

## Project Information

- 1. Project Title:** Van Duzen Storage Project
- 2. Lead Agency Name and Address:** Humboldt County Planning and Building Department  
3015 H Street  
Eureka, CA 95501
- 3. Contact Person and Phone Number** Steve Werner, 268-3726
- 4. Project Location** The Project is located north of State Route 36 and adjacent to and east of the existing Pacific Gas & Electric Bridgeville Substation within the unincorporated community of Bridgeville in Humboldt County on Accessor Parcel Number 207-074-027-000 and 207-311-002.
- 5. Project Sponsor's Name and Address** Van Duzen Storage, LLC  
11455 El Camino Real, Suite 160  
San Diego, CA 92130
- 6. General Plan Designation** Rural Residential Agriculture (RA40)
- 7. Zoning** Unclassified

### 8. Description of Project

The project consists of two major components, the battery energy storage system (BESS) and upgrades to the existing PG&E Bridgeville substation. Further description is provided in the "Proposed Project" section below.

### 9. Surrounding Land Uses and Setting

The Project would occupy up to 4.0 acres within a single parcel of about 73 acres; the proposed battery storage system would require up to 2.0 acres, and the Bridgeville Substation upgrades would require up to 2.0 acres. Existing land uses surrounding the Project site include State Highway 36; an entry road, occupied residence, an electric substation, and a 1.50-acre Caltrans Highway Maintenance Station; two small abandoned structures; discarded vehicles and assorted machinery; and forested uplands.

### 10. Other Public Agencies Whose Approval May Be Required (e.g., permits, financing approval, or participation agreement.)

The Project would require the discretionary approval by Humboldt County of a Conditional Use Permit, Special Permit and Lot Line Adjustment. The Project could also require later administrative or ministerial approvals (e.g., grading permit, building permit, electrical permit, fire permit). PG&E upgrades to the substation would require authorization by the California Public Utilities Commission (CPUC) pursuant to General Order 131-D. A less than 3-acre conversion exemption is anticipated from CAL FIRE.

**11. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

A request for tribal consultation pursuant to Public Resources Code section 21080.3.1 (AB 52) was sent to the Bear River Band of the Rohnerville Rancheria on March 25, 2019. Bear River Band is the only Tribe known to be culturally affiliated with the project site. Government to government tribal consultation with the Bear River Band of the Rohnerville Rancheria Tribal Council and the County occurred on March 26, 2019. Concerns were expressed regarding cultural resources known to be present at the project site, however the site was not identified as a Tribal Cultural Resource. A site visit was conducted with the Bear River Band Tribal Historic Preservation Officer, County staff, and project agent on April 1, 2019.

## **1.0 PROJECT DESCRIPTION**

### **1.1 LOCATION**

The Project is located north of State Route (SR) 36 and adjacent to and east of the Pacific Gas & Electric (PG&E) Bridgeville Substation, within the unincorporated community of Bridgeville in Humboldt County on Accessor Parcel Number 207-074-027-000 and 207-311-002-000 (Figure 1). The Van Duzen River is west of the PG&E Bridgeville Substation.

### **1.2 EXISTING CONDITIONS**

The Project site is located in rural, unincorporated Humboldt County, east of Bridgeville, California. The Project area consists primarily of forested upland dominated by redwood and Douglas-fir forests, with adjacent substation, bare ground, and two abandoned structures and discarded vehicles and machinery. Nearby areas are used for a variety of rural agriculture including timber production, cattle grazing, and various forms of cultivation. The topography is relatively level near the existing substation then sloping up to the northeast, and above the elevation of the Van Duzen River, which is located west of (and separated from the Project by) the Bridgeville Substation.

The existing Bridgeville Substation, located at 26380 SR 36, is a 115-kilovolt (kV) substation on a 1.0-acre parcel (APN 207-311-002-000) with perimeter fencing. The height of the substation is approximately 50 feet. Two transmission lines, including the Humboldt-Bridgeville 115kV line and the Bridgeville-Cottonwood 115kV line, connect to the substation from the north and are approximately 80 feet in height. The substation is accessed by a paved road from SR 36 that is 18 feet wide. A Caltrans maintenance yard is located adjacent to the substation accessed via the same road. A single family residence is located to the south of the substation and maintenance yard, also accessed via the same road.

### **1.3 PROJECT PURPOSE AND NEED**

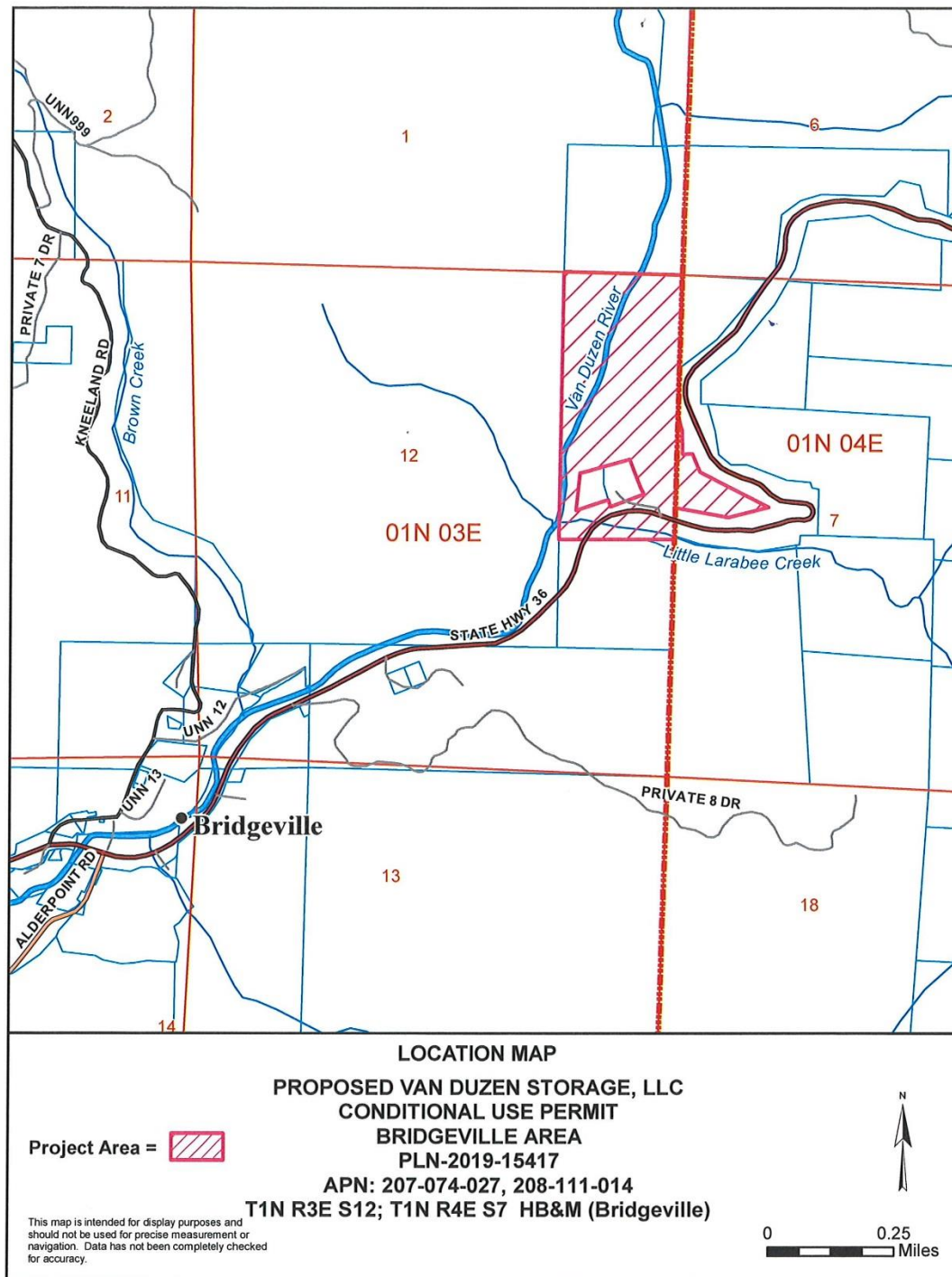
Battery energy storage provides a means to increase use of renewable forms of energy generation. By storing energy that is generated at off-peak times (i.e., when there is less demand for energy) batteries provide a ready source of power that can be deployed by the California Independent System Operator at times of higher demand. The benefits also include grid efficiency, energy cost savings, energy redundancy, fewer service disruptions, and reduced greenhouse gas emissions that would otherwise be associated with gas-fired power generation.

The Project as proposed would be able to produce 10 megawatts (MW) for 4-hours, providing increased energy capacity and energy stability to the local grid. The Project's location adjacent to the Bridgeville Substation minimizes the amount of disturbance and infrastructure required to connect the Project to the PG&E transmission system. The substation upgrade is required to connect the battery storage project to the electric grid.

The Project would be located on one privately-owned parcel in Humboldt County (Figure 1). This Draft IS/MND was prepared to evaluate the Project for potential environmental effects in compliance with CEQA. Humboldt County is the lead agency under CEQA and has the principal responsibility for approving the project. This document has been

prepared in accordance with CEQA, Public Resources Code Section §21000 et seq., and the State CEQA Guidelines, California Code of Regulations (CCR), Title 14, Section §15000 et seq.

**Figure 1. Location Map**



## 1.4 PROPOSED PROJECT

The project consists of two major components, the battery energy storage system (BESS) and upgrades to the existing PG&E Bridgeville substation.

### 1.4.1 Battery Energy Storage System

The BESS portion of the project would consist of 20 containers, each measuring 53 feet long, 8.5 feet wide, and 9.5 feet tall, and each containing batteries capable of 2 megawatt hours (MWh) of energy storage; the Project would thus provide 40 MWh of energy storage. The Project would support the California Independent System Operator grid by providing a standalone battery system that would provide energy and ancillary services for up to at least 4 hours. The Project would be located adjacent to the existing Pacific Gas & Electric (PG&E) Bridgeville Substation, and would require up to 2.0 acres.

The BESS would be composed of Lithium (Li)-ion batteries (i.e., cells) arranged into modules, which in turn would be stored in battery racks. The racks would be entirely housed within containers. The Project would include 20 containers, each measuring 53 feet long by 8.5 feet wide by 9.5 feet tall. Each container will house arrays of Li-ion batteries capable of providing 2 megawatt hours (MWh) of energy storage, for a total of 40 MWh for the Project (Table 1-1).

The batteries, containers, transformers, power distribution center (PDC), and power conversion system (PCS) would be inside a fenced area and locked gate. The area within the enclosure would be surfaced with compacted gravel. The 20 containers inside the enclosure would each be placed on 8 cast-in-place reinforced concrete piers (i.e., footings) of about 2 feet in diameter, extending about 48 inches below grade, and rising 4 to 6 inches above the ground surface. The footings would be located at each corner and two pairs of evenly spaced footings would be at opposite sides located along the long axis at the one-third points of the container. The auxiliary equipment would be mounted on individual reinforced concrete foundations sized for the equipment (Figure 2). Each container would have a heating, ventilation, and air conditioning (HVAC) unit within the container. An inverter with a battery management system and container control system would be installed externally on a concrete pad next to each container. One step-up transformer would be associated with each pair of containers and would be installed alongside the containers on a separate concrete pad (Table 1-1).

**Table 1-1. Van Duzen Storage Project BESS Component Dimensions**

Battery Storage System Component	Number	Height (feet)	Width (feet)	Length (feet)	Foundation Design	Foundation Surface Area (feet <sup>2</sup> )	Excavation Volume (cubic yards)
Energy Storage Project Enclosure	20	9.5	8.5	53	Concrete footings (8 per unit), 2 ft diameter, 4 to 6 inches above grade, 18 inches below grade	NA	2
Power Conversion System (PCS)	10	9	11	5	Concrete pad, 11 ft by 5 ft, 4 to 6 in above grade, 18 in below grade	55	7
Step Up Transformers	10	9	11	5	Concrete pad, 11 ft by 5 ft, 4 to 6 in above grade, 18 in below grade	55	7
Power Distribution Center (PDC)	1	10	14	14	Concrete pad, 4 to 6 in above grade, 18 in below grade	196	20
12,500 kVA <sup>1</sup> Main Transformer	1	20	20	20	Concrete pad w/retainment, 4 to 6 in above grade, 48 in below grade	400	1500
75 kVA Auxiliary Transformer (Mounted in PDC)							
15kV Switchgear (Mounted in PDC)							
Cable Trench	NA	2	2	350		NA	50

<sup>1</sup> kV = kilovolt; kVA = kilovolt-ampere

The Project site would require vegetation clearing and grading to level the terrain for pads. Excavation would be required for the concrete footings, electrical conduit banks, PDC, PCS, and transformer pads. Additional external features (civil, structural, and electrical) include two pad-mounted low-voltage transformers located in the battery storage system walled area adjacent to the battery containers and low-voltage yard lights to illuminate the battery storage equipment when needed during nighttime hours. Collection is by overhead 115 kV gen-tie on wooden poles to the point of interconnection.

The main components of the BESS are (Figure 2):

- Batteries:** Li-ion cells are assembled either in a series or a parallel connection in sealed modules. The cells would have an operating direct current (DC) voltage ranging between 2 and 6 volts, while the battery modules would have a DC voltage ranging between 40 and 60 volts. The battery modules would be installed in self-supporting racks electrically connected in a series or parallel to each other. The operating rack-level DC voltage would range between 700 and 1,000 volts. The individual battery racks would be connected in series or parallel configuration to deliver the battery storage system energy and power rating.

- **Battery Storage System Enclosure and Controller:** The battery storage system enclosure would house the batteries described above, as well as the battery storage system controller. The battery storage system enclosure would also house required HVAC and fire protection systems.
- **Power Conversion System:** The PCS would consist of an inverter, protection equipment, DC and alternating current (AC) circuit breakers, filter equipment, equipment terminals, and connection cabling system. Electricity would be transferred from the existing power grid to the Project batteries during a battery charging cycle and from the Project batteries to the power grid during a battery discharge cycle. The PCS would convert electric energy from AC to DC when the energy is transferred from the grid to the battery and from DC to AC when the energy is transferred from the battery to the grid.
- **Step-up Transformer:** The transformer would be pad-mounted and would transform the output of the PCS to medium AC voltage (15 kV) to increase the overall efficiency of the battery storage system and protect the PCS in case of electrical faults. One or more PCS units would be connected to the step-up transformer in a three-winding configuration.
- **Medium Voltage Switchgear:** The medium voltage switchgear would be mounted in the PDC and provide a feeder breaker for the battery storage system and provide the required level of protection during electrical faults in the system.
- **Auxiliary Transformer:** The auxiliary transformer would be mounted in the PDC, powered from the 15-kV switchgear, and provide all auxiliary power to the battery storage system.
- **Access Road:** A 16-foot wide access road that would extend from the existing access road (approximately 300 feet).
- **Stormwater facilities:** Stormwater facilities including a stormwater detention berm and basin and concrete spillways are included in the design. Retaining walls would be also be constructed.



