---|-------------|
| Thre | eshold of significance: Erosion by water or wind of more than a | | | | |
| | imal volume of earth materials. | | | | |
| 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? | | | | \boxtimes |
| Thre | eshold of significance: Secondary instability of earth materials, | | | | |
| | ted to the project, that could subsequently fail, damaging | | | | |
| | ect elements or other sites or structures. | | | | |
| d) | Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | П | П | \boxtimes |
| Thre | eshold of significance: Location of the project on expansive soils | _ | _ | | |
| Charles Valer | are identified by professional geologists, which could result in | | | | |
| | age to project elements or other sites or structures. | | | | |
| 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? | | | | \boxtimes |
| Thre | shold of significance: Placement of a septic tank or alternative | | | | |
| disp | osal system on soils not capable of supporting such systems. | | | | |

The North Coast is a seismically active area located near a triple junction of tectonic plates that increase the likelihood of regionally significant earthquakes. All construction projects are subject to the seismic safety standards in the California Building Code. The County's geologic hazards regulations are provided in Humboldt County Code, Title III (Land Use Development), Division 3 (Building Regulations), Chapter 6 (Geologic Hazards). Potential seismic hazards include surface fault rupture, liquefaction, and landsliding.

VI. (a)(i) - Less than significant impact: The project area is situated within the Mad River Earthquake Fault Zone. An Earthquake Fault Zone is a regulatory zone that encompasses traces of Holocene-active faults to address hazards associated with surface fault rupture (California Geological Survey, 2018). Surface fault rupture is the result of fault movement that breaks to the surface of the earth (either suddenly or slowly) and is the result of tectonic movement that originates at depth. Surface fault rupture poses a hazard because the displacement that occurs can severely damage buildings.

The Mad River Earthquake Fault Zone contains a series of northeast-dipping thrust faults and associated folds that is approximately 10 kilometers wide and extends at least 43 kilometers onshore southeast from Trinidad Head (Hart, 1999). At least 37 subparallel, partly interconnected strands have been mapped. The principal faults of the zone are designated (from southwest to northwest) as the Fickle Hill, Mad River, McKinleyville, Blue Lake, and Trinidad faults. The project area is associated with the McKinleyville fault. According to Hart (1999), paleoseismic studies have identified two displacement events during Holocene time (within approximately 11,700 years before present) on the McKinleyville fault.

The purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of structures for human occupancy across traces of active faults. The microgrid project is not subject to the Alquist-Priolo Earthquake Fault Zoning Act because it does not include structures for human occupancy. The project will be designed in accordance with the California Building Code and other applicable standards. Because the project does not include occupied structures, the likelihood of exposing people or structures to potential substantial adverse effects is less than significant.

- VI. (a)(ii) Less than significant impact: The project area is located in a region of high seismicity, and the facility will likely be subjected to high levels of seismically-induced shaking over the period of its useful life. The level of shaking at the site will depend on the earthquake magnitude and the distance to the source. There is a high probability the project site will experience shaking associated with a seismic event of magnitude seven or greater during its lifetime. The project area does not have unique characteristics or hazards that would elevate the risk of strong seismic ground shaking.
- VI. (a) (iii) No impact: Liquefaction involves a sudden loss in strength of a water-saturated soil, and results in temporary transformation of the soil into a fluid mass. Recent alluvial floodplain soils and coastal sand deposits exhibit the highest liquefaction hazard (Humboldt County, 2018 Safety Element). The project area is situated outside of mapped liquefaction hazard zones (Humboldt County, 2015).
- VI. (a) (iv) No impact: Hazards related to slope instability and landslides are generally associated with mountain terrain, bluffs, and steep riverbanks. The project area is situated on a gradually varying, moderately sloped ground surface. As part of the airfield for the airport, the project area has been designed for stability. Landslide hazards are not expected for slopes less than 15%. The potential for a landslide as a result of project activities or the completed project is considered negligible.
- VI. (b) No impact: The project involves limited grading and will utilized sediment and erosion control best management practices during construction. The disturbed soil area will be re-seeded with herbaceous vegetation following the completion of construction. Soil erosion or loss of topsoil will be minimal.
- VI. (c) No impact: Due to the moderate slopes of the project area and the general design of the airport for ground surface stability, there is negligible potential for instability to result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- VI. (d) No impact: Expansive soils are those soils with significant clay content that expand when wet and shrink when dry. Soils with a high content of expansive minerals can form deep cracks in drier seasons, which can be detrimental to foundations and other structural members. The predominant soil types at the airport are not expansive soils.
- VI. (e) No impact: The project does not involve placement of septic tanks or alternative disposal systems.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have a Less Than Significant impact on Geology and Soils.

| VII. GREENHOUSE GAS EMISSIONS. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|--------------|
| a) Generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment? Threshold of significance: For land use development projects, the threshold is annual emissions less than 1,100 metric tons per year (MT/yr) of carbon dioxide equivalent (CO₂e). For stationary-source projects, the threshold is 10,000 metric tons per year (MT/yr) of CO₂e. | | | | \boxtimes |
| b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG? Threshold of significance: Substantial conflict with a goal, standard, or implementation measure of an applicable plan, policy, or regulation for GHG reduction. | | | | |

Section 15064.4 of the CEQA guidelines specifies how the significance of impacts from greenhouse gas (GHG) emissions is to be determined. The Lead Agency is to make a good faith effort to describe, calculate, or estimate the amount of GHG emissions that will result from a project. The Lead Agency is also to consider the following factors when accessing the impacts of the GHG emissions on the environment:

- Extent to which the project may increase or reduce GHG emissions, relative 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. Extent to which the project complies with regulations adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions

Global climate change is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The primary GHGs contributing to global climate change are carbon dioxide, methane, nitrous oxide, and fluorinated compounds. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but prevent heat from escaping back out into space.

Among the potential consequences of global climate change are rising sea levels and adverse impacts to water supply, water quality, agriculture, forestry, and ecosystems. In addition, global climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health.

In California, the largest emitter of GHGs is the transportation sector, followed by electricity generation. Carbon dioxide, methane, and nitrous oxide emissions are byproducts of fossil fuel combustion. GHG emissions are typically reported as carbon dioxide equivalents (CO₂e) to account for the fact that different GHGs have different potentials to retain infrared radiation in the atmosphere and contribute to

the greenhouse effect. Expressing emissions in CO_2e takes the contributions of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only carbon dioxide was being emitted (BAAQMD, 2017).

Thresholds of significance for GHG emissions were adopted for the project based on BAAQMD (2017).

VII. (a) and (b) - No impact: Project construction activities could result in a small, temporary increase in GHG emissions, including exhaust emissions from on-road trucks, worker commute vehicles, and off-road heavy-duty equipment (assuming these vehicles and equipment would not otherwise be operating). The recent estimate of construction-related emissions for a larger construction project was 285 MT/yr CO₂e over a two year period (GHD, 2018), which is an order of magnitude below the threshold of significance. Construction-related emissions resulting from construction of the microgrid project are expected to be less than the project analyzed in GHD (2018). Operation of the facility will generate minimal vehicle trips and a negligible increase in GHG emissions.

The microgrid is a zero-emission electricity source, and the project will result in a substantial net decrease in GHG emissions by serving as an alternative source for fossil-fuel based power. SERC estimated that the project will result in avoided emissions of 900 MT/yr CO_2e . This project directly aligns with federal, state, and local plans that aim to reduce GHG emissions through alternative power supplies.