Figure 2. Site Plan

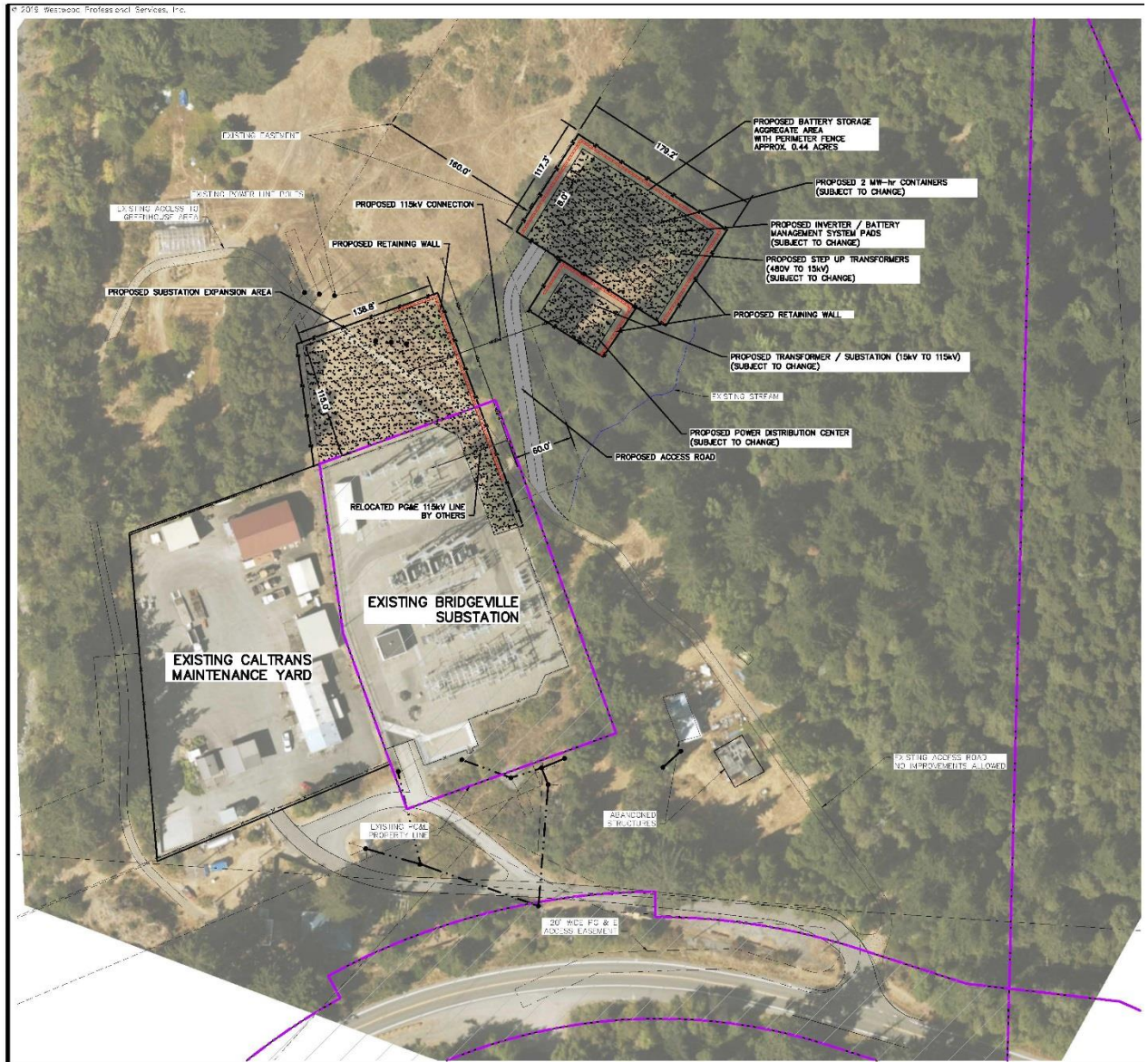




Figure 3. PG&E Substation Upgrades



## 1.4.2 PG&E's Bridgeville Substation Upgrades

The Bridgeville Substation is part of PG&E's existing 115-kV transmission system and is located between the Cottonwood Substation to the east and the Humboldt Substation to the west. Bridgeville is currently configured as a 115/60/12-kV substation, which connects local distribution lines to PG&E's 115-kV and 60-kV transmission system. The Project includes upgrades to the existing PG&E Bridgeville 115kV Substation to accommodate interconnection of the BESS to the grid including an expansion area, pad, fence, building expansion, infrastructure, and overhead lines (Figure 3).

PG&E Substation upgrades include:

- **Substation Expansion:** The existing substation graveled pad would be extended to the north and east requiring approximately 2.0 acre of clearing and grading and installing new perimeter fencing. New electrical equipment at the existing substation will be installed, including new circuit breakers, bus structures, metering and control equipment, 115 kV disconnect switches, instrument transformers, remote supervisory control and data acquisition equipment, telemetering equipment, an electric grounding system, and underground conduits or trench systems. A new battery building will be installed and measure up to 30 feet in length and up to 16 feet in width to accommodate required equipment. A new perimeter fence will be installed surrounding the substation expansion area. A new retaining wall would be installed along the eastern boundary of the expansion area.
- **Power Line Reconfiguration:** Modifications to the existing Humboldt-Bridgeville 115kV line and the Bridgeville-Cottonwood 115kV line entering and exiting the Bridgeville Substation may be required to interconnect the BESS. During construction, a temporary line (3 temporary "shoo-fly" deadend poles) up to 200 feet long and up to 75 feet above grade may be needed to maintain electrical service while substation upgrades are completed. The new Cottonwood 115kV line would be constructed, including a new terminal (i.e., interconnection point), dead-end structures (which prevent a power failure from spreading), and associated foundations, conduit and grounding systems. The transmission line work will include installation of up to 12 new intermediate transmission structures including a switch pole, tubular steel poles, and 3-pole light duty steel structures, and 3 temporary shoo-fly dead-end poles, and associated conductor for the Cottonwood 115kv line terminal reroute.
- **Telecommunications Upgrades:** Upgrade communications equipment at Bridgeville by installing approximately 1,000 feet of fiber optic cable from the expansion area using existing 115kV structures.

The electrical equipment in the Substation Expansion area will be similar to equipment at the existing Bridgeville Substation and may include:

- A control or battery building installed on a concrete foundation
- A stormwater retention basin
- Circuit breakers and switches
- Voltage transformers on concrete foundations
- Approximately eight 115 kV steel dead-end structures
- Busbar (a conducting bar that carries heavy currents to supply several electric circuits)
- Protection facilities

- Capacitor banks
- Telecommunications links (e.g., fiber optic cables)

### **Substation Expansion Safety and Security**

Site access exists to the PG&E Bridgeville Substation via an unnamed road exiting from and to the north of SR 36. The substation expansion would be fenced and have access secured by a locked gate. It would be surrounded by an up-to 10-foot high chain-link and barbed wire or similar security fence and be accessible only by PG&E staff.

### **Access Roads**

There is an existing access road to the substation from SR 36 (Figures 2 and 3) which may be improved with geotextile fabric, capping rock, or both, but no grading or blading would be done to this road. No new access roads would be required for the expansion of the existing substation.

### **Signage**

PG&E would install signage as required by the California Public Utilities Commission (CPUC) and any other entities with jurisdiction.

### **Operations & Maintenance**

PG&E's O&M at the expanded substation would not change from that at the existing substation.

### **Construction Description**

Construction of the substation expansion would be completed in a phased approach beginning with site preparation and grading of the site, then installing foundations and underground equipment, and lastly installing and testing of electrical equipment. Site preparation would involve grubbing, clearing and grading of the substation expansion footprint as well as installing the security fencing. Underground equipment, if necessary, would be installed in trenches, backfilled with suitable material (e.g. excavated soil or clean fill). Substation equipment would be installed on concrete foundation. Equipment typically used for the substation expansion may include but is not limited to cranes, excavators, forklifts, generators, water trucks, pavers, graders, rollers, and scrapers. Construction of the substation expansion is anticipated to take approximately 12 months.

Construction of the PG&E upgrades to the substation would generally occur as follows:

- 1) Bridgeville Substation expansion including site compaction and gravel, excavating footings and pads, pour-in-place concrete footings and pad foundations
- 2) Bridgeville-Cottonwood 115 kV line relocation including staging of equipment, installing of TSPs
- 3) Install new equipment on graveled pad
- 4) Complete Project interconnection and energization; testing

A wind energy project (Humboldt Wind) is currently proposed for development. The proposed Humboldt Wind project would include up to 60 wind turbines approximately 25 miles to the west from the Van Duzen Storage Project along Bear River Ridge and Monument Ridge. The Humboldt Wind project would connect to the Bridgeville substation via a gen-tie line that would roughly follow Shively Road. Although the Humboldt Wind Project and the Van Duzen Storage Project would both connect to the PG&E transmission system via the Bridgeville Substation, they are separate projects with independent utility. The Humboldt Wind Project is being separately considered by the County and a Draft EIR has been prepared for that project.

### 1.4.3 Avoidance and Protection Measures

As part of the construction and operation of the facilities, the project proponents would observe the following Avoidance and Protection Measures (APMs). These are applicant proposed measures that are part of the project description and implementation is compulsory.

**APM Aesthetics-1:** Security lighting will be designed and positioned to minimize casting light and/or glare to off-site locations.

**APM Air-1:** All ground-disturbing activities will be effectively controlled of fugitive dust emissions by application of water or by presoaking.

**APM Air-2:** When materials are transported off site, all material will be covered or wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.

**APM Air-3:** Speeds of vehicles and equipment operating on unpaved surfaces will be limited to no more than 15 miles per hour, and as required in the Project dust control permit.

**APM Air-4:** Minimize unnecessary idling time through application of a “common sense” approach to vehicle use—if a vehicle is not required immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a “common sense” approach to vehicle use.

**APM Air-5:** Maintain construction equipment in good working order.

**APM Air-6:** Minimize construction equipment exhaust by using low-emission or electric construction equipment where feasible. Portable diesel fueled construction equipment with engines 50 horsepower (hp) or larger and manufactured in 2000 or later will be registered under the California Air Resources Board (CARB) Statewide Portable Equipment Registration Program or shall meet at a minimum U.S. Environmental Protection Agency (USEPA)/ CARB Tier 1 engine standards.

**APM GHG-1:** Diesel fueled off-road construction equipment with 50 hp or greater engines shall meet USEPA/CARB Tier 1 engine standards. This APM is not applicable to equipment permitted by the local air quality district or certified through CARB’s Statewide Portable Equipment Registration Program, or single specialized equipment that will be used for less than five total days.

**APM GHG-2:** Incorporate the following measures into its construction plans to further reduce greenhouse gas emissions:

- Encourage construction workers to carpool by establishing carpooling to construction sites where feasible to do so.
- Encourage recycling of construction waste.
- Minimize welding and cutting by using compression of mechanical applications where practical and within standards.

**APM GHG-3:** Be an active member of the SF<sub>6</sub> Emission Reduction Partnership, which focuses on reducing emissions of sulfur hexafluoride (SF<sub>6</sub>) from transmission and distribution sources. Accurately monitor equipment for SF<sub>6</sub> leaks and immediately repairing leaks that are discovered. All breakers purchased for this Project will have a manufacturer's guaranteed SF<sub>6</sub> leakage rate of 0.5 percent per year or less.

**APM Bio-1:** Conduct on-site environmental training to aid workers in recognizing and avoiding sensitive, protected, or special-status plant and wildlife species that may occur in the Project area and have some potential to be impacted by construction of the Project.

**APM Bio-2:** All work will be done in a manner that minimizes disturbance to wildlife and habitat.

**APM Bio-3:** Revegetate areas of disturbed soil with appropriate species.

**APM Hazards-1:** Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.

**APM Hazards-2:** Emergency spill response and cleanup kits will be available on site and readily available for the cleanup of any accidental spill. Construction crews will be trained in safe handling and cleanup responsibilities prior to the initiation of construction.

**APM Hazards-3:** Implement best management practices (BMPs) for storage and handling of hazardous materials during construction.

**APM Water-1:** Implement BMPs for erosion control during construction.

## 1.5 CONSERVATION MEASURES

The Project was designed to occupy the smallest area possible and to be as close to the existing Bridgeville Substation as is feasible, which will minimize direct and indirect adverse environmental effects, temporary and permanent impact areas, space use, and materials required.

## 1.6 SCHEDULE

Construction activities for the Project would generally occur as follows:

- 1) Pre-construction survey to confirm absence or adequate avoidance of any sensitive resources
- 2) Equipment staging
- 3) Use of stormwater BMPs (e.g., silt fences, straw wattles, or gravel bags; covering stockpiled soil) to contain soil and runoff onsite consistent with the Project's grading and stormwater permits

- 4) Preparation of driveway and equipment foundations by removing existing vegetation; grading
- 5) Site compaction and gravel
- 6) Excavating footings and pads
- 7) Pour-in-place concrete footings and pad foundations
- 8) Install below-ground conduit banks
- 9) Install PCS, PDS, and pad-mounted transformers
- 10) Install below-ground and above-ground conduit to existing PG&E utility poles
- 11) Install safety features and security lighting
- 12) Cleanup and demobilize Project site
- 13) Conduct operator orientation and training

Construction of the PG&E upgrades to the substation would generally occur as follows:

- 1) Bridgeville-Cottonwood 115 kV line relocation including staging of equipment, installing of TSPs
- 2) Bridgeville Substation expansion including site compaction and gravel, excavating footings and pads, pour-in-place concrete footings and pad foundations
- 3) Install new equipment on graveled pad
- 4) Complete Project interconnection and energization; testing

## **1.7 REQUIRED PERMITS AND APPROVALS**

The Project would require the discretionary approval of a Conditional Use Permit, Special Permit and Lot Line Adjustment by Humboldt County and subsequent administrative or ministerial approvals (e.g., grading permit, building permit, electrical permit, fire permit). The Project would also require several environmental permits, including a discharge permit under the National Pollutant Discharge Elimination System (NPDES) through the Clean Water Act and a Spill Prevention, Countermeasure, and Control Plan (SPCCP). Any upgrades to the Bridgeville Substation will require authorization from the CPUC pursuant to General Order 131-D. A less than three- acre conversion exemption is required from CAL FIRE





## **2.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES**

This chapter incorporates the Environmental Checklist contained in Appendix G of the CEQA Guidelines, including the CEQA Mandatory Findings of Significance. Each resource section provides a brief description of the setting, a determination of impact potential, and a discussion of the impacts. Where appropriate, mitigation measures are provided that would be used by the County to reduce potential impacts to a less than significant level. A discussion of cumulative impacts is included at the end of this chapter.

Addressed in this section are the 18 environmental categories listed below and mandatory findings of significance.

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance



Each of these environmental categories was fully evaluated and one of the following four impact determinations was made:

- **No Impact:** No impact to the environment would occur as a result of implementing the proposed project.
- **Less than Significant Impact:** Implementation of the proposed project would not result in a substantial and adverse change to the environment and no mitigation is required.
- **Less than Significant with Mitigation Incorporated:** A “significant” impact that can be reduced to a less than significant level with the incorporation of project-specific mitigation measures.
- **Potentially Significant Impact:** Implementation of the proposed project could result in an impact that has a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (CEQA Guidelines Section 15382).

## 2.1 ENVIRONMENTAL SETTING

Humboldt County is within the Klamath/North Coast bioregion and features a rocky coastline, and montane forests. Cool, moist climate is typical on the coast but becomes progressively drier, warmer, and more variable but remaining mild inland. Humboldt County features several biological communities; the most abundant is coniferous forest comprised of Douglas-fir, redwood, and pine forests, followed by oak woodlands, and grasslands. Less abundant habitats include coastal beach dune vegetation, northern coastal scrub, chaparral, salt marsh, riparian, and freshwater marsh. Humboldt Bay, located approximately 30 miles northwest of the Project, is the second largest estuary in California. As such, Humboldt Bay and the Humboldt County coast have high biodiversity and support many species of resident and migratory wildlife with high seasonal and year-round abundance. Numerous rivers run through the county, providing habitats for fish and wildlife as well as important water resources.

Humboldt County spans two geologic provinces. The Coast Ranges Province in the county’s center and southwest is comprised of mainly the Franciscan Complex, with schists, sand, and other alluvial deposits associated with the coast. The Klamath Mountains Province in the northeast features older sedimentary rock including sandstone, chert, slate, and schist.

The average July temperature in Humboldt County is typically in the 60s (Fahrenheit). While rain can occur throughout the year, about 90% of the annual rain results from Pacific Ocean storms and falls between October and April. Seasonal totals average more than 40 inches in the driest areas and exceed 100 inches in the wettest zones. Moisture and moderate temperature combined create high average relative humidity.

The Project would occur on in rural, unincorporated Humboldt County, east of Bridgeville, California. The Project area consists primarily of forested upland dominated by redwood and Douglas-fir forests, with adjacent substation, bare ground, and unoccupied buildings that are currently used for storage. Nearby areas are used for a variety of rural agriculture including timber production, cattle grazing, and various forms of cultivation. The topography is relatively level, sloping up to the northeast, and above the elevation of the Van Duzen River, which bisects APN 207-074-027 and is located just west and north of the Bridgeville Substation.

## 2.2 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>I. AESTHETICS</b> — Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality??	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Existing Setting

The visual resources within the Project area includes montane, coniferous forests and small and sparsely populated settlements. The Project site is located adjacent to the Van Duzen River and SR 36. The Project would be built immediately adjacent to an existing substation (Figures 1, 2), and would add infrastructure similar to what is present within the substation.

Although no highways in the county are officially designated as California State Scenic highways, several state highways could be eligible for official designation, including SR 36 from Route 101 to the Trinity County Line (Humboldt County 2017), which passes by the Project site.

A portion of the Van Duzen River, located west and north of the Project site, is designated a Wild and Scenic River under the National and State of California Wild and Scenic Acts. The National Wild & Scenic Rivers Act (Public Law 90-542; 16 U.S.C. 1271-1287) of 1968 is the nation's primary river conservation law to protect the free-flowing character and outstanding values of rivers. The National Wild & Scenic Rivers Act calls for the protection of specific U.S. rivers that "possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values" (16 U.S.C. 1271, p. 1526). The California Wild & Scenic Rivers Act (Public Resources Code Sec. 5093.50 et seq.) was passed in 1972 to preserve designated rivers possessing extraordinary scenic, recreation, fishery, or wildlife values.

### Discussion of Impacts

- a. *Have a substantial adverse effect on a scenic vista?*
- b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

- c. *Substantially degrade the existing visual character or quality of the site and its surroundings?*
- d. *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

**Finding: No Impact**

A vegetated berm visually shields motorists on SR 36 from the existing substation and would also shield from the proposed Project. No reflective materials will be used in the construction of the proposed Project. APM Aesthetics-1 states that security lighting will be designed and positioned to minimize casting light and/or glare to off-site locations. The site does not contain any visually significant trees or rock outcroppings, and is not located near or within an airport, open space, park, or recreational area. Construction of the proposed Project, including the upgrades to the substation, would not substantially impact scenic vistas or scenic resources, would not act as a substantial source of light or glare, and would not degrade the visual character of the surrounding area. Therefore, there would be no impact from the proposed Project.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>II. AGRICULTURAL AND FOREST RESOURCES</b> — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Existing Setting

Land on which the Project would be built is zoned Unclassified under the Humboldt County Zoning Regulations and designated Rural Residential Agriculture (RA40) under the 2017 Humboldt County General Plan. The Project site is not located on Prime Farmland or Farmland of Statewide Importance and is not under a Williamson Act Contract.

## Discussion of Impacts

- a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

**Finding: No Impact**

The majority of the Project area is considered Other Land by the Farmland Mapping and Monitoring Program. Therefore, the proposed Project would not convert prime farmland, unique farmland, or farmland of statewide importance to nonagricultural use and there would be no impact

- b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

**Finding: No Impact**

Construction of an electric generating facility is allowed in the unclassified zone with the issuance of a Conditional Use Permit. The Project area is not currently under a Williamson Act Contract. Consequently, the Project would not conflict with existing zoning for agricultural use or a Williamson Act Contract. Therefore, there would be no impact from the proposed Project.

- c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

**Finding: No Impact**

The project site is zoned unclassified (U). According to Humboldt County Zoning Regulations, principally permitted uses for the U zoning district consist of residential and general agriculture. All other uses require the issuance of a Use Permit. The project site is not zoned TPZ or timberland and would not convert managed timberlands to non-timber use. Therefore, the proposed Project would not conflict with existing zoning or cause rezoning of forest land, timberlands or TPZ. No impact would occur.

- d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

- e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

**Finding: Less Than Significant Impact**

The Project would require tree removal and would permanently convert the area from being capable of producing timber in the future. However, this impact is less than significant because the site is zoned unclassified and not managed or zoned for timber production. A less than significant impact would occur.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>III. AIR QUALITY</b> — Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Existing Setting

The proposed Project is located within North Coast Air Basin (NCAB), which includes all of Humboldt, Del Norte, Trinity, and Mendocino counties and a portion of Sonoma County. The North Coast Unified Air Quality Management District (NCUAQMD) regulates air quality in the Humboldt, Del Norte and Trinity County portions of the NCAB.

Air pollution in the NCAB can be attributed to both human-related (anthropogenic) and natural (nonanthropogenic) activities. Air pollution from significant anthropogenic activities in the NCAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. Air pollution within the NCAB is also influenced by topographical and meteorological conditions.

The NCUAQMD is listed as "attainment" or "unclassified" for all the federal and state ambient air quality standards with the exception of the state 24-hour Particulate Matter (PM<sub>10</sub>) standard in Humboldt County only. The NCUAQMD has not exceeded the federal annual standard for particulate matter during the last five-year period. Primary sources of particulate matter generally 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.

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 NCUAQMD has not formally adopted significance thresholds, but rather utilizes the Best Available Control Technology (BACT) emission rates for stationary sources as defined and listed in the NCUAQMD Rule and Regulations, Rule 110, New Source Review and Prevention of Significant Deterioration. Accordingly, the proposed Project would be considered to have a

potentially significant impact if project-generated construction or operational emissions would exceed the BACT thresholds for the criteria pollutants of primary concern, as identified in Table 3-1.

The NCUAQMD does not have recommended significance thresholds for Toxic Air Contaminants (TACs) but recommends the use of the California Air Pollution Control Officers Association's guidance document: Health Risk Assessment for Proposed Land Use Projects (2009) for the evaluation of health risks associated with exposure to TACs. Accordingly, incremental increases in cancer risk that exceed 10 in one million or acute and chronic non-carcinogenic health impacts that exceed a hazard index threshold of one would be considered to have a potentially significant impact.

**Table 2-1. NCUAQMD Significance Thresholds**

Pollutant	Significance Thresholds	
	Daily (lbs./day)	Annual (tons/year)
CO	500	100
NOX	50	40
ROGs	50	40
PM <sub>10</sub>	80	15
PM <sub>2.5</sub>	50	10
SOX	80	40
Source: NCUAQMD 2015		

## Discussion of Impacts

a) *Conflict with or obstruct implementation of the applicable air quality plan?*

**Finding: Less than Significant Impact**

The NCUAQMD is listed as "attainment" or "unclassified" for all the federal and state ambient air quality standards with the exception of the state 24-hour PM<sub>10</sub> standard in Humboldt County only. As such, the NCUAQMD adopted the PM<sub>10</sub> Attainment Plan, which includes control strategies to reduce PM<sub>10</sub> emissions from various sources. Control strategies include transportation control measures such as encouraging the use of public transit and promotion of alternatively powered fleets and vehicles. Land use control measures encourage mixed use or more dense development. The PM<sub>10</sub> Attainment Plan also includes measures that limit residential burning as well as various measures to encourage the installation of USEPA certified woodstoves (NCUAQMD 1995 and 2018).

To assess the proposed Project's potential to obstruct implementation of an air quality plan, regional criteria pollutant emissions were analyzed. The primary pollutants of concern are particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Although the NCUAQMD is unclassified/attainment for ozone, maintenance of federal and state ambient air quality standards for ozone is imperative, thus ozone precursors reactive organic gases and nitrous oxides are also a concern.

Air quality modeling was performed using Project-specific details to determine whether the proposed Project would result in criteria air pollutant emissions in excess of the applicable thresholds of significance.



## Construction

The proposed Project's unmitigated construction emissions are shown in Table 3-2. All construction criteria air pollutant emissions would be below the NCUAQMD's thresholds of significance. The impact is less than significant.

**Table 2-2. Summary of Construction-Generated Emissions of Criteria Air Pollutants**

Year	Emissions					
	ROG	NOX	CO	SOX	PM10	PM2.5
Daily Emissions (lbs/day)						
2019	4.38	37.64	28.93	0.06	3.21	1.99
2020	2.02	12.53	12.49	0.03	1.59	0.79
Maximum Daily Emissions	4.38	37.64	28.93	0.06	3.21	1.99
Daily Significance Thresholds	50	50	500	80	80	50
Exceed Daily Significance Thresholds?	No	No	No	No	No	No
Annual Emissions (tons/year)						
2019	0.31	2.60	2.16	0.004	0.26	0.16
2020	0.07	0.47	0.47	0.001	0.06	0.03
Annual Significance Thresholds	40	40	100	40	15	10
Exceed Annual Significance Thresholds?	No	No	No	No	No	No
Notes:						
1. Daily Emissions from Winter Results						
2. Emissions were quantified using CalEEMod, version 2016.3.2 based on estimated construction requirements for the proposed Project.						
Source: Stantec Consulting Services Inc., CalEEMod 2016.3.2						

## Operations

Activities associated with the long-term maintenance of the Project would be minimal but would include regular maintenance of the facility. It was assumed that the Project would be maintained on a monthly basis. The long-term operational emissions are shown in Table 3-3. The emissions are less than the NCUAQMD's thresholds of significance. The impact is less than significant.

**Table 2-3. Summary of Operational Emissions of Criteria Air Pollutants**

Source	Emissions					
	ROG	NOX	CO	SOX	PM10	PM2.5
Daily Emissions (lbs/day)						
Operational	0.003	0.003	0.014	<0.0001	0.002	<0.001
Daily Significance Thresholds	50	50	500	80	80	50
Exceed Daily Significance Thresholds?	No	No	No	No	No	No
Annual Emissions (tons/year)						
Operational	<0.001	<0.001	0.002	<0.001	<0.001	<0.001
Annual Significance Thresholds	40	40	100	40	15	10
Exceed Annual Significance Thresholds?	No	No	No	No	No	No
Notes: 1. Daily Emissions from Winter Results Source: Stantec Consulting Services Inc., CalEEMod 2016.3.2						

- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

**Finding: Less than Significant Impact**

A cumulative impact analysis considers a project over time in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed. Air pollution is largely a cumulative impact. Humboldt County is in nonattainment for the state PM<sub>10</sub> standard. The nonattainment status is a result of past and present development, and, thus, cumulative impacts related to PM<sub>10</sub> could be considered cumulatively significant.

As shown in Table 3-2 and Table 3-3, the proposed Project's PM<sub>10</sub> emissions, including the substation upgrades, would not exceed the thresholds of significance established for this Project. In addition, the proposed Project would be required to comply with all applicable NCUAQMD rules and regulations. Therefore, the proposed Project's individual emissions would not be expected to result in a cumulatively considerable contribution to a significant cumulative impact, and impacts would be considered less than significant.

c) *Expose sensitive receptors to substantial pollutant concentrations?*

**Finding: Less than Significant with Mitigation**

PM<sub>10</sub> emissions would not exceed the thresholds of significance, nevertheless, the potential for localized PM<sub>10</sub> health impacts are a concern. Therefore, the proposed Project has incorporated APM Air-1, APM Air-2, and APM Air-3 requiring the implementation of BMPs to reduce potential fugitive dust impacts to a less than significant level. Construction activities have the potential to generate diesel particulate matter (DPM) emissions related to the number and types of equipment typically associated with construction. Off-road, heavy-duty diesel equipment used for site grading, paving, and other construction activities result in the generation of DPM. However, construction is temporary and occurs over a relatively short duration. Operation of construction equipment is regulated by federal, state, and local regulations, including the CARB and NCUAQMD rules and regulations, and occurring intermittently throughout the course of a day, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended interval would be low. In addition, APM Air-4, APM Air-5, and APM Air-6 would be implemented to reduce emissions generated from construction equipment. Therefore, it is not anticipated the proposed Project would expose sensitive receptors to substantial pollutant concentrations and impacts would be considered less than significant with mitigation incorporated.

The nearest sensitive receptor is an occupied residence approximately 420 feet from the project. Sensitive receptors would not be exposed to substantial pollutant concentrations with the implementation of mitigation measures.

d) *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

**Finding: Less than Significant Impact**

While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the NCUAQMD. The occurrence and severity of odor impacts depends on numerous factors, including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor. The nearest sensitive receptor in the vicinity of the proposed Project site would be the residence located approximately 420 feet away. The site is located in a rural area and there is not a concentration of sensitive receptors near to the site. Construction activities associated with the proposed Project could result in short-term odorous emissions from diesel exhaust associated with construction equipment. However, these emissions would be intermittent and would dissipate rapidly from the source. In addition, this diesel-powered equipment would only be present on site temporarily during construction activities. Therefore, construction would not create objectionable odors affecting a substantial number of people, and the impact would be less than significant.

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The proposed Project does not contain land uses typically associated with emitting objectionable odors. Therefore, it would not be considered to have the potential to expose persons to substantial sources of objectionable odors. Odors would primarily consist of the sporadic traveling of vehicles to the site and additionally from the use of equipment during facility maintenance. These occurrences would not produce a significant number of odors. The proposed Project would not create objectionable odors affecting a substantial number of people.

Therefore, operational impacts are less than significant.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>IV. BIOLOGICAL RESOURCES</b> — Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Existing Setting

Stantec biologists conducted a database and literature review that included a combination of data queries and a review of publicly available data, annual monitoring reports, local guides, scientific literature, and technical reports and environmental documents for other relevant projects, including the following resources:

- Trust Resources Reports and Species Lists generated from the U.S. Fish and Wildlife Service (USFWS) IPac (Information, Planning, and Conservation System) database summarizing federally listed species, critical habitat, and other biological resources potentially occurring in the Project area (USFWS 2018)
- National Marine Fisheries Service (NMFS) fish species data for locally occurring species

- Humboldt Redwood Company (HRC) (a large landowner of a well-studied property in the Project vicinity) spatial data and Annual Monitoring Reports prepared per the HRC Habitat Conservation Plan (HCP)
- A technical report associated with a previously proposed Bear River Wind Project (A Survey of Birds and Bats at a Proposed Wind Energy Site, Bear River Ridge, Humboldt County, California; McAllister and Fix 2008)
- Technical reports associated with the proposed Humboldt Wind Energy Project (Humboldt Wind Energy Project Wildlife Assessment; Humboldt Wind Energy Project Aquatic Resources Survey Report) (Stantec 2018a, b)
- U.S. Geological Survey (USGS) Breeding Bird Atlas Explorer (USGS 2014)
- Northwestern California Birds (Harris 2006)
- Online eBird records available at [www.ebird.org](http://www.ebird.org)<sup>1</sup>
- California Natural Diversity Database (CNDDDB) was queried for wildlife occurrences within the 7.5-minute USGS topographic quadrangle where the Project occurs and for all surrounding quadrangles<sup>2</sup> (CDFW 2018a).

### ***Vegetation and Habitat Types***

Stantec conducted surveys to characterize vegetation communities and describe the existing environment in the Project area. The southern portion of the Project area is dominated by disturbed, rural residential areas with low abundance of native trees such as Pacific madrone (*Arbutus menziesii*) and California bay laurel (*Umbellularia californica*). The understory is largely disturbed by rural residential activities (e.g., access roads) and is dominated by non-native vegetation including Himalayan blackberry (*Rubus armeniacus*) and herbaceous annual plants. The northern portion of the Project area is dominated by Douglas-fir (*Pseudotsuga menziesii*) forest with a disturbed understory including an access road and non-native vegetation.

The Van Duzen River, a tributary of the Eel River, runs west of the proposed Project site, and Little Larabee Creek runs south of the Bridgeville Substation and SR 36. Riparian habitat characterized as palustrine forested wetland is present along the banks of the Van Duzen River and Little Larabee Creek. The Project site is located approximately 500 feet east of the top of bank of the Van Duzen River, and a similar distance north of Little Larabee Creek and does not exhibit riparian vegetation.

### ***Special Status Plants***

Regionally occurring plant species of “special status” (i.e., those listed by the USFWS or California Department of Fish and Wildlife (CDFW) as threatened or endangered; species bearing other agency designations denoting heightened concern for conservation status; and, those appearing non non-government organization “watch” lists) were identified based on a review of pertinent literature, the USFWS species list, CNDDDB and California Native Plant Society database records, the vegetation community field survey results, and results of a 2019 botanical survey. For

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<sup>1</sup> eBird records for special-status bird species were reviewed, but, because they are citizen-science based, commonly highlight rarities, and do not reflect data from repeatable scientific sampling, they were used to guide the inclusion of a species in this report. Specifically, they were used to determine if a species might occur routinely enough in the Project area that it warranted mention.

<sup>2</sup> Bridgeville, Yager Junction, Showers Mountain, Larabee Valley, Blocksburg, Myers Flat, Weott, Redcrest, and Owl Creek USGS quadrangles

each species, habitat requirements were assessed and compared to the habitats in the Project area and immediate vicinity to determine if potential habitat occurs in the Project area. Based on the habitat assessment and the results of the vegetation community field survey, special-status plant species are not expected to occur in the Project area due to the disturbed nature of the habitats present.

### ***Special Status Wildlife***

Based on the results of literature and database reviews and field surveys, the following species have the potential to occur in the vicinity of the Project site:

- Pacific lamprey
- Southern Oregon/Northern California (SONCC) coho salmon Evolutionarily Significant Unit (ESU)
- Steelhead
- Coastal California (CC) chinook salmon
- Foothill yellow-legged frog
- Southern torrent salamander
- Western pond turtle
- Northern spotted owl (NSO)
- Northern goshawk
- Sonoma tree vole
- Ring-tailed cat

### **Pacific Lamprey**

Pacific lamprey (*Entosphenus tridentatus*), a species of special concern (SSC; a designation by CDFW), are anadromous fish that migrate from the ocean to rivers and streams where spawning occurs in gravelly habitats. The USFWS's data (Reid and Goodman 2017) includes the Van Duzen River and the Eel River as part of the species' current range including downstream of the portion of the Van Duzen River near the Bridgeville Substation.

### **Southern Oregon/Northern California Coho Salmon Evolutionarily Significant Unit**

The Southern Oregon/Northern California (SONCC) coho salmon (*Oncorhynchus kisutch*) ESU is a federally and state-threatened species and includes all populations of coho salmon in coastal streams from Oregon southward to, and including, the Mattole River (NMFS 2016a). SONCC coho salmon are anadromous, living as adults in ocean habitats and migrating into rivers and streams to spawn. Prime spawning habitat conditions generally occur near the head of a riffle, just below a pool, where suitable gravel substrate, water depths, temperatures, and velocities occur (Shapovalov and Taft 1954). During the summer, fry prefer shallow pools and riffles with cover such as large woody debris, undercut banks, boulders, and overhanging vegetation. During the winter, fry prefer to rear in large mainstem pools, backwater areas and secondary pools with woody debris, and undercut banks (NMFS 2014).

The USFWS Recovery Plan (National Oceanic and Atmospheric Administration [NOAA] 2014) for this species lists that its current distribution near the Project area includes Howe Creek and the Eel and the lower Van Duzen Rivers (but not adjacent to the Bridgeville Substation) and noted that 2011 spawning surveys documented 8 spawning individuals in Fish Creek, a tributary to Lawrence Creek and the Van Duzen River, downstream of the Bridgeville Substation. The recovery plan also noted that the Van Duzen River and lower reaches of Little Larabee Creek near the Project area were modeled to have some intrinsic potential to support this species.