Based on the negligible percentage of construction- and operation-related GHG emissions, and the substantial net overall reduction in GHG emissions represented by the project, it can be firmly concluded that the project would not have a significant impact through GHG generation, and that the project will not conflict with an applicable plan, policy or regulation for GHG reduction.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have No Impact on Greenhouse Gas Emissions.

| VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|--------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Threshold of significance: Potential storage or use of chemicals, on a regular basis, that could be hazardous if released into the environment. | | | ⊠ | |
| b) 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? Threshold of significance: Construction conditions that would be likely to result in the generation and release of hazardous materials. | | | | |

| c) | Emit hazardous emissions or handle hazardous or acutely | | | | |
|------------|--|-----------|-------------|---|-------------|
| | hazardous materials, substances, or waste within one- | | | | |
| | quarter mile of an existing or proposed school? | | | | |
| | | | | | \boxtimes |
| Thre | eshold of significance: Use of hazardous materials within a | | | | |
| qua | rter-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 | 000000000 | - Company 1 | | |
| | hazard to the public or the environment? | | | | \boxtimes |
| Th | abold of the 10 cm. | | | | |
| | eshold of significance: Siting of a project on a listed hazardous | | | | |
| 10000 | erials site, as defined by Government Code Section 65962.5. | | | | |
| 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 for people residing or working in the project area? | п | П | П | |
| | project area: | | Ш | Ш | |
| Thre | eshold of significance: Increase in use intensity by people | | | | |
| | in the boundaries of, or within two miles of, the Airport | | | | |
| | ning Area for a public airport. | | | | |
| f) | For a project within the vicinity of a private airstrip, would | | | | |
| 2-20 | the project result in a safety hazard for people residing or | | | | |
| | working in the project area? | | | | |
| | | | | | \boxtimes |
| | shold of significance: Increased exposure of people within | | | | |
| the | vicinity of a private airstrip to a safety hazard. | | | | |
| g) | Impair implementation of, or physically interfere with an | | | | |
| | adopted emergency response plan or emergency evacuation | | | | |
| | plan? | | | П | \boxtimes |
| T I | | _ | | _ | |
| | shold of significance: Physical change in the environment | | | | |
| | would interfere with emergency responses or evacuations. | | | | |
| n) | Expose people or structures to a significant risk of loss, | | | | |
| | injury, or death involving wildland fires, including where | | | | |
| | wildlands are adjacent to urbanized areas or where | | | | |
| | residences are intermixed with wildlands? | | | | \boxtimes |
| Thre | shold of significance: Increased exposure of people or | | | | |
| | ctures to significant risk of life involving wildland fires. | | | | |
| | | | | | |

The coordinated electrical house will have a placard indicating that flooded lead acid batteries are inside. The compartment where the batteries are installed will be vented and equipped with spill containment. The size of the flooded lead-acid batteries has not been determined. A conservative estimate of the amount of liquid electrolyte in these batteries is approximately 30 gallons.

ACV was used by the federal government as a Naval Auxiliary Air Station in the 1940s. Between 1943 and 1945, the site was used for pilot training. In 1946, the Department of Defense reutilized the site as a research facility called the Landing Aids Experiment Station (LAES) to test different landing aids,

including fog dispersal systems, known as Fog, Intensive Dispersal of (FIDO). Installation of the FIDO system was completed in 1946, and the system was operational from 1947 through 1949. In 1950, Congress discontinued appropriations for the LAES, and the land was transferred back to Humboldt County. In 1956, the site was officially conveyed to the County of Humboldt (Ahtna, 2018).

The FIDO system consisted of approximately 40,000 feet of buried and exposed distribution pipeline flanking both sides of the airport's two runways, and 2,000 feet of buried supply pipeline connecting a rail car unloading station on the west side of what is now Highway 101 to a tank farm consisting of six 50,000-gallon aboveground storage tanks (ASTs). Also associated with the system was the FIDO Test Area, a Pump House, and Truck Fill Stand; all located in the northeast quadrant of the airport. A railroad tank car, unloading station was located in the southwest quadrant. Fuel from rail cars was piped to the AST Farm via a six-inch underground supply line. Underground storage tanks (USTs) were installed to store fuel for the airfield, including the FIDO and building heating systems. The majority of the FIDO-associated tanks, burners, above ground pipelines, and some buried pipelines have been removed; however, three to five miles of underground piping system remains in place. Releases of fuel to soil from the FIDO system during its operation were documented (Ahtna, 2018).

On behalf of the Department of Defense, the U.S. Army Corps of Engineers is the lead federal agency for implementing environmental restoration at formerly used defense sites. Building on previous investigative activities, the Corps of Engineers is developing a Work Plan (Ahtna, 2018) for a comprehensive site investigation to fully characterize the impacts to soil and groundwater caused by the FIDO system and associated USTs. The investigation will result in recommendations either for site closure or performing additional environmental investigation and/or remediation. The study area for the Corps of Engineers' site investigation does not include the project area for the microgrid project (Attachment C). Therefore, the environmental impacts from the FIDO system and associated facilities will not affect this project.

VIII. (a) and (b) - Less than significant: Construction activities would involve the use of hazardous materials, such as fuels and lubricants. These materials are commonly used during construction, would be used in small quantities, and are not acutely hazardous. Numerous laws and regulations ensure the safe transportation, use, storage, and disposal of hazardous materials. For example, Caltrans and the California Highway Patrol regulate the transportation of hazardous materials and wastes, including container types and packaging requirements, as well as licensing and training for truck operators, chemical handlers, and hazardous waste haulers. The construction contract will include standard provisions for the safe handling of hazardous materials and spill prevention control and countermeasures.

Worker safety regulations cover hazards related to the prevention of exposure to hazardous materials and a release to the environment from hazardous materials use. The California Division of Occupational Safety and Health (Cal-OSHA) also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees.

The hazardous materials associated with the battery systems and pole-mounted transformers are used in small quantities. Maintenance of on-site batteries or pole-mounted transformers is a standard practice with established protocols.

- VIII. (c) No impact: The project will not emit hazardous emissions, handle hazardous or acutely hazardous materials, substances, or waste.
- VIII. (d) No impact: The project is not located on a site included on a list compiled pursuant to Government Code Section 65962.5.
- VIII. (e) No impact: The project is situated within the jurisdiction of the Humboldt County Airports Land Use Compatibility Plan (Humboldt County, 1993). A project-specific Safety and Operations Plan will be developed in accordance with FAA Advisory Circular 150/5370-2G (Operational Safety on Airports during Construction) to ensure that the project will not result in a significant safety hazard.
- VIII. (f) No impact: The project is not situated within the vicinity of a private airstrip.
- VIII. (g) No impact: No physical change to the environment will occur as a result of this project that would interfere with emergency responses or evacuations. The Safety and Operations Plan will address emergency notification procedures and responding to police, fire, or aircraft-related emergencies.
- VIII. (h) No impact: The project site is situated in a developed area on the cool and moist Pacific Coast, approximately one mile from the urban-wildland interface, where the risk of wildland fire is negligible.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have No Impact on Hazards and Hazardous Materials.