### **Steelhead**

Both Northern California (NC) Steelhead Distinct Population Segment (DPS) (*Oncorhynchus mykiss irideus*) (a federally threatened species) and Summer Run Steelhead Trout runs (*Oncorhynchus mykiss irideus*) (SSC) can be found in similar habitats near the Project area. The NC DPS steelhead range includes all naturally spawned anadromous populations below natural and manmade waterway barriers in California coastal river basins from Redwood Creek southward to, but not including, the Russian River (NMFS 2016a). Steelhead spawn in gravel and small cobble substrates usually associated with riffle and run habitat in cold water streams. NC DPS steelhead may exhibit two life history strategies, termed the summer and winter steelhead. Winter NC DPS steelhead spawn in rivers and streams between December and mid-April (Busby et al. 1996). Spawning timing of the summer steelhead may occur just prior to or congruently with the winter steelhead (Moyle et al. 2008). Due to their multiple life history strategies, NC DPS steelhead may be found year-round at various life stages within their occupied range.

The summer steelhead ESU is a SSC that inhabits river basins from Redwood Creek in Humboldt County south to the Gualala River, and includes winter and summer steelhead. This ESU also includes what is currently considered the southernmost population of summer steelhead, in the Middle Fork Eel River (Busby et al. 1996). Summer steelhead seek refuge in deep pools with cool seeps and springs (California Trout, Inc 2018a). Preferred habitat includes pools with boulders, large woody debris, and undercut banks that provide refuge from predators and other fishes (California Trout, Inc. 2018a). Spawning occurs in gravel substrate of the streambed, where the streambed is composed of gravelly substrate, usually in riffles or pool tails (California Trout, Inc. 2018a).

Steelhead remain widely distributed throughout the Eel River Watershed (Yoshiyama and Moyle 2010). Based on the amount of historic habitat available in the watershed, Yoshiyama and Moyle (2010) estimate the historic run size ranged between 100,000 and 150,000 adults per year for both the winter and summer populations. However, steelhead runs in the Eel River watershed have declined substantially since the 1950s (NOAA 2015). Populations within the vicinity of the Project area remain in the Van Duzen and Eel rivers as well as suitable tributaries (NOAA 2015).

Steelhead are known from one CNDDB occurrence from 1992 within 5 miles of the Project area that documents summer run steelhead (CDFW 2018a). This occurrence was located in the Van Duzen River upstream of its junction with Little Larabee Creek. Critical habitat for this species (including both the NC DPS steelhead and the summer run steelhead trout) has been designated in the Van Duzen River from its junction with Eel River to past the Bridgeville Substation and Little Larabee Creek for approximately 2.5 miles upstream of its junction with the Van Duzen River.

### **Coastal California Chinook Salmon Environmentally Significant Unit**

The CC Chinook salmon (*Oncorhynchus tshawytscha*) ESU is a federally threatened species and includes all Chinook salmon that spawn in coastal watersheds from Redwood Creek (Humboldt County) in the north to the Russian River in the south, inclusive (Moyle et al. 2008). In the North Coastal Region, Redwood Creek and the Mad,

Lower Eel, South Fork Eel, Bear, and Mattole Rivers all contain sufficient habitat for independent populations (Mad River Watershed Assessment 2010). Due to their anadromous life history, CC Chinook salmon may be found year-round at various life stages within their occupied range (NMFS 2016b). Chinook salmon typically occupy and spawn in streams and rivers that are deeper and larger than those used by other salmon species, and spawn in larger gravels and small cobble (Moyle 2002). Smolts require tidal or flooded habitats with overhanging cover or undercut banks to forage before migrating to the ocean (California Trout, Inc. 2018b).

CC Chinook salmon in the Eel River consist of two independent populations (NOAA 2016). The Lower Eel River population includes fish that spawn in the South Fork Eel River as well as all mainstem and tributaries downstream of the South Fork confluence (e.g., Van Duzen River and Little Larabee Creek). The Upper Eel River population includes all fish spawning upstream of the South Fork Eel River confluence (excluded), including major tributaries such as the Middle Fork and North Fork Eel River. Spring-run populations in the Eel River watershed are considered extirpated.

There was one CNDDDB occurrence of this species documented in 2000 at a Hely Creek monitoring stations north of its connection to the Van Duzen River (CDFW 2018a), 10 miles west of the Project site.

### **Foothill Yellow-legged Frog**

Foothill yellow-legged frog (*Rana boylei*), a state candidate threatened species and SSC, primarily inhabits partly shaded streams and rivers with shallow, flowing water and at least some cobble-sized substrate (Hayes and Jennings 1988). Instream riffles appear to be an important habitat component. Breeding and oviposition occur at the margins of relatively wide and shallow channel sections (Thomson et al. 2016). Adults and juveniles use riparian and upland areas immediately adjacent to aquatic habitats. Fall/winter refugia are generally characterized by small tributary streams with perennial water where frogs can forage and avoid mortality caused by flooding (CDFW 2018b). Springs, seeps, pools or other moist habitats such as woody debris, root wads, undercut banks, clumps of sedges, and large boulders occurring at high water-lines adjacent to pools may serve as refugia during periods of high stream flow in winter (CDFW 2018b). One study in Tehama County found frogs rarely go beyond 12 meters (m) from the channel during any time of the year (Bourque 2008).

This species has been documented to occur in Little Larabee Creek and the Van Duzen River near the Project area (CDFW 2018a). Closest to the Project area, one CNDDDB occurrence documented four adult frogs observed in 2018 in areas of slow-moving water in Little Larabee Creek at SR 36. Rocks in this area were cobble-boulder sized.

On their land holdings in the region, HRC performs occupancy level surveys, which are area-constrained searches, concentrating on surveying river and stream reaches for eggs, tadpoles, and adults (HRC 2015). HRC has mapped the species within the following areas near the Project (HRC 2018a):

- An unnamed creek that flows into the Van Duzen River east of Stitz Creek
- An unnamed creek that flows into the Van Duzen River north of Shively Ridge and east of Root Creek
- The Van Duzen River, with the closest CNDDDB occurrence occurring 10 miles downstream of the proposed Project site

### **Southern Torrent Salamander**



Southern torrent salamander (*Rhyacotriton variegatus*), a SSC, occurs in coastal forests of northwestern California from the Oregon border south to Point Arena in Mendocino County (Jennings and Hayes 1994). Southern torrent salamanders are found primarily in cold, well-shaded permanent streams and spring seepages with coarse rocky substrates (Behler and King 1979; Thomson et al. 2016) in redwood, Douglas-fir, mixed conifer, and montane riparian and montane hardwood-conifer habitats (Stebbins 1951; Anderson 1968). The elevational range for this species extends from near sea level to about 1,200 m (Jennings and Hayes 1994). Key habitat features include loose gravel and cobble substrates as this species has been documented to be sensitive to fine sediment load (Thomson et al. 2016). Adults may use adjacent riparian and forest habitat in the wet season (Thomson et al. 2016), although this species is generally restricted to moist areas as it has highly reduced lungs and relies on its skin surface to take in oxygen (Stebbins 1951). Estimates of abundance have shown southern torrent salamander to be more abundant in late-seral forest (forests with secondary successional growth but dominated by natural species) compared to younger stands (forests with younger successional growth and fewer mature natural species) (Thomson et al. 2016).

There are 14 occurrences of this species within the 9-quadrant search radius, although none documented within the last 5 years (CDFW 2018a). One CNDDDB occurrence from the Van Duzen River described an unknown number of individuals collected in 1950 and 1970. HRC monitors for this species using an area-constrained search method of Class II waters after the first winter rains through May (HRC 2015). HRC has mapped the species within the Van Duzen River 3 miles north of the gen-tie and approximately 7.4 miles downstream of the Bridgeville Substation (HRC 2018a).

### **Western Pond Turtle**

Within California, the western pond turtle (*Emys marmorata*), a SSC, is present from the Pacific coast to 6,719 feet in elevation in the Sierra Nevada foothills (Holland 1992). Western pond turtle occurs in intermittent and permanent streams and rivers, lakes, ponds, reservoirs, shallow wetlands, stock ponds, abandoned gravel pits, and sewage treatment lagoons (Holland 1994). Preferred habitat is characterized by adequate emergent vegetation and basking sites, presence of suitable refugia, undercut banks, submerged vegetation, mud, rocks, and logs (Holland 1994). Western pond turtles also require terrestrial shelter sites for overwintering that may be as much as 197 feet from the water (U.S. Forest Service 2018). Two distinct habitats may be used for oviposition (CDFW 2018c). Along large slow-moving streams, eggs are deposited in nests constructed in sandy banks. Along foothill streams, females may climb hillsides, sometimes moving considerable distances to find a suitable nest site. Nussbaum et al. (1983) reports a nest in a clover field 100 m (325 feet) from water. Nests have been observed in many soil types from sandy to very hard.

The CNDDDB occurrences for this species in the Project vicinity are restricted to the Van Duzen River and Little Larabee Creek (CDFW 2018a). Only one occurrence was documented in the last five years, when one adult was observed crossing the road in 2017 on the north side of the Van Duzen River about 1.4 miles west-southwest of Devil's Elbow near SR 36 approximately 8 miles east of the Project site (CDFW 2018a). HRC monitors for this species using visual searches, snorkel-surveys, and floating surveys (HRC 2015). Currently, HRC has mapped the species within Little Larabee Creek and multiple occurrences from the Van Duzen River. The occurrence closest to the Project site is located approximately 9.7 miles downstream (HRC 2018a).

### **Northern Spotted Owl (NSO)**

The northern spotted owl (NSO; *Strix occidentalis caurina*) is listed as Threatened by both the USFWS and the CDFW. Additionally, the CDFW considers the NSO as a "species of special concern." The NSO is an inhabitant of old-growth forest interiors. While it has been known to use second-growth forest if sufficiently mature, diverse, and

composed of the correct tree species, the NSO is not adapted to use forest edges, or highly disturbed or anthropogenically impacted areas.

Conceptually, impacts could occur if nests were directly affected (e.g., a tree with an active nest was removed), or indirectly (e.g., a distant nest tree was active, yet construction disturbance caused adults to avoid the nest, causing mortality of eggs or dependent young). Impacts can also be permanent (e.g., a nest tree is removed) or temporary (e.g., construction vehicle causes a temporary disruption in use of foraging habitat, but the impact ceases after the vehicle's departure from the area).

No NSO nests or activity centers were documented within the 400-m buffer around the Project. Stantec conducted a reconnaissance NSO Habitat Assessment on February 18, 2019 and found the area surrounding the Bridgeville Substation is either non-habitat (e.g., the existing substation, maintenance yard, occupied residence or other buildings, access roads, forest clearings, State Highway 36) or is potential roosting habitat. However, given the extent of human alterations to the landscape, ongoing human presence and activity, and the amount of forest edge that exists surrounding the existing anthropogenic features it is unlikely that NSO use the area, and could be impacted by the project.

### **Northern Goshawk**

Northern goshawk (*Accipiter gentilis*), a SSC, is a widely distributed species and in California occurs in the North Coast Ranges, through the Sierra Nevada, Klamath, Cascade, and Warner mountains (Polite and Pratt 2005). CNDDDB includes one record of a nest located approximately 2.2 miles north of the Bridgeville Substation (CDFW 2018a) that was monitored for multiple years. During 2007-2008, a pair with dependent young were observed in this location. Follow up surveys in July of 2008 suggested that the nest failed. No individuals were detected at the site during four surveys from March–April 2016. HRC has not documented northern goshawk nesting near the Project area. Northern goshawk is found in dense, mature conifer and deciduous forests, interspersed with openings and riparian habitat. Foraging generally takes place in wooded areas (Polite and Pratt 2005).

### **Sonoma Tree Vole**

The Sonoma tree vole (*Arborimus pomo*), a SSC, occurs along the North Coast from Sonoma County north to the Oregon border. The closest CNDDDB occurrence for this species was documented in 1994 approximately 3.5 miles east of the Project site. This species favors Douglas-fir, redwood, and montane hardwood-conifer habitats. These voles rely heavily on Douglas-fir foliage for both their main food source and for lining their nests (Maser 1965, Maser et al. 1981). An individual's home range may include one to several fir trees, with females typically inhabiting one tree while males visit several trees (Howell 1926). Nest sites are frequently in the broken tops of young, second-growth Douglas-fir (Maser et al. 1981). HRC developed a property-wide habitat model to evaluate tree vole habitat by watershed or sustainability unit (SU) (HRC 2018c). Results predicted the density of Sonoma tree vole nests in the Van Duzen and Bear SUs to be greater than the property-wide average. These results indicate that mature stands with larger Douglas-fir trees and those with higher densities of Douglas-fir trees tend to have higher relative densities of tree vole nests, while pole and young stands with relatively little to no Douglas-fir trees tend to have fewer nests (HRC 2018c).

### **Ring-Tailed Cat**

Ring-tailed cats (*Bassariscus astutus*), a federally protected species, are distributed throughout California in areas containing shrubland and forested habitats. Camera trap monitoring by HRC has detected ring-tailed cats at 6 of 86

camera trap locations in the region (HRC 2018b). Exact survey locations are not provided in the annual HRC monitoring reports though it appears that ringtails have not been documented in the 14 HRC survey blocks in which the Project features occur. HRC also reported that one ringtail was detected at Shaw Creek—greater than 10 miles north of the Project area (HRC 2014). Ringtails prefer areas containing hollow trees, logs, cavities, and rocky areas for cover and are usually not found far from a permanent water source. Their den sites are rocky crevices, hollow trees or snags, abandoned burrows, or woodrat nests (Taylor 1954).

## Discussion of Impacts

- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

**Finding: Less than Significant with Mitigation**

### **Special Status Fish Species**

No suitable habitat for Pacific lamprey, SONCC coho salmon ESU, steelhead, CC chinook occurs within the Project site, including the area proposed for the substation upgrade. Therefore, the Project will not directly impact these species. However, the Project could indirectly impact this species if ground disturbance caused sediment or hazardous materials to run into the Van Duzen River or Little Larabee Creek. APM Water-1 and MM HAZ-1 would require the applicant to establish appropriate sediment control and hazardous materials BMPs during construction. Additionally, the proposed permanent stormwater facilities would reduce the potential for erosion for the life of the project. With implementation of APM Water-1 and MM HAZ-1, impacts to these species would be reduced to less than significant.

### **Special Status Reptile and Amphibian Species**

There is potential for foothill yellow-legged frog, southern torrent salamander, and western pond turtle to occur in the Van Duzen River and Little Larabee Creek, but not within the Project footprint itself due to lack of suitable habitat. The Project could indirectly impact these species if ground disturbance caused sediment or hazardous materials to run into the Van Duzen River or Little Larabee Creek. APM Water-1 and MM HAZ-1 would require the applicant to establish appropriate sediment control and hazardous materials BMPs during construction. Additionally, the proposed permanent stormwater facilities would reduce the potential for erosion for the life of the project. With implementation of APM Water-1 and MM HAZ-1, impacts to these species would be reduced to less than significant.

### **Special Status and Nesting Birds**

The Project site is wooded, and trees and vegetation would be cleared or trimmed prior to Project construction. Birds nesting in trees on or adjacent to the Project site may be directly impacted by vegetation clearing. In addition, noise and human presence have the potential to indirectly impact birds nesting close to the Project site. High levels of disturbance may cause nest abandonment and subsequent mortality of eggs or nestlings. Impacts of this nature would be considered significant and would also represent a violation of the Migratory Bird Treaty Act and provisions of the California Fish and Game Code, which protect birds and their nests, eggs, and young from take (harm or destruction). Project construction has the potential to directly and indirectly impact nesting birds. However, with implementation of APMs and mitigation measures, these impacts would be reduced.

MM BIO-1 requires a biologist to conduct preconstruction surveys prior to vegetation clearance and establish a protective buffer around any active nests. The buffer will be flagged and avoided. APM Bio-1 requires the applicant to conduct worker environmental awareness training to enhance workers' understanding of their responsibilities to protect biological resources. APM Bio-2 requires the applicant to conduct work in a manner that minimizes disturbance to wildlife and habitat. APM Bio-3 requires temporarily disturbed construction areas to be revegetated with appropriate native species. In addition, MM BIO-2 requires overhead electrical lines to be designed according to in accordance with *Avian Power Line Interaction Committee Guidelines* in accordance with the *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2012* to minimize the change of electrocutions of avian species. With implementation of these APMs and mitigation measures, impacts to special status and nesting birds would be reduced to less than significant.

### **Special Status Mammals**

The Sonoma tree vole and ring-tailed cat are likely to occur in suitable, Douglas-fir dominated habitats near the Project site. Therefore, Project construction has the potential to directly and indirectly impact these species, and these impacts could be considered significant. However, with implementation of APMs and mitigation measures, these impacts would be reduced.

MM BIO-1 requires a biologist to conduct preconstruction surveys on the Project site prior to vegetation clearance and to establish a protective buffer around any active dens or refugia (resting places). APM Bio-1 requires the applicant to conduct worker environmental awareness training to enhance workers' understanding of their responsibilities to protect biological resources. APM Bio-2 requires the applicant to conduct work in a manner that minimizes disturbance to wildlife and habitat. APM Bio-3 requires temporarily disturbed construction areas to be revegetated. With implementation of these APMs and mitigation measures, impacts to special status mammals would be reduced to less than significant.

- b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?; OR*
- c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

### **Finding: Less Than Significant Impacts**

The Project will not have adverse effects on any riparian habitat or other sensitive natural communities. There is no riparian vegetation to be removed on the site. The vegetation removal proposed would be limited to approximately 39 trees with a diameter breast height of greater than 12" (Douglas fir, madrone and bay laurel) within the Project footprint. Additional tree removal may be required for defensible space. The applicant will favor tree trimming over tree removal to preserve the integrity of the riparian corridor and will conduct preconstruction surveys to identify special status plants or wildlife that may be present in the Project area prior to construction. In addition, the applicant will implement stormwater BMPs during construction to reduce the potential for sediment or hazardous materials to runoff into riparian vegetation associated with the Van Duzen River which is located approximately 500 feet from the Project site. No wetlands will be filled, removed, or hydrologically interrupted (for additional information on wetlands, see Section X, Hydrology and Water Quality). Therefore, impacts under this criterion would be reduced to less than significant.

- 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?*

**Finding: No Impact**

The Project is located adjacent to the Van Duzen River and Little Larabee Creek. However, the Project site is not located near or within the channel of either feature. Therefore, construction and operation of the Project, including substation upgrades, would not interfere with the movement of migratory fish or wildlife nor impede the use of any wildlife nursery sites that may be present within the river or creek. Therefore, there are no impacts under this criterion.

- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**Finding: No Impact**

There is a small unnamed ephemeral drainage on the Site. Setbacks (50 feet) for this drainage are established in the County's Streamside Management Area Ordinance. Although no structures will be placed within this setback, the existing access road crosses the drainage. Road work is permitted within the Streamside Management Area with the issuance of a Special Permit and findings that there will not be detrimental effects to the riparian habitat. In this case the drainage is intermittent and there is not established riparian habitat associated with it. Nonetheless a Special Permit is being processed with the application.

The Site does not host any other resources that are specifically protected in the General Plan Conservation and Open Space or Water Resources Elements (e.g., landmark trees). Therefore, there are no impacts under this criterion.

- 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?*

**Finding: No Impact**

There are no currently adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans for the Project area or its vicinity. Therefore, the proposed Project would not conflict with any such plan and there would be no impact.

## **Mitigation Measures**

**MM BIO-1** Preconstruction surveys for special status species shall be conducted no more than one week prior to the initiation of earth moving or vegetation clearing by a qualified biologist. If active nests, special status species, roosts, or dens are observed during surveys, work at the site shall cease and the County shall be contacted. Project work shall cannot resume until the County in consultation with the California Department of Fish and Wildlife (CDFW) determine a suitable buffer distance or other necessary protection measures to prevent disturbance to the species. Once established, buffer limits shall be flagged and avoided. Project activities may encroach into the buffer only with approval from, the County in consultation with CDFW and must be monitored by the project the biologist. Biologists shall monitor itinerant wildlife until they have dispersed on their own.

**MM BIO-2** Guidance outlined in *Avian Power Line Interaction Committee Guidelines* in accordance with the *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2012* or equivalent measures shall be incorporated into the power line design to minimize the likelihood of avian electrocutions.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>V. CULTURAL RESOURCES</b> — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Existing Setting

### Prehistory

Several strategies have been used to organize the archaeological record of northwest California. The strategy used for the current discussion follows the work of Frederickson (1973, 1974, and 1984). Fredrickson (1973) identified patterns or modes of adaptation for northwest California and the North Coast Ranges and assigned them to specific time periods. The patterns associated with the Project area are: Post Pattern 12,000 Before Present (B.P.); Borax Lake Pattern 8,000 B.P.; Mendocino Pattern 2,500 B.P.; and Gunther Pattern 500 A.D. Cultural resources associated with the Project appear to represent the Gunther Pattern.

### Ethnology

The area presently known as Humboldt County is highly culturally diverse when compared to other regions of California and was home to a dozen distinct Native American tribes that occupied diverse areas, mainly conforming to the natural watershed basins. Most tribes of the region were either Algonquian or Athabascan speakers, excepting the Karuk. The Yurok and Wiyot spoke Algonquian languages and were present along both the coast and rivers. The Karuk were Hokan-speaking and lived primarily in mountainous territory. Even more distinct are the five groups referred to collectively as the southern Athapaskans. Of these, the Nongatl, Sinkyone, Lassik, and Wailaki spoke dialects of a single language; Mattole also is recognized as a dialect of Athapaskan but may have differed (Elsasser 1978b; cf. Kroeber 1925).

The project area is located above the confluence of The Van Duzen River and Larabee Creek. The native inhabitants of the region at the time of contact were Athapascan speakers of the Sinkyone, Mattole, Nongatl, and Bear River groups. The Sinkyone and Nongatl spoke closely related dialects, while the Bear River spoke a language closely related to the Athapaskan dialect spoken by the Mattole. Sinkyone were one of five groups speaking subdialects of Athabascan; the other four were the Mattole, Nongatl, Lassik, and Wailaki. These make up what Kroeber referred to as the Southern Athabascan (Kroeber 1925:142–144).

The study area is within the ethnographic territories of the Bear River, as well as the neighboring Sinkyone, Wiyot, Mattole and Nongatl. Ethnologists have defined tribal boundaries based mainly on liminal boundaries of the natural topography and informants of, often neighboring groups, describing their historical relationship with surrounding

tribes. The focus in the following discussion is on material culture because this forms the archaeological record. Although the culture, traditions, and practices of the Bear River and Sinkyone are distinct, the material culture among them and surrounding Athapaskan groups is notably similar.

## Bear River

The Bear River occupied the Bear River drainage from its headwaters to the coast as well as many of the surrounding ridgetops. The exact boundary of any of the Southern Athapaskan groups remains unresolved. Elsasser (1978a) noted that using Kroeber's tribelet concept (1925) to identify distinct cultural groups speaking related languages resulted in a boundary division among the Athapaskan speakers of the area along single drainages. Bordered on the north by Wiyot, on the south by Mattole, and on the east by Sinkyone, the Bear River and Mattole groups represent the only two Athapaskan speaking groups whose territory centered primarily on a single river drainage. Baumhoff's summary of Bear River (1958) presented an overview of the territory and some village names and locations identified from the works of Nomland (1938) and Goddard (1929). Nomland (1938) provided the greatest informant-derived detail on the daily lives of the Bear River peoples. Baumhoff (1958) included a map of village sites taken from Goddard's (1929) unpublished notes. This map depicted an ethnographic village site located north of the study area, across the Van Duzen River.

## Organization and Settlement

With settlements along the Bear River, Oil Creek, and other tributaries, the Bear River tribe enjoyed a foraging area extending from the Pacific Ocean to the upper reaches of Bear River southwest of Scotia. Noted villages were on river terraces at Capetown, Morris Ranch, and a large village described with a dance house about 15 miles upriver near the Bear River headwaters.

The Bear River tribe, like its Sinkyone neighbors, was organized into tribelets, with long-term settlement restricted to wintertime villages along annual drainages. Political organization was most evident at the tribal level and was centered on a chieftain. The chieftain was an inherited role, however; a chieftain passed on the role to his son if that son was an accomplished hunter and considered both wise and wealthy. If the son was not suitable, the elder men selected an able individual to assume the chieftain role. The primary role of the chieftain was to settle disagreements within the tribe, square debts, and provide decisions regarding when to go to war and how much enemies of the tribe should pay, following a successful campaign. Nomland noted that the Bear River tribe was a more peaceful tribe than its neighbors, according to her informant (1938).

The family, consisting of a mother, a father, and children, formed the basis of daily life and organization. Groups of families would form multi-house villages. No clan structure existed among the Bear River tribe, and the chieftain was the only institution that families and extended families recognized in terms of tribal obligation or commitment beyond the family unit (Nomland 1938).



## Technology and Material Culture

Technologically, the Bear River tribe created artistic and functional basketry, clothing, and tools. Among other uses, twined baskets were made for carrying burdens and water or storing food and worn as hats and used as fish traps. Fibers for basketry were from redwood roots and maidenhair fern and were colored with alder dyes (Kroeber 1925). Clothing was made of animal hides and generally was not adorned for daily use. Men wore buckskin shirts, fastened at the waist, while women wore buckskin aprons and buckskin skirts. Women wore a basket hat in summer and buckskin head-cover in wet weather. Both men and women wore ornamented buckskin clothing during dances. Tools produced for collecting and processing plant resources included digging sticks, twined seed-beaters and burden baskets, and portable milling stones. Acorns and seeds were collected and processed by Bear River women and children. Hunting tools included bows and arrows, tipped with silicate and obsidian arrowheads. Stone blades were used for knives, spears, and chopping tools (Nomland 1935).

## History

Exploration of the Project area dates to the early 19th century. Jedediah Smith and Peter Ogden explored the area in 1826 and 1827, and in 1829 a party of Hudson Bay Company trappers and explorers, led by Alexander McLeod, also passed through the area. The area remained sparsely occupied by Euroamericans until the discovery of gold and the development of the logging industry, which attracted settlers to the area in the latter half of the 19<sup>th</sup> century.

## Discussion of Impacts

*a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?*

There are no known historical resources at the project site.

**Finding: No Impact**

*b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

*c) Disturb any human remains, including those interred outside of formal cemeteries?*

**Finding: Less Than Significant with Mitigation**

Cultural resources investigations for the Project identified that it is located within the boundaries of site CA-HUM-187 (P-12-000212). Other existing facilities are also located within boundaries of site CA-HUM-187, including the PG&E Bridgeville Substation (i.e., adjacent to which the Project is proposed to be built), transmission lines, a Caltrans Highway Maintenance Station, a private residence, and other standing and collapsed structures. It is reported that a significant number of artifacts have been collected from the site by prior landowners and other individuals. Some of these artifacts are documented in existing site records. It is possible that pockets of intact deposits are still present at site CA-HUM-187, but a portion of the area has been disturbed by grading and excavation.

The substation expansion and access road would be within the known boundaries of site CA-HUM-187. To date more than 7 separate inventory efforts have occurred at this location and two site test excavations have been completed. Neither excavation effort resulted in the identification or recovery of intact prehistoric or historic era

archaeological deposits, rather, all excavation to date indicates a low density of artifacts in a highly mixed deposit that is not deeper than about 16-inches.

Because the access road and the substation expansion area are within CA-HUM-187 Mitigation Measure CUL-1 requires that there be no ground disturbing activities and that these areas be treated with geotextile fabric and covered with gravel prior to use in order to preserve any resources in place. The BESS would be located in an area that is outside of the known boundary of CA-HUM-187, and on a hillside. No resources are expected to be encountered here. However due to the proximity to CA-HUM-187, Mitigation Measure CUL-2 requires that sampling be completed prior to issuance of grading permits or ground disturbance. The sampling must demonstrate that there is no potential for encountering cultural artifacts during ground disturbing activities and requires an archeologist and Native American Tribal Monitor on site during the sampling. MM CUL-3 specifies the steps required to avoid resources or preserve it in place in the unlikely event that cultural resources are encountered during construction and required a Native American Tribal Monitor on site during all ground disturbing activities. Mitigation Measure CUL-4 and state law requires that the archaeologist and or the Native American Tribal Monitor stop construction and make the appropriate notifications in the event of the discovery of prehistoric or historic resources or human remains. With implementation of these mitigation measures, impacts are reduced to less than significant.

## **Mitigation Measures**

- MM CUL-1** No ground disturbing activities shall occur along the existing access road or substation expansion area. Geotextile fabric and gravel rock will be placed on top of these. A Native American Tribal Monitor from the Bear River Band of the Rohnerville Rancheria shall be on site to ensure no ground disturbing activities occur. Grading plans and other construction documents shall clearly indicate that no ground disturbing activities are to occur in these areas.
- MM CUL-2** Prior to issuance of a grading permit, any excavation, placement of poles or any other ground disturbance at the site, subterranean sampling shall be conducted at a depth sufficient to determine whether or not cultural resources are present. The sampling shall demonstrate that there is no potential for encountering cultural artifacts within the area where there will be ground disturbance or grading and shall locate the edge of the resource boundary on north and east side. The sampling plan shall require the concurrence of the Bear River Band of the Rohnerville Rancheria Tribal Historic Preservation Officer. An archaeologist and Native American Tribal Monitor from the Bear River Band of the Rohnerville Rancheria shall be on site to observe the sampling.
- MM CUL-3** An archaeologist and Native American Tribal Monitor from the Bear River Band of the Rohnerville Rancheria shall be on site to observe and inspect all ground disturbing activities at the applicant's expense. The archaeologist and Native American Tribal monitor shall have authority to stop work in an area where previously unidentified resources are encountered until the resources have been appropriately identified and addressed. In the unlikely event that resources are discovered the Planning and Building Department shall be notified immediately. If archeological resources are

identified during construction and cannot be avoided, the following steps shall be taken prior to re-initiating construction activities:

- The extent of the resource shall be investigated in consultation with the Bear River Band of the Rohnerville Rancheria.
- Improvement plans shall be prepared that demonstrate how the Project will be re-designed on-site to avoid the resource or that it is possible to cap the resource.
- The County in consultation with the Bear River Band of the Rohnerville Rancheria shall approve the improvement plans.

**MM CUL-4** There is a potential to inadvertently uncover human remains during Project construction. An archaeologist and Native American Tribal Monitor shall be on site to monitor any ground disturbing activity associated with the Project to identify and protect any inadvertently discovered human remains during Project construction. If human remains are discovered all work shall be halted immediately within 50 feet of the discovery and the County Coroner must be notified according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in the CCR §15064.5(d) and (e) shall be followed.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>VI. ENERGY</b> — Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

a) *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

b) *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

**Finding: No Impact**

Construction of the Project would involve a relatively small number of workers, vehicles, and equipment, and would not be staffed during operation. Construction of the Project would expand the capacity and efficiency of the existing

regional electric grid by introducing the ability to store electricity to use during peak demand. Humboldt County's General Plan Energy Element Background Technical Report encourages the addition of energy storage facilities to the County's energy portfolio (Humboldt County 2005), especially given the potential for expansion of renewable energy Projects in the county, such as wind, solar, wave, and biomass energy generation facilities. Construction of the Project would have a beneficial impact on the County's energy resources. Therefore, there are no impacts under these criteria.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>VII. GEOLOGY AND SOILS</b> — Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on strata 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **Existing Setting**

### **Regional Seismicity and Fault Zones**

Humboldt County is located within a seismically active area of California. It is in the two highest seismic risk zones of the Uniform Building Code, and Cape Mendocino (offshore of the County) experiences the highest concentration of earthquake events in the continental United States.

### **Seismicity**

The offshore and coastal regions of Humboldt County contain one of the most geologically complex areas in California. Three major faults, including the San Andreas, the Mendocino fracture zone, and the southern end of the Cascade subduction zone, all meet in what is known as a “triple junction.” Three major plates of the Earth’s surface are defined and separated by these three faults: Pacific plate, Gorda plate, and North American plate. As a result of this unique geologic setting, the North Coast is vulnerable to several types of earthquakes from a variety of sources. Because a triple junction has to accommodate plate motion in several directions, its faulting is varied, and its seismicity is high. The geometry of the triple junction renders it unstable, resulting in a likelihood that it will change with time.

The fault systems in Humboldt County are historically very active with movement on the fault occurring in the last 200 years according to the Natural Resources and Hazards Report (Humboldt County 2002), and thus are considered to have the potential to cause future earthquakes, surface rupture, and ground failure.

Recent earthquake activity includes several large-scale events in the Cape Mendocino area. In 1992, three powerful earthquakes rocked the Cape Mendocino area (magnitudes 7.1, 6.6, and 6.7). Injuries and damage occurred in the nearby towns of Ferndale, Petrolia, Fortuna, Rio Dell, and Scotia.

The earthquake peak ground acceleration (PGA) that has a 10% chance of being exceeded in 50 years has a value of between 30 and 40% g (percent of gravity) (Humboldt County 2002).

### **Landslides**

Landslides are a result of slope instability and characterized by the movement of soils and bedrock down steep slopes. Movement results from wet weather, seismic shaking, and/or improper construction, grading, and drainage. Landslides are characteristically abundant in areas of high seismicity, steep slopes, and high rainfall, but may be triggered by any or a mixture of the following: (1) type and structure of earth materials; (2) steepness of slope; (3) water; (4) vegetation; (5) erosion; and (6) earthquake generated ground shaking (Humboldt County 2002). The Project area is on a flat surface ridge above the Van Duzen River. However, in the area of the Van Duzen Watershed, a large majority of surface area slopes are between 15 and 50%.