| IX. HYDROLOGY AND WATER QUALITY. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|--------------|
| a) Violate any water quality standards or waste discharge requirements? Threshold of significance: Discharge of sediment or other pollutants that would violate Basin plan standards or Waste Discharge Requirements associated with National Pollution Discharge Elimination System Permit (NPDES) permits. | | | | |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level, (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? Threshold of significance: Change in groundwater movement that would affect potential uses of groundwater. | | | | \boxtimes |

| c) | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site? | | | | |
|---------|--|---|---|-----------|-------------|
| | eshold of significance: Erosion due to concentrated runoff on the project site. | | | | |
| d) | Substantially alter the existing drainage pattern of the site or | | | | |
| | area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site? | | | | |
| | eshold of significance: Increased potential for localized | | | | |
| | ding directly related to construction and operation of the | | | | |
| proj | | | | | |
| e) | 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? | | П | \square | |
| Thre | eshold of significance: Increase in runoff, as a result of the | | ш | | |
| 7.0 | ect, that would exacerbate existing drainage problems, or a | | | | |
| rund | off increase that would carry pollutants to surface water | | | | |
| | rses. | | | | |
| f) | Otherwise substantially degrade water quality? | | | | |
| | eshold of significance: Impacts to water quality that are erwise not addressed above. | | | | |
| g) | Place housing within a 100-year flood hazard area as | | | | |
| O, | mapped on a federal Flood Hazard Boundary of Flood | | | | |
| | Insurance Rate Map or other flood hazard delineation map? | | | | \boxtimes |
| Thre | eshold of significance: Development of housing within a | | | | |
| | eral Emergency Management Agency (FEMA)-designated | | | | |
| 777 115 | -year flood hazard area. | | | | |
| h) | Place within a 100-year flood hazard area structures, which would impede or redirect flood flows? | П | П | П | \square |
| | eshold of significance: Placement of structures that would ct flood flows. | | _ | _ | |
| i) | Expose people or structures to a significant risk of loss, | | | | |
| ., | injury or death involving flooding, including flooding as a | 0 | | | |
| | result of the failure of a levee or dam? | П | | | |
| | | | | | |
| | eshold of significance: Increased exposure of people or | | | | |
| 15.277 | ctures to potential flood flows. | | | | |
| j) | Result in inundation by seiche, tsunami, or mudflow? | | | | |
| Thre | eshold of significance: Increased exposure of people or | | | | \boxtimes |
| | ctures to the effects of a potential tsunami. | | | | |
| | | | | - | - |

A grading plan will be developed during the design phase for the project. The grading plan will determine the extent of the disturbed soil area. If this area exceeds one acre, coverage under the State Water Resources Control Board's General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) would be obtained. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. The SWPPP identifies appropriate erosion control measures and other Best Management Practices (BMPs). If this area is less than one acre, an Erosion and Sediment Control Plan would be developed in accordance with Humboldt County Code Section 331.

In addition to construction-related stormwater management, the project will need to comply with the Humboldt County Low Impact Development (LID) Stormwater Manual which address post-construction stormwater conditions (Humboldt County Code, Section 337). LID is a site development strategy that prevents chemical pollution of stormwater and maintains or reproduces the runoff characteristics that existed prior to development. Basic principles of LID include minimizing contact between pollutants and stormwater, retaining natural areas, minimizing new impervious surfaces, incorporating measures to promote storage and infiltration of stormwater, and treating runoff that leaves the site. LID is implemented largely through site design, site civil engineering, and landscaping. The specific compliance requirements for LID will be determined during the design phase.

- IX. (a) Less than significant: Construction activities necessary to construct the project would be conducted in accordance with either the state Construction General Permit or the County construction stormwater ordinance. Appropriate stormwater BMPs, including erosion, sediment and non-stormwater controls would be implemented to protect water quality at all times through construction. Implementation of BMPs and erosion control measures would reduce potential water quality impacts during project construction activities to a less-than-significant level by requiring measures to control erosion and sedimentation of receiving water bodies. As a result, the potential impact on water quality during construction and operation would be less than significant.
- **IX. (b) No impact:** The project does not include any groundwater withdrawals. The project will be designed to maintain on-site infiltration of stormwater, which benefits groundwater recharge.
- IX. (c), (d), (e) Less than significant impact: Maintaining drainage patterns will be one of the design goals for the grading plan. The project area does not include a stream or river, and new impervious surfaces will be minimal. Site soils are known to have high infiltration capacity. The project will comply with provisions of the LID Stormwater Manual. These factors support the conclusion that the project will not cause substantial erosion, siltation, or flooding by altering drainage patterns, and will not contribute to an exceedance of stormwater drainage systems, nor provide substantial additional sources of polluted runoff.
- IX. (f) No impact: No other potential causes of substantial degradation of water quality were identified.
- IX. (g) No impact: The project does not include housing.
- **IX. (h) No impact:** The project area is not situated within a FEMA mapped special flood hazard zone (FEMA, CA Community Panel No. 06023C0680G).
- IX. (i) No impact: No levees or dams are situated near the project area.
- **IX (j) No impact:** The elevation of the project area precludes any risk of inundation by seiche or tsunami, and the topography precludes any risk of a mudflow.

FINDINGS: The Project would have a Less Than Significant Impact on Hydrology and Water Quality.

| X. LAND USE AND PLANNING. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporation | Less Than Significant Impact | No Impact |
|---|--------------------------------------|---|------------------------------------|--------------|
| a) Physically divide an established community? Threshold of significance: Removal of existing structures or placement of new structures that result in a perception that the project will adversely affect existing public facility areas for a duration greater than the construction period. | | | | ⊠ |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? Threshold of significance: Project-related effects to environmental resources for which protective policies have been adopted in the County's General Plan, or other planning documents. | | | | |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? Threshold of significance: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. | | | | |

- **X (a) No impact:** The project is situated on a public facility or public right-of-way, and does not have the potential to divide an established community.
- **X (b)** Less than significant impact: The zoning for APN 511-071-005 and APN 511-082-009 is Airport, and the zoning for APN 511-082-010 is Residential. The proposed project is considered a "public use" as defined at Humboldt County Code Section 314-58.1 (Werner, 2018). Public uses are permitted in any zone without the need for obtaining a use permit (Humboldt County Code Section 314-58.1). The General Plan land use designation for each of the three affected parcels is Public Facility. The project is subject to a General Plan conformance review in accordance with Government Code Section 65402. Later in 2018 or early 2019, the Humboldt County Building and Planning Department and Humboldt County Planning Commission will review the project for conformance with the Humboldt County General Plan (2017) and McKinleyville Community Plan (2002).
- **X (c) No impact:** There are no adopted habitat conservation plans or natural community conservation plans that apply to the site.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have a Less Than Significant Impact on Land Use and Planning.

| XI. MINERAL RESOURCES. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|--------------|
| 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? Threshold of significance: A short-term or long-term decrease in the availability of rock, aggregate, or sand that would otherwise be available for construction or other consumptive uses. | | | | |
| 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? Threshold of significance: Change in land use that would result in the loss of availability of locally-important mineral resource recovery site. | | | | |

XI (a) and (b) - No impact: The airport does not contain mineral resources that are of value to the region or state. The quantity of gravel required for this project is a negligible amount compared to the total gravel extracted in the region.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have No Impact on Mineral Resources.