### **Liquefaction**

Soil liquefaction is a phenomenon in which loose and saturated cohesionless soils are subject to a temporary, but essentially total loss of shear strength, due to pore pressure build-up under the reversing cyclic shear stresses associated with earthquakes. Soils typically found most susceptible to liquefaction are saturated and loose, fine to medium grained sand having a uniform particle range. According to Special Publication 117A by the California Geological Survey, the assessment of hazards associated with potential liquefaction of soil deposits at a site must consider translational site instability (i.e. lateral spreading, etc.) and more localized hazards such as bearing failure

and settlement. The acceptable factor of safety against liquefaction is recommended in SP117 to be 1.3 or greater. Specific areas of high liquefaction potential are located near Humboldt Bay, coinciding with the presence of the bay's muds and sands (Humboldt County 2002). The Project area is not within the area mapped as high liquefaction potential (Stanford 2015).

### **Bedrock Geology**

The bedrock underlying the Van Duzen River are comprised of Franciscan schist, a sedimentary rock formation. Soils underlying the Project include the Parkland-Garberville complex with 2 to 9% slopes. This soil type is characterized by gravelly loam and gravelly clay loam composed of alluvium (river-borne sediments) derived from mixed sedimentary (erosion-formed) sources. This soil type is well-drained to moderately well-drained and has a depth to water table ranging from 20 to more than 80 inches.

### **Lateral Spreading**

Lateral spreading is the horizontal movement or spreading of soil toward a stream bank, the open side of a fill embankment, the side of a levee, or another open face. Areas most likely to be affected are artificial fill areas that were not properly engineered or that have steep and unstable embankments, which the Project area does not.

### **Subsidence**

Subsidence is the downward shift of ground surface relative to sea-level. Subsidence typically occurs as a result of the dissolution of limestone, subsurface mining, extraction of natural gas, earthquakes, groundwater pumping, and fault rupture. Subsidence typically occurs in areas where groundwater has been extracted. The Project area has not had groundwater extraction.

### **Paleontological Resources**

CEQA includes in its definition of historical resources "any object [or] site ...that has yielded or may be likely to yield information important in prehistory" (14 CCR 15064.5[3]), which is typically interpreted as including fossil materials and other paleontological resources. More specifically, destruction of a "unique paleontological resource or site or unique geologic feature" constitutes a significant impact under CEQA per State CEQA Guidelines Appendix G.

Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in the Project, assessment of potential impacts on significant or unique resources, and development of mitigation measures for potentially significant impacts, which may include monitoring combined with data recovery excavation and/or avoidance.

## **Discussion of Impacts**

- a) *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?*

**Finding:     Less than Significant**

The 1972 Alquist-Priolo Earthquake Fault Zoning Act required the State Geologist to establish regulatory "Earthquake Fault Zones" around the surface ruptures of active faults, to mitigate the hazard of surface fault rupture to structures for human occupancy. A fault is considered active if it has ruptured within the last 11,000 years.

There are multiple faults within Humboldt County and within regional proximity of the Project site, with the Little Salmon fault zone located approximately 2.5 miles west of the Project area. The Project area is not located within or near an Alquist-Priolo Earthquake Fault Zone, and there are no known active faults crossing the Project site as mapped and/or recognized by the State of California. As such, impacts related to ground rupture exposing people or structures to adverse effects would be less than significant.

*ii. Strong seismic ground shaking?*

**Finding: Less than significant**

There are no known active faults crossing the site as mapped and/or recognized by the State of California. However, the Project area is located within a seismically active region and earthquake related ground shaking should be expected during the design life of the Project. As previously discussed, the nearest major active fault is the Little Salmon fault zone, located approximately 2.5 miles west of the Project area. Additionally, numerous other active faults in the region may produce some seismic shaking at the Project area.

The Project would be designed and constructed to meet the specifications of State regulations regarding seismic hazards as contained in Title 24, Part 2, California Uniform Building Code (UBC); the CPUC General Order (GO) 95, which designates rules and regulations for overhead electric line engineering; and CPUC General Order 128, which designates rules for underground electric supply and communication systems. Due to the location and area of the Project, there will not likely be strong seismic ground shaking and impacts associated with strong ground shaking would be less than significant.

*iii. Seismic-related ground failure, including liquefaction?*

**Finding: No Impact**

According to the Humboldt County General Plan, the potential for liquefaction to occur on the Project site is low. Specific areas of high liquefaction potential are located near Humboldt Bay, due to the presence of mud and sand. The Project area is underlain with Franciscan schist, a sedimentary rock formation. Therefore, the potential for liquefaction to occur from these soil conditions is not considered possible. Therefore, no impacts associated with liquefaction would occur.

*iv. Landslides?*

**Finding: Less than Significant**

According to the Humboldt County General Plan, the Project area is located on Franciscan Formation, which break down in to a clay subsoil that tends to slip when wet and landslides can occur. The Project site is underlain with Franciscan schist. However, there is no evidence of slope instability or active landslides in the immediate vicinity of the Project area. As such, due to the flat area on which the Project will be built, the risk of impact from seismically induced landsliding would be less than significant.

*b) Result in substantial soil erosion or the loss of topsoil?*

**Finding: Less than Significant**

It is anticipated grading activities would cut approximately 8,600 cubic yards of soil, predominately for the battery storage area. Excess cut will be hauled off site. Under NPDES, the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) is required for construction activities that would disturb an area of 1 acre or more. Because the Project will result in approximately 3 acres of disturbance a SWPPP will be required. The SWPPP will identify best management practices to be implemented to control erosion and stormwater runoff from the Project site. Therefore, impacts associated with substantial soil erosion or the loss of topsoil would be less than significant.

*c) Be located on strata 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?*

**Finding: No Impact**

As previously discussed in Impact GEO-1, the Project area is within a seismically active region and may experience ground shaking during the design life of the proposed Project.

The Project area is in an area with very low potential for liquefaction, or lateral spreading to occur. The Project site is underlain with Franciscan schist, a sedimentary rock formation. The Project site is not underlain by natural or manmade subsurface features that are typically associated with collapse, including mining or extraction operations or karst topography. Therefore, there would be no impacts associated with unstable soil.

*d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?*

**Finding: No Impact**

Soil expansiveness, or shrink-swell potential, usually occurs in soils containing a high percentage of expansive clay minerals. Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet, and are susceptible to soil expansion, and can threaten the stability of a Project without engineered foundations.

The soils at the Project site consist of Parkland-Garberville complex, 2 to 9% slopes (NRCS 2019). Parkland series soils are very deep, moderately well drained soils formed in alluvium derived from mixed sedimentary sources including sandstone and mudstone. Parkland-Garberville soils are not known to be expansive soils that would create substantial direct or indirect risks to life or property. Therefore, there would be no impact.

*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?*

**Finding: No Impact**

The Project area would not require the construction of septic tanks or any other alternative wastewater disposal system. During construction, the use of existing septic tanks is not anticipated, as workers would use portable restroom facilities. Waste would be pumped out by qualified contractors and disposed of in accordance with all applicable regulations and codes. Therefore, impacts associated with soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems would not occur.



f) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**Finding: Less Than Significant Impact with Mitigation**

According to a search of the UC Berkeley Neogene Mammal Mapping Portal (Neomap), there are no known significant paleontological sites or deposits within the Project area. However remote, the possibility for encountering paleontological resources during construction of the Project does exist and Mitigation Measure GEO-1, which reviews procedures for unanticipated Discovery of Paleontological Resources, would be implemented to reduce impacts to a less than significant level.

## Mitigation Measures

**MM GEO-1** If paleontological resources (i.e., fossils) are found during Project construction, construction shall be halted immediately in the subject area and the Humboldt County shall be immediately notified. A qualified paleontologist shall be retained to evaluate the find. If a find is determined to be significant, representatives of Humboldt County and a qualified paleontologist would meet to determine avoidance measures or other appropriate mitigation, such as site salvage. Significant paleontological resources recovered will be subject to scientific analysis, professional museum curation, and a report prepared by the qualified paleontologist according to current professional standards. The Society of Vertebrate Paleontology (SVP) provides guidelines on assessment and mitigation of adverse impacts to paleontological resources (SVP 2010).

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>VIII. GREENHOUSE GAS EMISSIONS</b> — Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Existing Setting

Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). GHGs allow sunlight to enter the atmosphere, but trap a portion of the outward-bound infrared radiation, which warms the air. The process is similar to the effect greenhouses have in raising the internal temperature, hence the name GHGs. Both natural processes and human activities emit GHGs. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. However, emissions from human activities – such as fossil fuel-based electricity production and the use of motor vehicles – have elevated the concentration of GHGs in the atmosphere. This accumulation of GHGs has contributed to an increase in the temperature of the Earth's atmosphere and to global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), Sulfur hexafluoride (SF<sub>6</sub>), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). CO<sub>2</sub> is the most commonly reference gas for climate change. To account for the warming potential of GHGs, GHG emissions are often quantified and reported as CO<sub>2</sub> equivalents (CO<sub>2</sub>e). For example, SF<sub>6</sub> is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF<sub>6</sub>, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG with 23,900 times the global warming potential (GWP) as CO<sub>2</sub>. CO<sub>2</sub>e is commonly reported in metric tons (MT), as opposed to short tons for other pollutants.

In January of 2012, Humboldt County published the Draft Climate Action Plan (CAP). According to the CAP, Humboldt County emitted 1.3 million MT (MMT) of CO<sub>2</sub>e in 2006. Under the CARB scoping plan, the CAP states that Humboldt County's reduction target is 3,746 MTCO<sub>2</sub>e based on its proportion of the statewide population and scoping plan goals (Humboldt County 2012). The CAP has not been approved by Humboldt County and does not qualify under Section 15183.5 of the CEQA Guidelines as a GHG reduction plan.

The NCUAQMD has not yet identified recommended GHG significance thresholds for the evaluation of development projects subject to CEQA review. However, on July 9, 2015, the NCUAQMD adopted Rule 111 for the evaluation of GHG emissions for stationary sources subject to New Source Review and federal Title V permitting requirements. In accordance with this rule, stationary sources that emit less than 25,000 tons per year of CO<sub>2</sub>e are exempt from determining compliance. This threshold is intended for purposes of determining compliance with federal Title V stationary source permitting requirements and is typically not recommended for the evaluation of GHG emissions for stationary source projects subject to CEQA review. However, various other air districts in the state have identified recommended GHG significance thresholds for stationary sources, including the Sacramento Metropolitan Air Quality Management District (SMAQMD), the Bay Area Air Quality Management District (BAAQMD), and the South Coast Air Quality Management District (SCAQMD). For stationary sources, these air districts have identified a GHG threshold of 10,000 MTCO<sub>2</sub>e/year.

The SCAQMD has a draft threshold of 3,500 MTCO<sub>2</sub>e for residential projects, but it has not yet adopted this threshold. BAAQMD and SMAQMD have developed a bright-line threshold for determining when a development project has the potential to generate a GHG impact. Both BAAQMD and SMAQMD have established 1,100 MTCO<sub>2</sub>e as a bright-line threshold to screen out land use projects that are not likely to cause a considerable contribution to the impact of climate change. Although the County is not required to uphold the BAAQMD and SMAQMD thresholds, the thresholds provide a useful comparison for determining significance.

In the absence of a NCUAQMD-recommended GHG significance threshold, a GHG significance threshold of 1,100 MTCO<sub>2</sub>e/year has been used for evaluation of Project-generated GHG emissions. This is significantly less than the 10,000 MTCO<sub>2</sub>e for stationary sources. GHG emissions exceeding 1,100 MTCO<sub>2</sub>e/year would be considered to have a potentially significant impact on the environment that could interfere with AB-32 GHG-reduction goals.

## Discussion of Impacts

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

**Finding:**                **Less Than Significant Impacts**

Construction activities would contribute GHG emissions primarily from the combustion of fossil-fuels by construction equipment. As shown in Table 3-4, construction and operation of the proposed Project would generate an estimated 350 MTCO<sub>2</sub>e of GHG emissions. When amortized over a 15-year period (the assumed life of the Project), construction emissions would be approximately 23 MTCO<sub>2</sub>e per year. As discussed in Section 3.3, Air Quality, Project maintenance was conservatively assumed to occur on a monthly basis. Therefore, the Project would not generate emissions of less than 1 MTCO<sub>2</sub>e per year. Total emissions would be 24 MTCO<sub>2</sub>e per year, which would not exceed the threshold and impacts would be less than significant.

To further reduce emissions, the applicant will implement APM GHG-1, 2, and 3. APM GHG-1 requires diesel-fueled off-road construction equipment with 50 hp or greater engines to meet USEPA/CARB Tier 1 engine standards. APM GHG-2 includes implementation of BMPs such as recycling, carpooling, and minimizing welding. Finally, APM GHG-3 notes that the applicant will continue to be an active member of the SF<sub>6</sub> Emission Reduction Partnership, which focuses on reducing emissions of SF<sub>6</sub> from transmission and distribution sources; will institute new rules for more accurately monitoring its equipment for SF<sub>6</sub> leaks and immediately repairing leaks that are discovered; and will ensure that all breakers purchased for this Project will have a manufacturer's guaranteed SF<sub>6</sub> leakage rate of 0.5 percent per year or less.

**Table 2-4. Summary of Greenhouse Gas Emissions**

Source	MTCO <sub>2</sub> e
Construction 2019	269
Construction 2020	81
Total	350
Amortized over 15 years <sup>1</sup>	23
Operational	<1
Total	24
Threshold	1,100
Exceed Threshold?	No
Note: 1. GHG emissions are amortized over the 15-year life of the proposed Project Source: Stantec Consulting Services Inc., CalEEMod 2016.3.2	

*b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

**Finding: Less than Significant Impacts**

As discussed in Impact GHG-1, the proposed Project's GHG emissions would be below the significance thresholds recommended by the SMAQMD, BAAQMD and the SCAQMD. The proposed Project would be consistent with AB 32 GHG-reduction goals by reducing GHG emissions through the storage of energy during off-peak hours and dispatching energy on an as-needed basis during peak hours. This would reduce fossil fuel use during peak hours and also maximize the usage of energy from renewable sources that may not be able to produce energy during peak demand times.

As the operation of the Project would not result in substantial increased vehicle trip emissions and there are no active statewide, local, or regional plans applicable to temporary construction projects, the Project would not conflict with any plan regarding mobile emissions. Therefore, the Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Less than significant impacts would occur.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>IX. HAZARDS AND HAZARDOUS MATERIALS</b> — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use compatibility plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Existing Setting

The closest school is Bridgeville School located 0.9 miles southwest of the Project.

To identify hazardous materials sites, a search of the California Department of Toxic Substances Control (DTSC) EnviroStor (2019), State Water Resources Control Board (SWRCB) GeoTracker (2019), and USEPA CERCLIS

Public Access Databases was completed. No hazardous materials sites were identified within or adjacent to the Project area. Six hazardous materials sites were identified within two miles of the Project, all of which are completed closed cases. The closest hazardous materials site to the Project area was a Leaking Underground Storage Tanks (LUST) Cleanup Site, located approximately 0.75 miles from the Site (DTSC 2019, SWRCB 2019, USEPA 2018).

The results from the DTSC EnviroStor, SWRCB GeoTracker, and CERCLIS Public Access databases searches are listed below in Table 3-5. The buffer used for hazardous materials sites from the Project was 2 miles (DTSC 2019, SWRCB 2019, USEPA 2018).

**Table 2-5. Hazardous Materials Sites within Two Miles of Project**

Site	Type of Site	Cleanup Status	Distance from Project Site (miles)
DTSC EnviroStor Database Results			
No sites listed within 2 miles of Project site.			
SWRCB GeoTracker Database Results			
CDF Bridgeville	LUST Cleanup Site	Completed – Case Closed	0.75
HCDPW Bridgeville Maintenance Station	LUST Cleanup Site	Completed – Case Closed	1
Bridgeville School	LUST Cleanup Site	Completed – Case Closed	1
Bridgeville General Store	LUST Cleanup Site	Completed – Case Closed	1.16
Bruner Property	Cleanup Program Site	Completed – Case Closed	1.12
CDOT Bridgeville Maintenance	Cleanup Program Site	Completed – Case Closed	1.12
CERCLIS Public Access Database			
No sites listed within 2 miles of Project site.			

The Project is not within 2 miles of a public airport or airport land use compatibility plan. The closest airport to the Project is the Dinsmore Airport, a public airport, located 9 miles east of the Project area.

In relation to wildfire hazards, the Project is within a very high fire hazard area (Cal Fire 2012) and a State Responsibility Area (Board of Forestry and Fire Protection [BOF] 2012). See Section XX, Wildfire, for more information on hazards related to wildfire.

## Discussion of Impacts

- a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

**Finding: Less than Significant**

Temporary construction activities associated with the Project would involve the transport and use of limited quantities of miscellaneous hazardous substances including gasoline, diesel fuel, hydraulic fluid, solvents, and oils. These chemicals would be brought to the Project area, as well as transported along roadways. Federal and State laws

regulate the handling, storage, and transport of these and other hazardous materials, as well as the mechanisms to respond and cleanup any spills along local and regional roadways. Chemicals present on site or used for the Project would be handled in accordance with applicable Federal, State, and local regulations (including those laws mentioned in the regulatory setting above) for hazardous substances. In addition, APM Hazards-1, 2, and 3 require the applicant to limit the parking of vehicles and equipment to previously disturbed areas, provide emergency spill response kits onsite, and implement BMPs for storage and handling of hazardous materials onsite. Therefore, the potential for impacts related to hazardous materials transport, use, or disposal would be considered less than significant.

- 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?*

**Finding: Less than Significant with Mitigation Incorporated**

Temporary construction activities associated with the Project would involve the transport and use of limited quantities of hazardous materials including gasoline, diesel fuel, hydraulic fluid, solvents, and oils. Chemicals present onsite during Project construction would be handled by the contractor in accordance with applicable Federal, State, and local regulations for hazardous substances, and any spills would be immediately cleaned up and disposed of in the appropriate manner. The Project area is not listed by any Federal or State database that identifies known hazardous materials sites (DTSC 2019, SWRCB 2019, USEPA 2018). To ensure hazardous materials are not released into the environment during construction, MM HAZ-1 would be implemented to reduce the potential for a spill to create a significant hazard to the public or environment. In addition, APM Hazards-1, 2, and 3 require the applicant to limit the parking of vehicles and equipment to previously disturbed areas, provide emergency spill response kits onsite, and implement BMPs for storage and handling of hazardous materials onsite. Therefore, with the incorporation of these APMs and mitigation measure, impacts would be reduced to a less than significant level.

- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*
- d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*
- e. For a Project located within an airport land use compatibility plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?*
- f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**Finding: No Impact**

The Project, including the substation upgrade, would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The closest school to the Project is Bridgeville School, which is 0.9 miles southwest of the Project. No hazardous materials sites were identified within or adjacent to the Project area (DTSC 2019, SWRCB 2019, USEPA 2018). The Project is not within 2 miles of a public airport or airport land use compatibility plan. The closest airport to the Project is the Dinsmore Airport, a public airport located 9 miles east of the Project area. The Project would be built adjacent to an existing substation and would add infrastructure similar to what is present within the substation. The Project construction and operation would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, no impacts would occur.

- g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

**Finding: Less than Significant with Mitigation Incorporated**

The Project is within a very high fire hazard area (Cal Fire 2012) and a State Responsibility Area (Board of Forestry and Fire Protection [BOF] 2012). Equipment used during construction activities has the potential to generate sparks that could ignite dry vegetation on or adjacent to the construction area and cause wildland fires in the area. While the risk is minimal, to further reduce the risk of fire, MM HAZ-2, Fire Prevention Plan, would be incorporated into the Project. This mitigation measure is applicable to reducing fire hazard during construction and ongoing operations. The potential impact would be considered less than significant with MM HAZ-2 incorporated.

## **Mitigation Measures**

**MM HAZ-1** The applicant shall develop and implement a Spill Prevention, Countermeasure, and Control Plan (SPCCP) in accordance with Federal and State requirements to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The SPCCP shall be submitted to Humboldt County for review and approval prior to any construction permits being issued. The SPCCP shall include the following measures:

- Materials shall be stored in appropriate containers and contents labeled
- Material volume shall be restricted to the volume that can be addressed by available spill kits and supplies
- Used containers shall be disposed of at an appropriate landfill or other legal disposal or recycling facility
- Bulk storage tanks shall have secondary containment systems. Secondary containment shall be at least 110% of storage tank capacity or more if the area is uncovered to account for storm events
- Spill cleanup shall occur immediately, and notification shall be given to the CDFW, USFWS, Regional Water Quality Control Board (RWQCB)
- Workers shall be trained to properly handle hazardous materials, cleanup spills, and report spills. Construction workers shall be trained to identify indicators of contaminated soils such as soil discoloration, odors, differences in soil properties, and buried debris. Construction workers shall be trained to be aware of proper handling techniques and appropriate responses and actions to be taken if hazardous materials are accidentally released, with special emphasis on those hazardous materials with the greatest potential to occur at the Project
- Soils contaminated with fuels or chemicals shall be disposed of in a suitable location to prevent discharge to surface waters and in accordance with the rules and regulations of the U.S. Department of Transportation, the USEPA, the RWQCB, and other agencies including but not limited to CalEPA
- Excess or unused quantities of hazardous materials shall be removed upon Project completion. Although hazardous waste generation is not anticipated, any such wastes produced during construction shall be properly containerized, labeled, and transported to an approved hazardous waste disposal facility

- All nonhazardous waste materials including construction refuse, garbage, and sanitary waste, shall be disposed of by removal from the work area to an approved disposal facility. All nonhazardous waste containers shall be covered when not in use and/or at the end of each shift or before a rain event

A fueling plan shall be prepared separately or as a part of the SPCCP. The fueling plan shall include the following measures:

- Vehicles will be monitored for fluid leaks and will be maintained regularly to reduce the chance of leakage. If any leaks are detected, the vehicle will be taken to a special paved area designated for vehicle repair and equipped with management controls for leaked materials or if it cannot be repaired removed from service and site and a replacement obtained
- Vehicle refueling shall only occur on flat level ground where there is little chance of a spilled substance reaching a stream or waterway over an impermeable surface. A spill kit shall be available as appropriate for the activity
- Refueling and vehicle maintenance shall be performed at least 100 feet from receiving waters
- All fueling materials shall be properly labeled
- Oil, antifreeze, solvents, and other materials related to equipment maintenance shall be disposed of or recycled appropriately offsite. If these materials have to be stored before disposal/recycling, they shall be stored in covered areas in containers with 110% capacity with berms and lined with impermeable material to contain any spills. The impermeable material should be maintained free of holes, etc. that would permit leaks to contact the ground surface or otherwise leave the containment area

The applicant shall routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The applicant shall notify the County Planning and Building Department immediately if there is a noncompliance issue and shall require compliance.

The Federal reportable spill quantity for petroleum products, as defined in the EPA's Code of Federal Regulations (40 CFR 110) is any oil spill that (1) violates applicable water quality standards, (2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or (3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

If a spill is reportable, the applicant would contact the appropriate safety and cleanup crews to ensure the SPCCP is followed. A written description of reportable releases must be submitted to the County and RWQCB. The submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.

#### **MM HAZ-2**

Prior to the issuance of any permits for construction, the applicant shall prepare and submit for review and approval a Fire Prevention Plan to the Humboldt County Planning and Building



Department. The County shall review the plan in consultation with CAL FIRE. The plan shall include fire protection measures during construction and operation at the Site. The fire prevention plan shall include requirements for onsite extinguishers; no smoking on site, and training for construction personnel on what to do in the event of a fire. For ongoing operations, the plan shall include the strategy for maintaining defensible space and measures to decrease risk from fires associated with transmission line failure. The portion of the plan for ongoing operations shall be implemented for the life of the project.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>X. HYDROLOGY AND WATER QUALITY — Would the project:</b>				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Existing Setting

### Van Duzen River

The Project site is located more than 150 feet east of the top of bank of the Van Duzen River. The Van Duzen River is part of the Eel River Watershed. This river is characterized as a perennial drainage and palustrine forested wetland (Stantec 2018b) and is considered a traditionally navigable waterway by USACE. The river supports a riparian zone classified as black cottonwood (*Populus trichocarpa*) forest. Black cottonwoods dominate the tree layer, with a small amount of red alder (*Alnus rubra*) present. The shrub layer is co-dominated by narrowleaf willow (*Salix exigua*) and polished willow (*S. laevigata*). The shrub layer is dominated by Himalayan blackberry.

### Little Larabee Creek

Little Larabee Creek is located approximately 350 feet south of the Project site. This creek is considered an intermittent drainage and palustrine forested wetland (Stantec 2018b). Little Larabee Creek supports a riparian zone consisting of red alder forest dominated by red alder, with little to no shrub or herbaceous layer. Other vegetation present includes bigleaf maple (*Acer macrophyllum*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and Nootka rose (*Rosa nutkana*).

### Unnamed Ephemeral Drainage

One unnamed ephemeral drainage is located within the project site. This drainage is classified as ephemeral and begins with a headcut likely formed due to upslope runoff. The drainage is culverted under an existing dirt access road where it terminates in sheet flow and shares no direct connection to either Little Larabee Creek or the Van Duzen River. It does not support riparian vegetation. At the time of the field survey, the drainage was being utilized as an irrigation source.

## Discussion of Impacts

a) Violate any water quality standards or waste discharge requirements?

b) Otherwise substantially degrade water quality?

**Finding: Less Than Significant with Mitigation**

Due to temporary and permanent ground disturbances, the proposed Project, including the substation upgrade, may have potential for increased erosion and sedimentation from ground disturbing activities primarily associated with

construction. Prior to construction, a NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit), will be obtained from the North Coast Water Quality Control Board (NCRWQCB). Coverage under a General Construction Permit requires the preparation of a SWPPP and Notice of Intent (NOI). The SWPPP will include pollution prevention measures (erosion and sediment control measures and measures to control non-storm water discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, a detailed construction timeline, and a BMP monitoring and maintenance schedule. The NOI will include site-specific information and the certification of compliance with the terms of the General Construction Permit. In addition, implementation of MM HAZ-1 focuses on hazardous materials spill prevention. These requirements will reduce and control stormwater runoff, erosion, and siltation which may degrade water quality in the Van Duzen River and Little Larabee Creek. With mitigation incorporated, less than significant impacts would occur.

*c) 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)?*

**Finding: Less Than Significant Impact**

Impermeable surfaces created by the Project will be limited to the concrete pads on which each battery container would be installed, in addition to the transformers, PDC, and substation expansion area components requiring foundations. The remainder of the approximately 2-acre battery storage area and new spur road would be surfaced with gravel, which is permeable to water. The introduction of a limited extent of impermeable surface associated with the proposed Project would not significantly alter the groundwater recharge or available groundwater supplies. A less than significant impact would occur.

*d) 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?*

*e) 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?*

*f) 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?*

**Finding: Less Than Significant**

Project design has maximized retention of local surface drainage patterns, and much of the Project footprint would be surfaced in water-permeable gravel, and the project has been designed to avoid impacts on the ephemeral drainage. Prior to obtaining a grading permit for the Project, the construction contractor will confirm storm water runoff requirements and prepare a SWPPP. The project design also includes permanent stormwater detention facilities. A less than significant impact would occur.

*g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

*h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

**Finding: No Impact**

The proposed Project does not include placing housing within 100-year flood hazard area. The location of the project is not within a 100-year flood hazard area per the 2017 FEMA Flood Zones. Therefore, there is no impact.

*i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

**Finding: Less Than Significant Impact**

The dam closest to the Project site is Scott Dam on the Eel River. According to the Humboldt County Dam Failure Contingency Plan (Humboldt County 2016), failure of Scott Dam would result in floodwaters reaching communities downstream<sup>3</sup> in approximately 6 hours. While the Project site is located on the Van Duzen River, not the Eel River, the Van Duzen River is a tributary of the Eel River, and some flooding on the Van Duzen River could result from the failure of Scott Dam. However, the Project will not be consistently staffed, and there is no significant risk of loss, injury, or death involving flooding, including flooding as a result of a dam failure. In addition, the Project site is not located within the 100-year flood zone for the Van Duzen River or Little Larabee Creek. Therefore, impacts under this criterion are less than significant.

*j) Inundation by seiche, tsunami, or mudflow*

**Finding: Less Than Significant Impact**

There are no lakes near the Project area and therefore they do not pose a significant threat of a seiche. The proposed Project will be inland and not at risk of a tsunami. Because the proposed Project would not significantly increase runoff from the Project site or significantly alter existing drainage patterns, operation of the Project would not contribute to the risk of mudflows in the Project area. Although construction activities for the proposed Project would involve grading activities that could potentially increase erosion in the area and the potential for mudflows, compliance with stormwater guidelines and grading permit requirements will ensure that this impact is less than significant.

## Mitigation Measures

See MM HAZ-1, Section IX, Hazards and Hazardous Materials.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XI. LAND USE AND PLANNING</b> — Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<sup>3</sup> Alderpoint, Fort Seward, Eel Rock, McCann, Camp Grant, South Fork, Weott, Burlington, Myers Flat, Miranda, Larabee, Holmes, Shively, Pepperwood, Elinor, Stafford, Scotia, Rio Dell, Metropolitan, Fortune, Fernbridge, Loleta Bottoms, Ferndale, and Ferndale Bottoms.

## Discussion of Impacts

a) *Would the project physically divide an established community?*

**Finding: No Impact**

Fortuna is the largest established community near the Project area, located approximately 20 miles west of the Project area. The community of Bridgeville is located closer to the Project area (0.75 miles west). However, the proposed Project facilities would not create any access constraints for this community and would not physically divide it. Therefore, no impact would occur.

b) *Would the project 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?*

**Finding: Less Than Significant Impact**

The lands underlying the Project are designated in the General Plan as Rural Residential Agriculture (RA40) and zoned as Unclassified. Humboldt County Zoning Regulations Section 314-8.1 pertains to the Unclassified district. Within Unclassified residential and general agriculture are principally permitted while all other uses can be considered with a use permit.

A Conditional Use Permit has been applied for as well as a Special Permit to allow work within a streamside management area. A Lot Line Adjustment has also been applied for and will allow for the substation expansion to be transferred to PG&E.

Because the General Plan designation and zoning district underlying the proposed Project conditionally allow electrical power facilities, the proposed Project would be considered consistent with the site's current General Plan designation and zoning district. Therefore, this would be considered a less than significant impact.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XII. MINERAL RESOURCES</b> — Would the project:				
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

**Finding: No Impact**

The Project is minimal in size, occupying about 1 acre, and would be adjacent to an existing electric substation. According to the Humboldt County General Plan (Humboldt County 2017), additional identification and inventory of mineral deposits in Humboldt County are needed. However, there are no rock or mineral extraction sites within or adjacent to the Project area. The closest active mine to the Project is Cottrell Ranch Quarries, an active open pit stone mining operation and the Project is not within a Mineral Land Classification Study Area (California Department of Conservation [CDC] 2015). Therefore, the Project would not result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist or locally important mineral resource and no impacts would occur.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XIII. NOISE</b> — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

**Finding: Less Than Significant Impact**

The noise assessment consists of a review of the noise performance of the battery energy storage system and substation upgrade currently being considered for the Project, calculation of noise levels at nearby noise sensitive areas based on the proposed site plans, the assessment of the predicted levels relative to the appropriate regulations and guidelines, and the discussion of mitigation strategies, as necessary. The following criteria were used to evaluate the Project's impacts on ambient noise levels:

- **Noise Levels in Excess of Standards:** A noise impact would be identified if the Project would exceed 65 a-weighted decibels (dBA) Lmax during daytime hours (6:00 am to 10:00 pm), 60 dBA Lmax during nighttime hours (10:00 pm to 6:00 am) and/or 60 dBA Community Noise Equivalent Level (CNEL) at noise sensitive uses (residences). (Humboldt County General Plan Policies N-S1 and N-S7)
- **Permanent Noise Increases:** A noise impact would be identified if operational noise generated by the Project would substantially increase noise levels at sensitive receptors in the vicinity. Neither Humboldt County nor the State of California define what noise level increase would be considered substantial. Typically, a noise level increases of 3 dBA CNEL or greater would be considered significant where exterior noise levels would exceed the generally acceptable noise level standard (60 dBA CNEL for residential land uses). Where noise levels would remain at or below the normally acceptable noise level standard with the Project, noise level increases of 5 dBA CNEL or greater would be considered significant.
- **Supplemental Criteria for Low Frequency and Infrasonic Noise:** The threshold for concern for low frequency noise occurs when the C-weighted level exceeds the A-weighted level by 20 dB or more. If this difference is found to occur, the threshold for considering "reasonable complaints" in Humboldt County would be 64 dBC, based on 85% operation, at noise sensitive uses (residences).

The noise environment in the area is predominantly influenced by automobile and truck traffic noise along SR 36. Noise sensitive land uses in the vicinity of the Project include a residence is located approximately 420 feet south of the project site.

Construction activities associated with the Project would temporarily increase noise levels in the Project area. Noise resulting from construction activities would depend on the different types of equipment used, the distance between construction noise sources and sensitive noise receptors, and the timing and duration of noise-generating activities. The entire construction period for the proposed Project is anticipated to last approximately 6 months. Construction activities would be temporary and would occur during daytime and possibly nighttime hours; generally between the hours of 8:00 a.m. and 6:00 p.m. on weekdays. The Humboldt County General Plan exempts construction noise from the County noise standards. Thus, the Project would not expose persons to noise levels in excess of the Humboldt County standards and impacts would be less than significant.