| XII. NOISE. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|--------------|
| a) Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? Threshold of significance: Generation of sound-pressure levels, or the presence of people within range of these levels that exceed the applicable noise ordinance. | | | | |
| b) Expose persons to or generate excessive ground borne vibration or ground borne noise levels? Threshold of significance: Ground vibrations that interfere with normal activities or cause a nuisance condition, or damage, to adjacent properties. | | | | |

| c) | Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | |
|------|---|---|---|---|-----------|
| | eshold of significance: Increase in ambient long-term sound- | | | | |
| 92 | ssure levels after project completion resulting in a | | | | |
| 0.00 | asurable difference to ambient noise levels in the project area | | | | |
| | r to the project. | | | | |
| d) | Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | |
| Thre | eshold of significance: Temporary sound increases related to | | | | |
| | struction, which will be perceived as increased ambient or | | | | |
| | rground noise in the project area. | | | | |
| e) | For a project located within an airport land use plan or, | | П | П | \square |
| | where such a plan has not been adopted, within two miles | _ | _ | | |
| 1 | of a public airport or public use airport, would the project | | | | |
| | expose people residing or working in the project area to excessive noise levels? | | | | |
| | excessive noise levels: | | | | |
| Thre | eshold of significance: Increased noise levels arising from a | | | | |
| | lic use airport as a result of the project, or the introduction | | | | |
| | t-construction) of additional people into the vicinity of either | | | | |
| | nese airports where they will be exposed to sound levels that | | | | |
| | not compatible with the County's noise ordinance. | | | | |
| f) | For a project within the vicinity of a private airstrip, would | | | | |
| | the project expose people residing or working in the project | | | | _ |
| | area to excessive noise levels? | | | | |
| | | | | | |
| | shold of significance: Increased exposure of people within | | | | |
| the | vicinity of a private airstrip to excessive noise levels. | | | | |
| | | | | | |

Ambient (background) noise levels at the airport are affected by transient (short-term) noise events associated with aircraft departures and landings. An additional source of short duration noise is the gun club situated on the airport. Persistent (continual) noise levels at the airport are affected by traffic from U.S. Highway 101 and Central Avenue.

During construction, earth moving equipment will be utilized for clearing, grubbing, and grading, and a vibratory pile driver will be used to set the array piles. The pile driver produces noise of approximately 100 decibels at 50 feet. During operation, the AC/DC inverters inside the building will generate a low-level noise (less than 70 decibels at one meter).

XII. (a) - Less than significant: Noises generated by the proposed project will result in temporary, but not permanent, noise increases. Humboldt County does not currently have ordinances that address construction noise.

XII. (b) - Less than significant impact with mitigation incorporated: Construction activities will require the use of heavy equipment, concrete saws, jackhammers, and pile driving. Pile driving is a potential source of groundborne vibration and noise. Noise levels are a function of the distance between noise

source and sensitive receptors, and will also vary based on the type of pile driver, the depth of the pile, and soil conditions (Caltrans, 2013). Vibrations and noise will attenuate with increasing distance. Although rare, construction-induced vibrations have the potential to be structurally damaging to buildings located adjacent to the construction site.

The nearest residences are located west of Baadsgaard Avenue or south of Airport Road, except for one residence located north of Airport Road at the far south end of the airport. The nearest residence is approximately 75 feet to 100 feet from where pile driving may occur. The type of pile driver to be used for the project has not been determined.

Ground-borne vibration is typically measured by using "peak particle velocity descriptor" (ppv). Caltrans (2013) cites a study by the American Association of State Highway and Transportation Officials (AASHTO) which identifies maximum vibration levels for preventing damage to structures from intermittent construction or maintenance activities. The maximum vibration levels are 0.2-0.3 in/sec ppv for residential buildings with plastered walls, and 0.4-0.5 in/sec ppv for residential buildings in good repair with gypsum board walls.

Pile driving has the potential to generate substantial temporary ground-born vibration exceeding standard vibration thresholds, which could cause a nuisance condition, or damage, for adjacent residences. Exposure of persons to excessive ground-borne vibration would represent a potentially significant impact. Mitigation measure NOISE-1 will be incorporated to reduce impacts related to exposure to temporary construction-related ground-borne vibration to a less-than-significant level.

- XII. (c) No impact: The noise associated with facility operations is negligible, and will not result in a substantial permanent increase in ambient noise above existing levels.
- **XII.** (d) Less than significant: The highest noise levels generated by the project would result from use of heavy equipment and pile driving machinery during construction activities; however, increases in noise levels will be temporary and limited to daytime hours, and will not be present after the completion of the project. The background noise associated with aircraft operations.
- XII. (e) No impact: The project is situated within the jurisdiction of the Humboldt County Airports Land Use Compatibility Plan (Humboldt County, 1993). The project is compatible with utilization of the airport grounds. Workers will be able to use standard hearing protection during construction and operation of the facility.
- XII. (f) No impact: The project area is not located within the vicinity of a private airstrip.

MITIGATION MEASURES:

NOISE-1: The County and SERC will implement the following provisions to minimize impacts of groundborne vibrations and noise on adjacent residents:

- 1. Pile driving will be limited to between the hours of 8:00 am to 5:00 pm, Monday through Friday.
- 2. SERC will select pile driving equipment that generates the least amount of vibration and noise while still meeting the project specifications.
- To the extent feasible, SERC will incorporate noise suppression devices and/or techniques during pile driving.

- 4. SERC will estimate the generation of ground-borne vibration levels resulting from pile driving. If the vibration levels have the potential to exceed 0.2 in/sec ppv at adjacent buildings, SERC will monitoring pile driving vibration levels during construction to ensure vibrations do not exceed 0.2 in/sec ppv.
- The County or SERC will notify occupants of residents located within 200 feet of pile-driving
 activities of the project construction schedule in writing, at least four weeks prior to the
 commencement of construction.

FINDINGS: With mitigation, the Project would have a Less than Significant Impact on Noise.

| XIII. POPULATION AND HOUSING. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|--------------|
| a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure)? | | | | |
| <u>Threshold of significance</u> : Removal of an existing impediment to population growth due to an extension of an existing roadway and improved traffic circulation in the project area. | | | | |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? Threshold of significance: Demolition or removal of five or more | | | | |
| existing housing units as a result of the project. | | | | |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | | |
| <u>Threshold of significance</u> : Expulsion of 10 or more persons from otherwise occupied housing. | | | | |

DISCUSSION:

XIII (a) through (c) - No impact: The proposed project has no association with population or housing.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have a Less than Significant Impact on Population and Housing.

| XIV. PUBLIC SERVICES. 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: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|--------------|
|--|--------------------------------------|--|------------------------------------|--------------|