During operation, the battery storage system would store and discharge electrical energy from the grid in an electrochemical process. The primary source of the noise from the battery storage system would be from the power conversion system and battery storage module HVAC systems. The batteries and inverters make very little noise and are fully enclosed. When operating at full power, the ventilation fans and HVAC systems would cycle on and off. Significant noise would not be generated either by operation of the Project or the upgraded substation. The impact of operational noise would be less than significant.

*b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

**Finding: Less Than Significant Impact**

Vibration and ground-borne noise resulting from limited equipment usage would be minimal and would substantially attenuate with distance such that impacts at sensitive receptors would be less than significant.

- c. For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?*

**Finding: No Impact**

The Project is not within 2 miles of a public airport or airport land use compatibility plan. The closest airport to the Project is the Dinsmore Airport, a public airport 9 miles east of the Project area. Therefore, no impact will occur.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XIV. POPULATION AND HOUSING</b> — Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

**Finding: No Impact**

The Project would not induce substantial population growth in the area either directly or indirectly. The Project site does not have any existing housing units nor are any housing units proposed under the Project. Workers would be present onsite during short-term temporary construction activities. Once operational, the battery storage facility would be unmanned with workers anticipated only for intermittent maintenance activities. Therefore, no impact would occur.

- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

**Finding: No Impact**



Construction and operation of the proposed Project would not displace any existing housing or people. The Project site is vacant and zoned for light industrial uses and development. Therefore, no impact would occur as a result of the proposed Project.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XV. PUBLIC SERVICES</b> — Would the project:				
a) 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:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

*a) 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?*

### Finding: No Impact

The site is currently within the service area for Bridgeville Fire Protection District. Law enforcement services are provided by the Humboldt County Sheriff's Office. No fire, police, schools, parks, or other public facilities are located within 1 mile of the Project. The Project does not include a residential component and avoids any increases in demand for schools, parks, or other public facilities. Population growth will not occur as a result of the Project and demands on local parks districts and school districts are not expected to change in direct correlation to the Project. As such, there would be no impacts related to schools, parks, or other public facilities resulting from implementation of the proposed Project. Therefore, the Project, including the substation upgrade, would have no impact.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XVI. RECREATION</b> — Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) *Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

**Finding: No Impact**

Population growth will not occur as a result of the Project. Therefore, use of existing local or regional parks or other recreational facilities are not expected to change or increase. No impact would occur.

- b) *Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

**Finding: No Impact**

The Project does not propose any new or expanded recreational facilities. In addition, the Project area is not located on public land or otherwise designated as open space or recreational land, nor does it have formal public access for recreation. Therefore, no impacts would occur.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XVII. TRANSPORTATION</b> — Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Existing Setting

The Project site is located on private land adjacent to the existing Bridgeville Substation, which is accessed by a 500-foot spur road from SR 36. Construction vehicles would access the Project site from SR 36 during construction. No road closures or changes to the design of SR 36 will be needed during construction. One occupied residence occurs near the Project, over 400 feet from the nearest Project improvements, and separated by the existing substation. The next closest residences are located in Bridgeville, 0.75 miles west of the Project site.

The Project would use the access road from the site entrance off SR 36 north to the southeastern boundary of the proposed battery storage system. Construction equipment and materials would be delivered to the Project site and stored onsite for the duration of construction. Delivery trips would be infrequent and short-term during construction. The construction workforce would likely commute to the Project site in personal vehicles and utilize substation parking. During operations, maintenance and security would be conducted from an offsite location, and no staff would regularly work onsite.

## Discussion of Impacts

- a) *Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*
- b) *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*
- c) *Substantially increase hazards to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*
- d) *Result in inadequate emergency access?*

**Finding: Less than Significant Impact**

Project construction would not affect the design or flow of traffic on SR 36, nor impede emergency access to the site or nearby residences. Project construction would not generate substantially higher traffic volumes on SR 36, nor would the Project require workers to commute to the site daily. The Project would not impact any mass transit

services, air traffic at local airports, or pedestrian or bicycle paths. Therefore, impacts under these criteria are less than significant.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XVIII. TRIBAL CULTURAL RESOURCES</b> — Would the project: cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) 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:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Existing Setting

A request for tribal consultation pursuant to Public Resources Code section 21080.3.1 (AB 52) was sent to the Bear River Band of the Rohnerville Rancheria on March 25, 2019. Bear River Band is the only Tribe known to be culturally affiliated with the project site. Government to government tribal consultation with the Bear River Band of the Rohnerville Rancheria Tribal Council and the County occurred on March 26, 2019. Concerns were expressed regarding cultural resources known to be present at the project site however the site was not identified as a Tribal Cultural Resource. A site visit was conducted with the Bear River Band Tribal Historic Preservation Officer, County staff, and project agent on April 1, 2019. As a result, additional subsurface investigations at the site are being initiated and will be attended by a tribal monitor.

## Discussion of Impacts

- a) *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:*
  - i) *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or*
  - ii) *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

### **Finding: Less than Significant With Mitigation Incorporated.**

As mentioned in the cultural resource section, cultural resources investigations for the Project identified that it is located within the boundaries of site CA-HUM-187 (P-12-000212), a prehistoric archeological site. Other facilities are also located within boundaries of site CA-HUM-187, including the PG&E Bridgeville Substation (the subject Project is located adjacent to the substation), transmission lines, a Caltrans Highway Maintenance Station, two abandoned structures, and other standing and collapsed structures. Some site artifacts are documented. It is possible that pockets of intact deposits are still present at site CA-HUM-187, but portions of the site have been disturbed by grading and excavation for the construction of the various facilities, buildings, and structures within site boundaries.

Existing information provides a date for the site and the types of activities conducted there. The previous disturbances to site CA-HUM-187 have impacted its integrity and ability to provide additional information important in prehistory, and it does not appear to meet the criteria for inclusion on the CRHR. Regardless of this finding, portions of the Project, including the substation upgrade, and access road would occur within boundaries of site CA-HUM-187. As required by MM CUL 1 through 3 impacts to these resources would avoided or preserved in place. With mitigation incorporated a less than significant impact would occur.



## Mitigation Measures

See MM CUL-1 through 3.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XIX. UTILITIES AND SERVICE SYSTEMS</b> — Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion of Impacts

*a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

**Finding: No Impact**

The proposed battery storage Project is an unmanned facility that would not require new or expanded municipal water or wastewater services. Therefore, no Project impact would result.

*b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?*

**Finding: No Impact**

Construction of the Project will require approximately 0.31 acre feet of water for soil compaction, dust control, cement mixing, emergency fire suppression, and all other activities. During construction, the contractor will arrange for delivery of water to the site by water trucks from HRC. No new or expanded water service would be needed for the proposed battery storage Project. Therefore, no Project impacts related to water supply would result.

- c) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

**Finding: No Impact**

The proposed battery storage Project and substation upgrade are unmanned facilities that would not require new or expanded municipal water or wastewater services. Therefore, no Project impact would result.

- d) *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

- e) *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

**Finding: Less Than Significant Impact**

The proposed Project would comply with Federal, State, and local solid waste requirements. Waste generation associated with the Project would primarily be limited to short-term temporary construction of the battery storage foundations and external appurtenances. Project construction wastes such as excess wood, concrete, and metal would be recycled or reused to the extent feasible. The proposed Project would be an unmanned facility that would not generate waste on a routine basis as part of long-term operations and maintenance. Therefore, Project solid waste impacts would be less than significant. To further reduce potential impacts to waste handling facilities, construction and maintenance debris and waste materials would be recycled to the extent practical. A less than significant impact would occur.

## Mitigation Measures

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XX. WILDFIRE</b> — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*a) Substantially impair an adopted emergency response plan or emergency evacuation plan?*

*b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

*c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

*d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

#### **Finding: No Impact**

The Project is within a very high fire hazard area (Cal Fire 2012) and a State Responsibility Area (BOF 2012). The Project would occupy about 3.0 acre within a single parcel of about 73 acres. Surrounding land uses include forested uplands. The Project construction and operation would not impair an adopted emergency response plan or emergency evacuation plan. Infrastructure associated with the Project would not exacerbate fire risk resulting in temporary or ongoing impacts to the environment nor would the Project expose people or structures to significant risks post-fire, should a fire occur in the area. Therefore, no impacts would occur.

#### **Mitigation Measures**

None are required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XVIII. MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a. *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

### Finding: Less than Significant with Mitigation

The Project has the potential to negatively impact special status wildlife, and nesting birds. However, with implementation of MM BIO-1 and BIO-2 and MM HAZ-1, these impacts would be reduced to less than significant. The proposed Project has the potential to negatively impact cultural and historic resources. However, with the implementation of CUL-1, CUL-2, and CUL-3 these impacts would be reduced to less than significant.

- 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)?*

### Finding: No Impact

All potential environmental impacts of the Project have been determined in this IS/MND to have either no impact, less than significant impact, or less than significant impact with mitigation incorporated. In combination with the effects of

any past, current, or provable future Projects, the proposed Project would have less than significant cumulative impacts.

- c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

**Finding: No Impact**

The proposed Project will be constructed on private land more than a half-mile from the nearest community. No displacement of residents will result from development of the Project, and the facility will be monitored and maintained remotely. As such, no direct or indirect substantial adverse effects on human beings would result from Project development.

**Mitigation Measures**

None are required.

## Determination

Based on this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "Potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

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Signature

Date

Steve Werner  
Supervising Planner

April 9, 2019

## 3.0 MITIGATION MONITORING AND REPORTING PROGRAM

### 3.1 MITIGATION MEASURES

- MM BIO-1** Preconstruction surveys for special status species shall be conducted no more than one week prior to the initiation of earth moving or vegetation clearing by a qualified biologist. If active nests, special status species, roosts, or dens are observed during surveys, work at the site shall cease and the County shall be contacted. Project work shall cannot resume until the County in consultation with the California Department of Fish and Wildlife (CDFW) determine a suitable buffer distance or other necessary protection measures to prevent disturbance to the species. Once established, buffer limits shall be flagged and avoided. Project activities may encroach into the buffer only with approval from, the County in consultation with CDFW and must be monitored by the project the biologist. Biologists shall monitor itinerant wildlife until they have dispersed on their own.
- MM BIO-2** Guidance outlined in *Avian Power Line Interaction Committee Guidelines* in accordance with the *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2012* or equivalent measures shall be incorporated into the power line design to minimize the likelihood of avian electrocutions.
- MM CUL-1** No ground disturbing activities shall occur along the existing access road or substation expansion area. Geotextile fabric and gravel rock will be placed on top of these. A Native American Tribal Monitor from the Bear River Band of the Rohnerville Rancheria shall be on site to ensure no ground disturbing activities occur. Grading plans and other construction documents shall clearly indicate that no ground disturbing activities are to occur in these areas.
- MM CUL-2** Prior to issuance of a grading permit, any excavation, placement of poles or any other ground disturbance at the site, subterranean sampling shall be conducted at a depth sufficient to determine whether or not cultural resources are present. The sampling shall demonstrate that there is no potential for encountering cultural artifacts within the area where there will be ground disturbance or grading and shall locate the edge of the resource boundary on north and east side. The sampling plan shall require the concurrence of the Bear River Band of the Rohnerville Rancheria Tribal Historic Preservation Officer. An archaeologist and Native American Tribal Monitor from the Bear River Band of the Rohnerville Rancheria shall be on site to observe the sampling.
- MM CUL-3** An archaeologist and Native American Tribal Monitor from the Bear River Band of the Rohnerville Rancheria shall be on site to observe and inspect all ground disturbing activities at the applicant's expense. The archaeologist and Native American Tribal monitor shall have authority to stop work in an area where previously unidentified resources are encountered until the resources have been appropriately identified and addressed. In the unlikely event that resources are discovered the Planning and Building Department shall be notified immediately. If archeological resources are

identified during construction and cannot be avoided, the following steps shall be taken prior to re-initiating construction activities:

- The extent of the resource shall be investigated in consultation with the Bear River Band of the Rohnerville Rancheria.
- Improvement plans shall be prepared that demonstrate how the Project will be re-designed on-site to avoid the resource or that it is possible to cap the resource.
- The County in consultation with the Bear River Band of the Rohnerville Rancheria shall approve the improvement plans.

**MM CUL-4** There is a potential to inadvertently uncover human remains during Project construction. An archaeologist and Native American Tribal Monitor shall be on site to monitor any ground disturbing activity associated with the Project to identify and protect any inadvertently discovered human remains during Project construction. If human remains are discovered all work shall be halted immediately within 50 feet of the discovery and the County Coroner must be notified according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in the CCR §15064.5(d) and (e) shall be followed.

**MM GEO-1** If paleontological resources (i.e., fossils) are found during Project construction, construction shall be halted immediately in the subject area and the Humboldt County shall be immediately notified. A qualified paleontologist shall be retained to evaluate the find. If a find is determined to be significant, representatives of Humboldt County and a qualified paleontologist would meet to determine avoidance measures or other appropriate mitigation, such as site salvage. Significant paleontological resources recovered will be subject to scientific analysis, professional museum curation, and a report prepared by the qualified paleontologist according to current professional standards. The Society of Vertebrate Paleontology (SVP) provides guidelines on assessment and mitigation of adverse impacts to paleontological resources (SVP 2010).

**MM HAZ-1**

The applicant shall develop and implement a Spill Prevention, Countermeasure, and Control Plan (SPCCP) in accordance with Federal and State requirements to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The SPCCP shall be submitted to Humboldt County for review and approval prior to any construction permits being issued. The SPCCP shall include the following measures:

- Materials shall be stored in appropriate containers and contents labeled
- Material volume shall be restricted to the volume that can be addressed by available spill kits and supplies
- Used containers shall be disposed of at an appropriate landfill or other legal disposal or recycling facility
- Bulk storage tanks shall have secondary containment systems. Secondary containment shall be at least 110% of storage tank capacity or more if the area is uncovered to account for storm events
- Spill cleanup shall occur immediately, and notification shall be given to the CDFW, USFWS, Regional Water Quality Control Board (RWQCB)
- Workers shall be trained to properly handle hazardous materials, cleanup spills, and report spills. Construction workers shall be trained to identify indicators of contaminated soils such as soil discoloration, odors, differences in soil properties, and buried debris. Construction workers shall be trained to be aware of proper handling techniques and appropriate responses and actions to be taken if hazardous materials are accidentally released, with special emphasis on those hazardous materials with the greatest potential to occur at the Project
- Soils contaminated with fuels or chemicals shall be disposed of in a suitable location to prevent discharge to surface waters and in accordance with the rules and regulations of the U.S. Department of Transportation, the USEPA, the RWQCB, and other agencies including but not limited to CalEPA
- Excess or unused quantities of hazardous materials shall be removed upon Project completion. Although hazardous waste generation is not anticipated, any such wastes produced during construction shall be properly containerized, labeled, and transported to an approved hazardous waste disposal facility
- All nonhazardous waste materials including construction refuse, garbage, and sanitary waste, shall be disposed of by removal from the work area to an approved disposal facility. All nonhazardous waste containers shall be covered when not in use and/or at the end of each shift or before a rain event

A fueling plan shall be prepared separately or as a part of the SPCCP. The fueling plan shall include the following measures:

- Vehicles will be monitored for fluid leaks and will be maintained regularly to reduce the chance of leakage. If any leaks are detected, the vehicle will be taken to a special paved area designated for vehicle repair and equipped with management controls for leaked materials or if it cannot be repaired removed from service and site and a replacement obtained

- Vehicle refueling shall only occur on flat level ground where there is little chance of a spilled substance reaching a stream or waterway over an impermeable surface. A spill kit shall be available as appropriate for the activity
- Refueling and vehicle maintenance shall be performed at least 100 feet from receiving waters
- All fueling materials shall be properly labeled
- Oil, antifreeze, solvents, and other materials related to equipment maintenance shall be disposed of or recycled appropriately offsite. If these materials have to be stored before disposal/recycling, they shall be stored in covered areas in containers with 110% capacity with berms and lined with impermeable material to contain any spills. The impermeable material should be maintained free of holes, etc. that would permit leaks to contact the ground surface or otherwise leave the containment area

The applicant shall routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The applicant shall notify the County Planning and Building Department immediately if there is a noncompliance issue and shall require compliance.

The Federal reportable spill quantity for petroleum products, as defined in the EPA's Code of Federal Regulations (40 CFR 110) is any oil spill that (1) violates applicable water quality standards, (2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or (3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

If a spill is reportable, the applicant would contact the appropriate safety and cleanup crews to ensure the SPCCP is followed. A written description of reportable releases must be submitted to the County and RWQCB. The submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.

**MM HAZ-2**

Prior to the issuance of any permits for construction, the applicant shall prepare and submit for review and approval a Fire Prevention Plan to the Humboldt County Planning and Building Department. The County shall review the plan in consultation with CAL FIRE. The plan shall include fire protection measures during construction and operation at the Site. The fire prevention plan shall include requirements for onsite extinguishers; no smoking on site, and training for construction personnel on what to do in the event of a fire. For ongoing operations, the plan shall include the strategy for maintaining defensible space and measures to decrease risk from fires associated with transmission line failure. The portion of the plan for ongoing operations shall be implemented for the life of the project.



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