| a) Fire protection? | | | | |
|--|--------------------|--|--------------------|--------------|
| Threshold of significance: Changes to an existing fire-protection | _ | _ | | _ |
| system, or perceived need for such changes. | | | | |
| b) Police protection? | | | | |
| 11 CANON DESCRIPTION OF THE PROPERTY OF THE PR | | | | |
| Threshold of significance: Changes to an existing law | | | | |
| enforcement system, or perceived need for such changes. | | | | |
| c) Schools? | | | | \boxtimes |
| Threshold of significance: Changes in existing school enrollments, | | | | |
| or the uses of schools, or perceived need for such changes. | | | | |
| d) Parks? | | | | \boxtimes |
| Threshold of significance: Changes to an existing park, resulting | - | | | |
| in less use, or a need for significant repairs to park facilities, or | | | | |
| replacement parks. | | | | |
| e) Other public facilities? | | | | \square |
| Threshold of significance: Changes to other public facilities that | | | | _ |
| are not directly a part of the County's roadway or storm water | | | | |
| conveyance system. | | | | |
| | | | | |
| XIV (a) through (e) - No impact: The proposed project in and MITIGATION MEASURES: No mitigation required. FINDINGS: The Project would have No Impact on Public Serv | | aid not impac | t public ser | vices. |
| | | | | |
| | | | | |
| | Dotantially | Less Than | 1 - 7 | |
| XV. RECREATION Would the project: | Potentially | Significant | Less Than | No |
| XV. RECREATION. Would the project: | Significant | Significant with | Significant | No Impact |
| XV. RECREATION. Would the project: | | Significant with Mitigation | | //dawa/2015 |
| | Significant | Significant with | Significant | Impact |
| Increase the use of existing neighborhood and regional parks | Significant | Significant with Mitigation | Significant | //03/MATES |
| Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical | Significant | Significant with Mitigation | Significant | Impact |
| Increase the use of existing neighborhood and regional parks | Significant | Significant with Mitigation | Significant | Impact |
| 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? | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Threshold of significance: Increased demand for recreation | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Threshold of significance: Increased demand for recreation facilities or increased use of existing recreational areas in a | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Threshold of significance: Increased demand for recreation facilities or increased use of existing recreational areas in a manner that would lead to an adverse change in the | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Threshold of significance: Increased demand for recreation facilities or increased use of existing recreational areas in a manner that would lead to an adverse change in the environment, such as degradation through over-use of | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Threshold of significance: Increased demand for recreation facilities or increased use of existing recreational areas in a manner that would lead to an adverse change in the environment, such as degradation through over-use of environmentally sensitive areas. | Significant | Significant with Mitigation | Significant | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Threshold of significance: Increased demand for recreation facilities or increased use of existing recreational areas in a manner that would lead to an adverse change in the environment, such as degradation through over-use of environmentally sensitive areas. DISCUSSION: | Significant Impact | Significant with Mitigation Incorporated | Significant Impact | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Threshold of significance: Increased demand for recreation facilities or increased use of existing recreational areas in a manner that would lead to an adverse change in the environment, such as degradation through over-use of environmentally sensitive areas. | Significant Impact | Significant with Mitigation Incorporated | Significant Impact | Impact |
| a) 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? Threshold of significance: Increased demand for recreational facilities or increased use of existing recreational areas such that those areas are physically degraded. b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? Threshold of significance: Increased demand for recreation facilities or increased use of existing recreational areas in a manner that would lead to an adverse change in the environment, such as degradation through over-use of environmentally sensitive areas. DISCUSSION: | Significant Impact | Significant with Mitigation Incorporated | Significant Impact | Impact |

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have No Impact on Recreation.

| XVI. TRANSPORTATION / TRAFFIC. Would the project | t: Sigr | entially nificant npact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---------------|-------------------------------|--|------------------------------------|--------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performa of the circulation system, taking into account all modes transportation including mass transit and non-motorize travel and relevant components of the circulation system including but not limited to intersections, streets, highwand freeways, pedestrian and bicycle paths, and mass transit? | of d m, | | | | |
| <u>Threshold of significance</u> : Project traffic that would increase existing-plus-project traffic above the capacity of existing str or highways, resulting in a noticeable and adverse change in circulations, including temporary traffic effects during construction. | eets | | | | |
| b) Conflict with an applicable congestion management program including, but not limited to, level of service (Li standards and travel demand measures, or other standar established by the county congestions management age for designated roads or highways? | irds | | | | |
| <u>Threshold of significance</u> : Increased traffic that would cause level-of-service on City streets or County and state highways fall below Level of Service (LOS) D for City roadways and LOS state highways. | | | | | |
| c) Result in a change in air traffic patterns, including either increase in traffic levels or a change in location that resu substantial safety risks? | | | | | |
| <u>Threshold of significance</u> : Project components that would resin a change to air traffic patterns. | sult | | | | |
| d) Substantially increase hazards due to design features (e. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | | \boxtimes |
| <u>Threshold of significance</u> : Introduction of a project element that would result in increased hazards due to design features, particularly a dangerous intersection. | ent | | | | |

| e) Result in inadequate emergency access? | | \boxtimes | |
|--|--|-------------|--|
| <u>Threshold of significance</u> : Project-related traffic restrictions that would prevent emergency vehicles from reaching necessary locations. | | | |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | | | |
| <u>Threshold of significance</u> : Conflict with adopted policies, plans, or programs supporting alternative transportation. | | | |

XVI. (a) and (b) - No impact: The project will not permanently increase vehicle trips. There will be a small increase in vehicle trips generated during construction activities, ending once construction is complete.

- XVI. (c) No impact: No change in air traffic patterns will result from project implementation.
- XVI. (d) No impact: The project does not propose permanent roadways.
- **XVI. (e) Less than significant impact:** Emergency vehicles will have alternative routes for reaching necessary locations.
- **XVI.** (f) No impact: The proposed project does not include infrastructure for transportation and would not conflict with an applicable plan.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have a Less than Significant Impact to Transportation/Traffic.

| XVII. | TRIBAL CULTURAL RESOURCES. 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: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---------|--|--------------------------------------|--|------------------------------------|--------------|
| H re | isted or eligible for listing in the California Register of listorical Resources, or in a local register of historical esources as defined in Public Resources Code section 020.1(k)? | | | | |

| and supported by substant pursuant to criteria set for Resources Code Section 5024 In applying the criteria set for Resources Code Section 50 | te lead agency, in its discretion all evidence, to be significant the in subdivision (c) of Public 1? Orth in subdivision (c) of Public 224.1, the lead agency shall the resource to a California | | |
|---|---|--|--|
| <u>Threshold of significance</u> : Adverse characteristics of a tribal cultural rits eligibility in the national, state, | esource that are significant for | | |

XVII. (a) and (b) – Less than significant impact: Humboldt County Public Works has not received formal written correspondence from any Tribe to be informed of proposed projects per PRC Section 21080.3.1. As described in Section V above, the County retained Roscoe & Associates to conduct an archaeological survey which included informal consultation with the Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and the Wiyot Tribe. According to the Archaeological Survey Report (Roscoe & Associates, 2018), there is a low possibility that the project area contains undiscovered prehistoric artifacts or archaeological deposits. However, the tribes requested the opportunity to observe ground-disturbing activities that will penetrate deeper than one foot below ground surface. This request was incorporated into mitigation measure CULT-1.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have No Impact on Recreation.

| XVIII.UTILITIES AND SERVICE SYSTEMS. Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|--------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? Threshold of significance: An increase in hydraulic loading or waste-loading at the applicable wastewater treatment facility that results in exceeding the facility's design capacity or in violations of the facility's Waste Discharge Requirements. | | | | |
| b) Require or result in the construction of new water or wastewater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? Threshold of significance: Discernible relationship between the effects of the proposed project and a direct need to upgrade or expand either the existing wastewater system or the water delivery system. | | | | |

| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? Threshold of significance: Increase in runoff intensity that would exacerbate drainage conditions and increases localized flooding in the project area. Al Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? Threshold of significance: A demonstrated need for additional water supplies from the local water district. Result in a determination by the wastewater treatment provider, which serves the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Threshold of significance: An increase in hydraulic loading or waste-loading that exceeded the approved design features of the wastewater treatment facility. Reserved by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Threshold of significance: Discernible relationship between the effects of disposing solid waste generated by the project that would be in excess of the local landfill's permitted capacity. Somply with federal, state, and local statutes and regulations related to solid waste? Threshold of significance: Violation of any federal, state, and local statutes and regulations related to solid waste. | _ | | | |
|---|------|--|--|-------------|
| exacerbate drainage conditions and increases localized flooding in the project area. d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? Threshold of significance: A demonstrated need for additional water supplies from the local water district. e) Result in a determination by the wastewater treatment provider, which serves the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Threshold of significance: An increase in hydraulic loading or waste-loading that exceeded the approved design features of the wastewater treatment facility. f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Threshold of significance: Discernible relationship between the effects of disposing solid waste generated by the project that would be in excess of the local landfill's permitted capacity. g) Comply with federal, state, and local statutes and regulations related to solid waste? Threshold of significance: Violation of any federal, state, and | c) | construction of which could cause significant environmental | | |
| from existing entitlements and resources, or are new or expanded entitlements needed? Threshold of significance: A demonstrated need for additional water supplies from the local water district. e) Result in a determination by the wastewater treatment provider, which serves the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Threshold of significance: An increase in hydraulic loading or waste-loading that exceeded the approved design features of the wastewater treatment facility. f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Threshold of significance: Discernible relationship between the effects of disposing solid waste generated by the project that would be in excess of the local landfill's permitted capacity. g) Comply with federal, state, and local statutes and regulations related to solid waste? Threshold of significance: Violation of any federal, state, and | exa | cerbate drainage conditions and increases localized flooding | | |
| water supplies from the local water district. e) Result in a determination by the wastewater treatment provider, which serves the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Threshold of significance: An increase in hydraulic loading or waste-loading that exceeded the approved design features of the wastewater treatment facility. f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Threshold of significance: Discernible relationship between the effects of disposing solid waste generated by the project that would be in excess of the local landfill's permitted capacity. g) Comply with federal, state, and local statutes and regulations related to solid waste? Threshold of significance: Violation of any federal, state, and | d) | from existing entitlements and resources, or are new or | | |
| provider, which serves the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Threshold of significance: An increase in hydraulic loading or waste-loading that exceeded the approved design features of the wastewater treatment facility. f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Threshold of significance: Discernible relationship between the effects of disposing solid waste generated by the project that would be in excess of the local landfill's permitted capacity. g) Comply with federal, state, and local statutes and regulations related to solid waste? Threshold of significance: Violation of any federal, state, and | | | | |
| waste-loading that exceeded the approved design features of the wastewater treatment facility. f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Threshold of significance: Discernible relationship between the effects of disposing solid waste generated by the project that would be in excess of the local landfill's permitted capacity. g) Comply with federal, state, and local statutes and regulations related to solid waste? Threshold of significance: Violation of any federal, state, and | e) | provider, which serves the project that it has adequate capacity to serve the project's projected demand in addition | | |
| accommodate the project's solid waste disposal needs? Threshold of significance: Discernible relationship between the effects of disposing solid waste generated by the project that would be in excess of the local landfill's permitted capacity. g) Comply with federal, state, and local statutes and regulations related to solid waste? | was | te-loading that exceeded the approved design features of the | | |
| effects of disposing solid waste generated by the project that would be in excess of the local landfill's permitted capacity. g) Comply with federal, state, and local statutes and regulations related to solid waste? Threshold of significance: Violation of any federal, state, and | f) | | | \boxtimes |
| regulations related to solid waste? Threshold of significance: Violation of any federal, state, and | effe | cts of disposing solid waste generated by the project that | | |
| | g) | | | |
| | | | | |

XVIII. (a) - No impact: The project will not result in generation of wastewater requiring treatment.

XVIII. (b) - No impact: The project will not require new water or wastewater treatment facilities.

XVIII. (c) - No impact: Any storm water facilities would be constructed on site as part of the LID design.

XVIII. (d) - No impact: The project does not require water supplies.

XVIII. (e) - No impact: The project goes not generate wastewater.

XVIII. (f) - No impact: The project will generate very limited solid waste, and only during construction.

XVIII. (g) - No impact: The project would not result in a substantial increase in solid waste.

MITIGATION MEASURES: No mitigation required.

FINDINGS: The Project would have a No Impact on Utilities and Service Systems.

| a) Does the project have the potential to 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, 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 | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------|--------------|
| history or prehistory? Threshold of significance: Significant if the proposed project reduced the habitat of a fish, plants, or wildlife species, or caused a fish or wildlife species to decline below a self-sustaining population size. | | | | |
| 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). | | | | |
| Threshold of significance: Significant if the project, in combination with other recent, current, or foreseeable future projects, created a cumulatively considerable environmental effect for one or more of the environmental issue areas discussed in the checklist, even though the project itself did not. | | | | |
| c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? Threshold of significance: Significant if an element of the proposed project could be found to have a demonstrable opportunity of causing harm to individual human beings or groups. | | | | |

XIX. (a) – Less than significant impact: As documented in this Initial Study, the project would not 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; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.

- **XIX.** (b) Less than significant impact: As documented in Section IV (Biological Resources), the County considered the potential cumulative effects on the checkerbloom plant community at the airport, and concluded that checkerbloom are not present within the project area.
- **XIX.** (c) No impact: No evidence for direct or indirect impacts with the potential to cause substantial adverse effects on human beings were identified.

FINDINGS: The Project would have a Less than Significant Impact on Mandatory Findings of Significance.

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ATTACHMENT A

Visual Presentation (SERC, 2017)

Appendix 1- ACV Airport Microgrid Project Visual Presentation

This appendix presents various images, illustrations, and photos that will assist stakeholders and the general public in visualizing the proposed microgrid project at the ACV airport.

The first set of images was captured using Google Map. These current pictures (2017) show the existing site conditions throughout the project area. The next set of illustrations provide a three-dimensional view of the proposed microgrid system as sited in the project area. *Trimble SketchUp* was used to create a digital 3D model which was then geo-located into Google Earth Pro. The last set of photos are of solar farms that have been sited at existing airports throughout the world.

Existing Site Conditions



Image 1: Aerial view of the California Redwood Coast—Humboldt County Airport, with proposed project area outlined in green (Google Maps, 2017).



Image 2: Enlarged overhead view (from south) of the project area. Security perimeter fencing exists on the west side of the project area along Baadsgaard Ave and also along Airport Rd on the southern end of the area (Google Maps, 2017).



Image 3: View from southeast corner of project area. As shown, the site consists of a grassy field with some brush on the southern end and trees along the southern border (Google Maps, 2017).



Image 4: View (from west) of the existing old parking lot in northern section of the project area. The south end of the lot (right side of photo) will be the future location for the proposed facility (Google Maps, 2017).

Model Views of Proposed Project



Illustration 1: Aerial view of the project area (from south) showing the proposed system.



Illustration 2: Aerial view of facility from the northwest enclosed in the existing and new perimeter security fence.



Illustration 3: Lower elevation view of the new facility. The microgrid includes a photovoltaic system, a battery energy storage system, a coordinated electrical house and electrical switchgear (transformers and distribution cabinets).

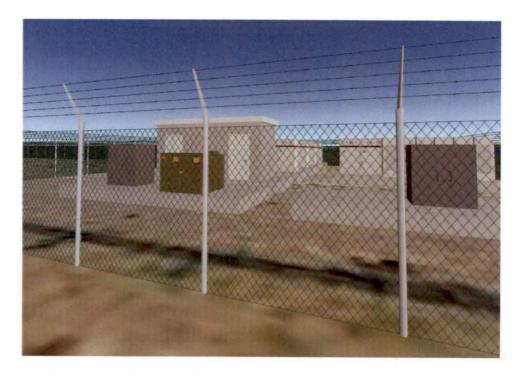


Illustration 4: Street view of the new facility. System equipment and civil work (e.g. concrete slabs) are scaled to the approximated size and includes components identified in the preliminary engineering design work submitted for funding.

Photovoltaic Systems at other Airports



Photo 1: Darwin International Airport, Australia (Image from Palisade Partners.)



Photo 2: Thunder Bay Airport, Ontario, Canada (Image from Recharge News.)



Photo 3: Indianapolis International Airport, Indiana (Image from Solarchoice.)

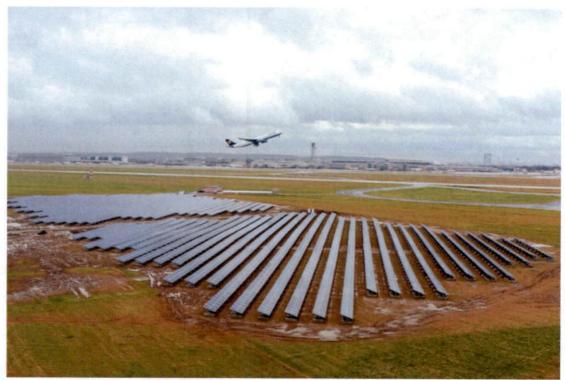


Photo 4: Dusseldorf International Airport, Germany (Image from Aviationpros.)

ATTACHMENT B

Checkerbloom Survey Maps



California Department of Fish and Game, U.S. Fish and Wildlife Service, and Humboldt County Public Works, Aviation Division Sidalcea oregana ssp. eximia Survey, Arcata-Eureka Airport

June 2009 and October 2010

October 2010 Survey, small occurrence

June 2009 Survey, small occurrence

October 2010 Survey
June 2009 Survey

0.25



Coast Checkerbloom "Clear Zone" near Runway 32, Arcata-Eureka Airport

Data collected June 3, 2009 (Humboldt Co. DPW / Suzanne Isaacs)

Legend

 Coast Checkerbloom Occurrence (Individual or cluster)

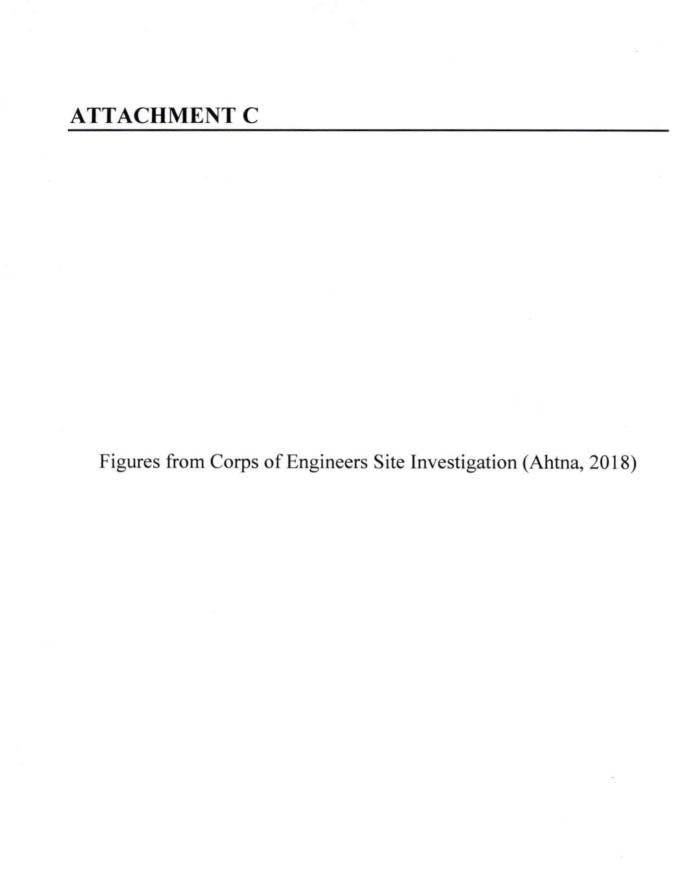


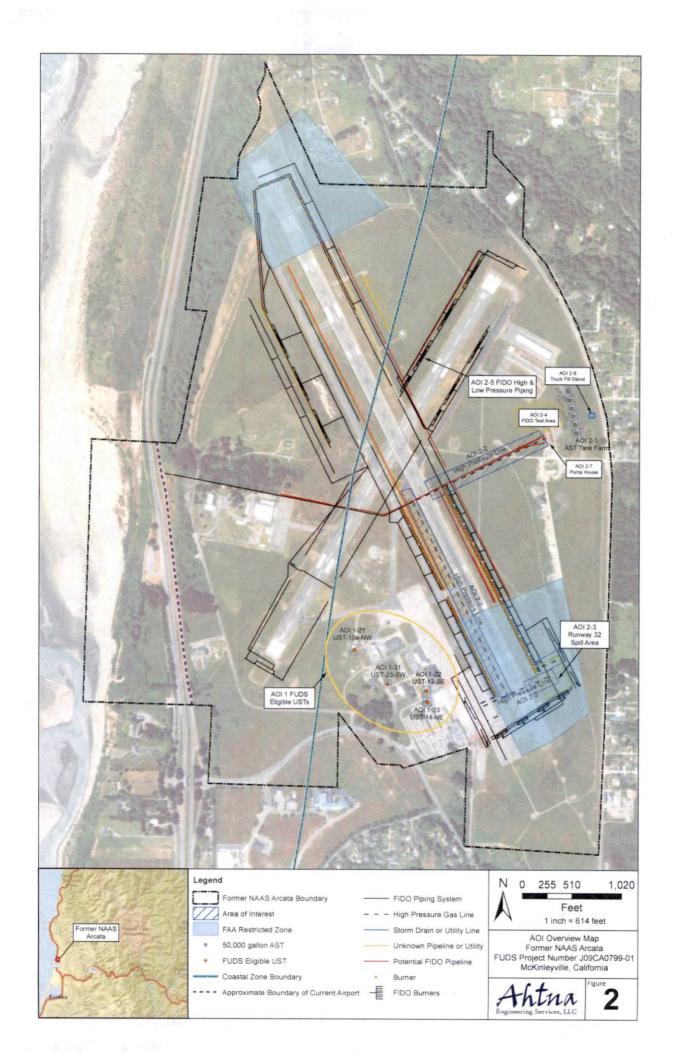
0.00308.016.026.0320.04

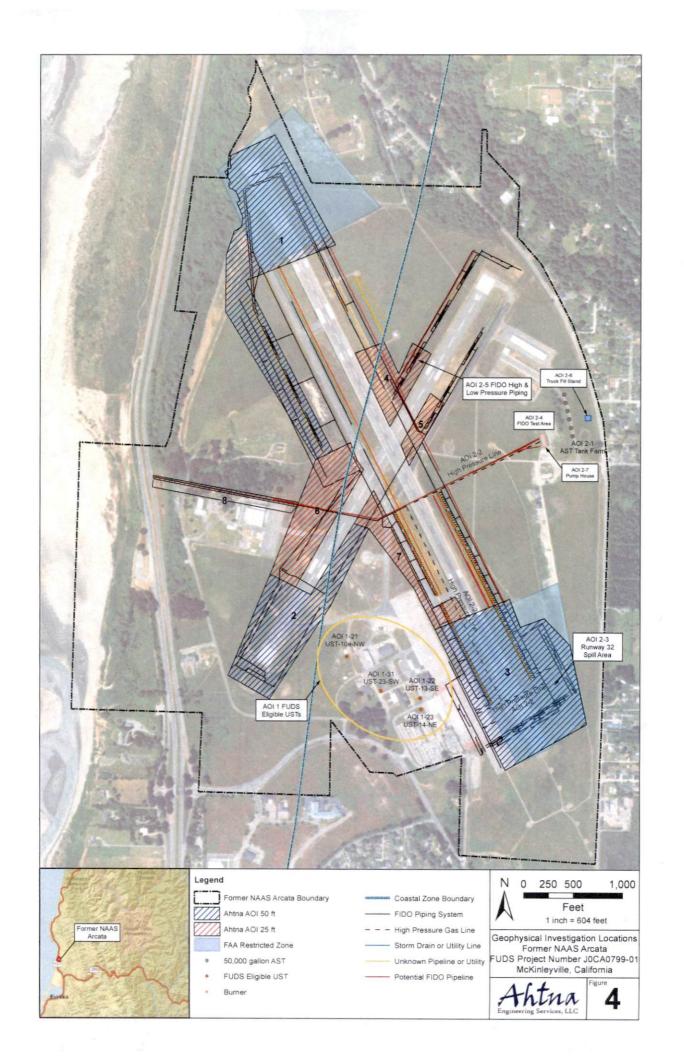


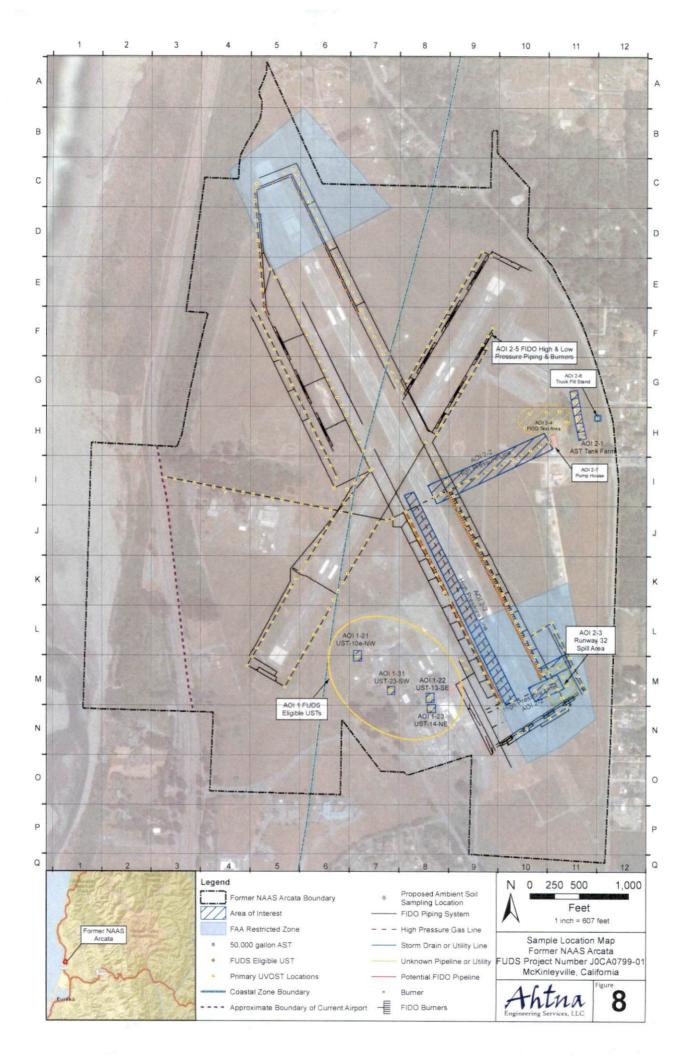
1 inch equals 250 feet













ATTACHMENT D

Mitigation Monitoring and Reporting Program

Appendix D Mitigation Monitoring and Reporting Program ACV Airport Microgrid Project

| Environmental Factor | Mitigation Measure | Implementation Responsibility | Monitoring/ Reporting Responsibility | Timing |
|-------------------------|---|----------------------------------|--|------------------------|
| Biological Resources | Mitigation Measure BIO-1: SERC will attempt to remove trees and other vegetation that could potentially contain nesting birds outside the bird nesting season (March 15 to August 15). If vegetation removal occurs outside the bird nesting season, no further mitigation is necessary. If vegetation removal occurs between March 15 and August 15, SERC shall have a qualified wildlife biologist conduct preconstruction surveys within the vicinity of the impact area, to check for nesting activity of native birds. The biologist shall conduct a minimum of one preconstruction survey within the seven-day period prior to vegetation removal activities. If vegetation removal work lapses for seven days or longer during the nesting season, a qualified biologist shall conduct a supplemental avian survey before project work is reinitiated. If an active nest is found, the biologist will determine the extent of an appropriate construction-free buffer zone to be established around the nest and/or operational restrictions in consultation with the California Department of Fish and Wildlife. Buffer zones will be delineated with flagging and maintained until the nests have fledged or nesting activity has ceased. | SERC | County of Humboldt | Prior to construction |
| Cultural Resources | Mitigation Measure CULT-1: The County and SERC will contact representatives of the Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and the Wiyot Tribe at least two months prior to the start of construction and offer the opportunity to monitor ground disturbing activities that will penetrate deeper than one foot below ground surface. If cultural materials (e.g., chipped or ground stone, historic debris, building foundations, or bone) are discovered during ground-disturbance activities, work within 20 meters (66 feet) of the discovery shall be stopped, per the requirements of CEQA (Title 14 CCR 15064.5 [f]). Work near the archaeological find(s) shall not resume until a professional archaeologist, who meets the Secretary of the Interior's Standards and Guidelines, has evaluated the materials and offered recommendations for further action. Any identified cultural resources will be recorded on DPR 523 historic resource recordation forms, from the Office of Historic Preservation. If Native American archaeological remains are inadvertently encountered, the Tribal Historic Preservation Officers (THPOs) of the three recognized Wiyot-area tribes (Blue Lake Rancheria, Bear River Band of Rohnverville Rancheria, and Wiyot Tribe) will be immediately notified, permitted to observe the findings in the field, and afforded the opportunity to make recommendations for avoiding, minimizing, or mitigating impacts from the proposed development. | SERC | County of Humboldt | During construction |

March 27, 2018

| Cultural Resources | Mitigation Measure CULT-2: If human remains are discovered during project construction, work within 20 meters (66 feet) of the discovery location, and within any nearby area reasonably suspected to overlie human remains, will cease (Public Resources Code, Section 7050.5). The Humboldt County Coroner will be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of the California Native American Heritage Commission (NAHC) (Public Resources Code, Section 5097). In this case, the coroner will contact NAHC. The descendants or most likely descendants of the deceased will be contacted, and work will not resume until they have made a recommendation to the landowner or person responsible for excavation work with direction regarding appropriate means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98. | SERC | County of Humboldt | During construction |
|-----------------------|--|------|-----------------------|------------------------|
| Noise | Mitigation Measure NOISE-1: The County and SERC will implement the following provisions to minimize impacts of groundborne vibrations and noise on adjacent residents: Pile driving will be limited to between the hours of 8:00 am to 5:00 pm, Monday through Friday. SERC will select pile driving equipment that generates the least amount of vibration and noise while still meeting the project specifications. To the extent feasible, SERC will incorporate noise suppression devices and/or techniques during pile driving. SERC will estimate the generation of ground-borne vibration levels resulting from pile driving. If the vibration levels have the potential to exceed 0.2 in/sec ppv at adjacent buildings, SERC will monitoring pile driving vibration levels during construction to ensure vibrations do not exceed 0.2 in/sec ppv. The County or SERC will notify occupants of residents located within 200 feet of pile-driving activities of the project construction schedule in writing, at least four weeks prior to the commencement of construction. | SERC | County of Humboldt | Prior to construction |